

Real People. Real Solutions.

Type & Boundary Application

June 8th, 2021

Le Sueur Economic Development Authority

City of Le Sueur, Le Sueur County, Minnesota



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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.

Applican	t/Lando	wner Name:	Le Sueur Economic Development Authority	
Mailing	Address	: 203 2 nd St S	Ee Sueur, MN 56058	
Phone:	507-66	5-6401		
E-mail A	ddress:			
				1
Authoriz	ed Cont	act (do not co	mplete if same as above):	
Mailing /	Address	:		
Phone:				
E-mail A	ddress:			
		1		
Agent Na	ame:	Dan Donayre	Natural Resource Specialist Bolton & Menk, Inc.	
Mailing /	Address	: 1960 Prem	ier Drive Mankato, MN 56001	
Phone:	507-62	5-4171 ext 26	46	

E-mail Address: dando@bolton-menk.com

PART TWO: Site Location Information

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):

County: Le Sueur

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 Impact¹ Summary

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

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

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

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

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A". ⁴Use Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2. ⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

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

N/A

PART FIVE: Applicant Signature

Check here if you are requesting a <u>pre-application</u> 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



Real People. Real Solutions.

Wetland Delineation Report

June 8th, 2021

Le Sueur Economic Development Authority

City of Le Sueur, Le Sueur County, Minnesota



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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.



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, <u>http://climate.umn.edu/</u> and the National Weather Service Forecast Office, <u>http://w2.weather.gov/climate/</u>. 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,

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.

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.



Photo 1: View of Wetland 1 looking East.



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.

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

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



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

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

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.



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

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.

<u>Site 3:</u> 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.

<u>Site 4:</u> 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, yellownutsedge 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.

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



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

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

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



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

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

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.



Photo 9: View of Tributary 2

<u>Tributary 3:</u> 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 2feet 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.

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

WETLAND SUMMARY

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

Sincerely, BOLTON & MENK, INC.

Dan Donayre Certified Wetland Delineator, No. 1191

APPENDIX

Prepared by: Bolton & Menk, Inc. Le Sueur EDA Project | 0M1.123071



City of Le Sueur, Le Sueur TWP, MN

Exhibit A: Location Map

June 2021





City of Le Sueur, Le Sueur TWP, MN

Exhibit B: 2-Foot LiDAR Contours Map

June 2021





Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

June 2021





City of Le Sueur, Le Sueur TWP, MN

Exhibit D: Public Waters Inventory Map



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Le Sueur EDA

City of Le Sueur, Le Sueur TWP, MN

Exhibit E: Faribault County Soil Survey Map

June 2021



1 11 S2X 14		1 12 11			600 D		
Symbol	Name	Slopes	Hydric Rating	Hydric Class	2398		Legend
106C2	Lester loam	6-10%	No	2%			😥 🛛
945F	Lester-Belview complex	22-40%	No	0%	16D2		Study Area
414	Hamel loam	0-2%	Yes	90%		414	Study Area
468	Otter silt loam	0-2%	Yes	100%			
109	Cordova clay loam	0-2%	Yes	90%			Hydric Solls
106D2	Lester loam	10-16%	No	0%	4		
123	Dundas silt loam	0-2%	Yes	90%		106C2	Non-Hydric Soils
239B	Le Sueur Ioam	1-3%	NO	15%	414	1 12	0 265 530
405	Willinerska fille salluy loalli	0-2%	NU	5%			Feet
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State State	Street to	1		90			
ET AL HARLES			and the second se		A second s		

Exhibit F:Delineation Map

June 2021







once developed here.

EXHIBIT G: WETLAND DETERMINATION DATA FORM

Real People. Real Solutions.	(Midwest	Region)				
Project/Site: Le Sueur EDA Project	City/Cour	nty: Le Sueur/ Le Sue	ur Sampling Date: 6/2/2021			
Applicant/Owner: Le Sueur Economic Development Authority	y	State: Minnesota	Sample Point: W1-A			
Investigator(s): Addeline Theis & Dan Donayre	Sect	Section, Township, Range: Sec 17, T112N, R25W				
Landforms (hillside, terrace, etc.): Basin/toeslope	Lo	cal Relief (concave, co	nvex, none): Concave			
Slope (%): 0-2% Latitude:	Lor	ngitude:	Datum: Le Sueur			
Soil Map Unit Name: 414-Hamel Loam	N	WI Classification: No	ne			
Are climatic/hydrologic conditions of the site typical for this time of	year?	No (If	no, explain in remarks)			
Are vegetation \mathbf{X} , soils , or hydrology		significantly distur	bed? Are normal circumstances present? No			
Are vegetation , soils , or hydrology	1	naturally problema	tic? (If needed, explain any answers in Remarks)			
SUM	IMARY O	F FINDINGS				
Hydrophytic vegetation present? Yes						
Hvdric soils present? Ves		Is the s	ampled area within a wetland? Ves			
Wetland hydrology present? Ves		10 0110 5				
<u>Remarks:</u> Antecedent precipitation was above normal during	g the site visit	. Vegetation is signfic	antly disturbed by agriculture row crops.			
VEGETA	TION - Use	scientific names of pla	nts			
Abs	solute Do	minant Indicator	Dominance Test Worksheet			
Tree Stratum (Plot size: 30 feet) % (1 1	Cover SI	pecies Status	Number of dominant species that are OBL, FACW, or FAC: 2 (A)			
2			Total number of dominant			
3			- species across all strata: <u>3</u> (B)			
4			Percent of dominant species that are OBL, FACW or FAC: 67% (A/B)			
	0 =Total	Cover				
Sapling/Shrub stratum (Plot size: 15 feet)			Prevalence Index Worksheet			
1 Acer negundo	2	Yes FAC	Total % cover of:			
2			- OBL Species: 0 x 1 = 0			
3			FACW Species: 25 x 2 = 50			
4			FAC Species: $2 \times 3 = 6$			
5			FACU species: 0 $\mathbf{x} 4 = 0$			
·	2 -Total	Cover	$\frac{1}{1}$			
Herb stratum: (Plot size: 5 feet)	<u> </u>	cover	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
	25	Vac IIPI	$\frac{101}{101}$			
2 Company acculantus	<u>25</u>	Ves FACW	- Prevalence Index (B/A): 3.48			
			Hydronhytic Vegetation Indicators			
<u> </u>			- Danid test for hydrophytic vegetation			
4			Kapla test for hydrophytic vegetation			
<u> </u>			A Dominance test >50%			
6			Prevalence index is $\leq 3.0^*$			
7 8			Morphological adaptations* (Provide supporting data in remarks)			
9			Problematic hydrophytic vegetation* X (Explain in remarks)			
	50 =Total	Cover				
Woody vine stratum: (Plot size: <u>15 feet</u>)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
2			Hydrophytic vegetation			
	0 =Total	Cover	present? Yes			
Remarks: The sample point was taken within row crops. Cyp	perus esculent	tus was found within	the rows, indicating hydrophytic vegetation may have			



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(Midwest Region) SOILS

	Tiption: (Describe to	the uept	in include to doct	iment	ne indicator		absence of indica	tors.)	
Depth Matrix			Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-10	10YR 2/1	100					Clay Loam		
10-24+	10YR 5/1	100					Clay Loam		
	*Type: C = Concentr	ation, D	= Depletion, RM	= Redu	ced Matrix, N	AS = Masked Sa	nd Grains. **Locat	ion: PL = Pore Lining, M = Matrix	
Hydric Soil	Indicators:						Indicator	s for Problematic Hydric Soils*:	
Histis	ol (A1)			Sandy	Gleyed Matri	ix (S4)	Coa	st Prairie Redox (A16)(LRR K,L,R)	
Histic	Epipedon (A2)			Sandy	Redox (S5)		Daı	k Surface (S7)(LRR K, L)	
Black	Histic (A3)			Stripp	ed Matrix (S6	j)	Iron	h-Manganese Masses (F12)(LRR K, L, R)	
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mate	erial (F1)	Ver	y Shallow Dark Surface (TF12)	
Stratif	fied Layers (A5)			Loamy	Gleyed Mat	rix (F2)	Oth	er (Explain in remarks)	
2 cm]	Muck (A10)			Deplet	ed Matrix (F.	3)			
X Deple	ted Below Dark Surfa	ce (A11)		Redox	Dark Surface	e (F6)			
X Thick	Dark Surface (A12)			Deplet	ed Dark Surf	ace (F7)	*Indicato	*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or	
Sandy	Mucky Material (S1))		Redox	Depressions	(F8)	hydrolo		
5 cm 1	Mucky Peat or Peat (S	33)		-				problematic	
Restrictive I	ayer (if observed):								
Type:				_		Hyd	Iric Soils Present?	Yes	
Depth (inches	s).								
Deptil (lifelies				-					
Remark	<u></u>								
<u>Remark</u>	<u></u>				HYDROI	LOGY			
Remark Wetland Hyd	s: s: brology Indicators:			<u> </u>	HYDROI	LOGY			
Remark <u>Remark</u> Wetland Hyd <u>Primary Indic</u>	s: arology Indicators: ators (minimum of or	ne is requ	ired; check all th	at apply	HYDROI	LOGY	<u></u>	ondary Indicators (minimum of two requir	
Remark <u>Remark</u> Wetland Hyd <u>Primary Indic</u> Surfac	Irology Indicators: eators (minimum of or ce Water (A1)	ne is requ	ired; check all th	at apply	HYDROI	LOGY res (B9)	<u>Sec</u>	ondary Indicators (minimum of two requir	
Wetland Hyd Primary Indic Surfac High Y	Irology Indicators: eators (minimum of or the Water (A1) Water Table (A2)	ne is requ	ired; check all th	at apply Water Aquat	HYDROI) Stained Leav c Fauna (B13	2 0GY res (B9) 3)	SecX	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10)	
Wetland Hyd Primary Indic Surfac High ' Satura	Irology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3)	ue is requ	ired; check all th	at apply Water Aquati True A	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants	20GY res (B9) 3) 5 (B14)	<u>Sec</u>	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)	
Remark Wetland Hyd Primary Indic Surfac High ' Satura Water	Irology Indicators: eators (minimum of or e Water (A1) Water Table (A2) ation (A3) Marks (B1)	ne is requ	ired; check all th	at apply Water Aquati True A Hydro	HYDROI) Stained Leav c Fauna (B13 Quatic Plants gen Sulfide C	20GY res (B9) 3) 5 (B14) 20dor (C1)	<u>Sec</u>	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)	
Remark Wetland Hyd Primary Indic Surfac High ' Satura Water Sedim	rology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) tition (A3) Marks (B1) ent Deposits (B2)	ie is requ	ired; check all th	at apply Water Aquati True A Hydro Oxidiz	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C ed Rhizosphe	20GY res (B9) 3) 5 (B14) 9dor (C1) eres on Living Re	Sec 2 	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (
Remark Wetland Hyd Primary Indic Surfac High ' Satura Water Sedim Drift l	Irology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) Marks (B1) ent Deposits (B2) Deposits (B3)	ne is requ	ired; check all th	at apply Water Aquati True A Hydro Oxidiz Presen	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C ced Rhizospha ce or Reduce	20GY res (B9) 3) 5 (B14) 0dor (C1) eres on Living Ro d Iron (C4)	<u>Sec</u> <u>X</u> oots (C3) <u>X</u>	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1)	
Wetland Hyd Primary India Surfac High Satura Water Sedim Drift I Algal	Irology Indicators: eators (minimum of or e Water (A1) Water Table (A2) ation (A3) Marks (B1) eent Deposits (B2) Deposits (B3) Mat or Crust (B4)	ne is requ	ired: check all th	at apply Water Aquati True A Hydro Oxidiz Presen Recen	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C and Rhizospha ce or Reduce t Iron Reduct	res (B9) 3) 5 (B14) odor (C1) eres on Living Ru d Iron (C4) ion in Tilled Soil	oots (C3)	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2)	
Remark Wetland Hyd Primary Indic Surfac High ' Satura Water Sedim Drift I Algal Iron E	rology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) tition (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ie is requ	ired; check all the	at apply Water Aquati True A Hydro Oxidiz Presen Recem Thin N	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C ced Rhizosphe ce or Reduce t Iron Reducti Juck Surface	2OGY res (B9) 3) 5 (B14) 2dor (C1) eres on Living Re d Iron (C4) fon in Tilled Soil (C7)	<u>Sec</u> <u>X</u> oots (C3) <u>X</u> ls (C6) <u>X</u>	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Remark Wetland Hyd Primary Indic Surfac High Satura Water Sedim Drift 1 Iron E Inunda	Irology Indicators: Eators (minimum of or See Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria	<u>e is requ</u> ll Imager	ired; check all th	at apply Water Aquati True A Hydro Oxidiz Presen Recen Thin N Gauge	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C and Rhizospha ce or Reduce the Iron Reduction fuck Surface or Well Data	LOGY res (B9) 3) 5 (B14) odor (C1) eres on Living Re d Iron (C4) ton in Tilled Soil (C7) a (C7)	oots (C3)	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Remark Wetland Hyd Primary Indic Surfac High Satura Water Sedim Drift I Algal Iron D Sparse	ss: Trology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) tition (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria ely Vegetated Concave	e is requ l Imager e Surface	y (B7)	at apply Water Aquati True A Hydro Oxidiz Presen Recen Thin N Gauge Other	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C and Rhizosphe ce or Reduce i Iron Reducti fuck Surface or Well Data (Explain in R	LOGY res (B9) 3) 5 (B14) Odor (C1) eres on Living Ro d Iron (C4) ion in Tilled Soil (C7) 1 (C7) emarks)	oots (C3)	ondary Indicators (minimum of two requin Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Wetland Hyd Primary India Surfac High Satura Water Sedim Drift I Algal Iron D Sparse	Irology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) Marks (B1) Marks (B1) Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria ely Vegetated Concave ations:	<u>e is requ</u> l Imager <u>;</u> e Surface	y (B7)	at apply Water Aquati True A Hydro Oxidiz Presen Recen Thin N Gauge Other	HYDROI) Stained Leav c Fauna (B13 Aquatic Plants gen Sulfide C ed Rhizosphe ce or Reduce the Rhizosphe the	2OGY res (B9) 3) 5 (B14) odor (C1) eres on Living Re d Iron (C4) ion in Tilled Soil (C7) a (C7) emarks)	oots (C3)	ondary Indicators (minimum of two requin Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Remark Wetland Hyd Primary Indic Surfac High ' Satura Water Sedim: Drift I Algal Iron E Inunda Sparse Field Observa Surface Wate	Irology Indicators: Eators (minimum of or ce Water (A1) Water Table (A2) tition (A3) Marks (B1) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria ely Vegetated Concave ations: rr Present?	l Imager e Surface	y (B7) (B8)	at apply Water Aquati True A Hydro Oxidiz Presen Recem Thin M Gauge Other	HYDROI) Stained Leav c Fauna (B13 quatic Plants gen Sulfide C ed Rhizosphe ce or Reduce thron Reducti fuck Surface or Well Data (Explain in R	LOGY res (B9) 3) 5 (B14) 2dor (C1) eres on Living Red d Iron (C4) fon in Tilled Soil (C7) a (C7) a (C7) emarks)	oots (C3)	ondary Indicators (minimum of two requin Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Remark Wetland Hyd Primary Indic Surfac High Satura Water Sedim Drift I Algal Iron E Sparse Field Observ Surface Wate Water Table	Irology Indicators: Eators (minimum of or Eators (minimum of or Eators (Mainimum of or Eators (Mainimum of or Eators (Mainimum of or Marks (Mainimum of or Marks (B1) Marks (B1) Marks (B1) Marks (B1) Marks (B1) Marks (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria ely Vegetated Concave ations: rr Present? Present?	e is requ l Imager e Surface	ired; check all the	at apply Water Aquati True A Hydro Oxidiz Presen Recen Thin N Gauge Other	HYDROI) Stained Leav c Fauna (B13 quatic Plants gen Sulfide C red Rhizosphe ce or Reduce i Iron Reducti fuck Surface or Well Data (Explain in R Depth (inches)	20GY res (B9) 3) 5 (B14) 0dor (C1) eres on Living Red d Iron (C4) ion in Tilled Soil (C7) a (C7) emarks)):	oots (C3)	ondary Indicators (minimum of two requir Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) Indicators of Wetland Hydrology Present? Yes	



Real People, Rea	al Solutions.	(Mic	lwest Region)				
Project/Site: Le Sueur EDA Project			y/County: Le Su	eur/ Le Sueur	Sampling Date: 6/2/2021		
Applicant/Owner:	Applicant/Owner: Le Sueur Economic Development Authority			e: Minnesota	Sample Point: W7-A		
Investigator(s):	Addeline Theis & Dan Donayre		Section, Township, Range: Sec 17, T112N, R25W				
Landforms (hillside, t	errace, etc.): Toeslope		Local Relief	(concave, conve	x, none): Concave		
Slope (%): 0-	2% Latitude:		Longitude:		Datum: Le Sueur		
Soil Map Unit Name:	414-Hamel Loam		NWI Class	ification: None			
Are climatic/hydrolog	gic conditions of the site typical for	this time of year?	No	(If no,	explain in remarks)		
Are vegetation	\mathbf{X} , soils , or \mathbf{I}	hydrology	signif	icantly disturbed	? Are normal circumstances present? No		
Are vegetation	, soils , or l	hydrology	natura	ally problematic?	(If needed, explain any answers in Remarks)		
		SUMMAR	Y OF FINI	DINGS			
Hvdro	phytic vegetation present?	Yes					
Hvdrid	c soils present?	Yes		Is the same	bled area within a wetland? Ves		
Wetlar	nd hydrology present?	Ves		-s the sum			
		105					
Remarks: Antec	edent precipitation was above nor	mal during the sit	e visit. Vegetat	ion is signficant	ly distrubed by agriculutre row crops.		
	V	EGETATION	- Use scientific	names of plants			
		Absolute	Dominant	Indicator	Dominance Test Worksheet		
Tree Stratum	(Plot size: 30 feet)	% Cover	Species	Status	Number of dominant species		
1 Acer negund	0	5	Yes	FAC	that are OBL, FACW, or FAC: 2 (A)		
2					Total number of dominant		
3					species across all strata: 3 (B)		
4					Dereast of dominant species that		
5					are OBL, FACW or FAC: 67% (A/B)		
			Total Cover				
Sapling/Shrub stratum	n (Plot size: 15 feet)				Prevalence Index Worksheet		
1					Total % cover of:		
2					OBL Species: $0 \times 1 = 0$		
3					$\begin{array}{c} \hline \hline \\ FACW Species: 10 \\ \hline \\ \hline \\ \hline \end{array} x 2 - 20 \\ \hline \end{array}$		
3 <u></u>					$\begin{array}{c c} FAC \text{ Species:} & 5 \\ \hline \end{array} \times 3 = & 15 \\ \hline \end{array}$		
5					FACU species: $0 \times 4 = 0$		
5			Total Cover		$\frac{1}{100} \frac{1}{100} \frac{1}$		
Uarh stratum.	(Plot size: 5 feet)	=			Totals: 40 (A) 160 (P)		
1 7	(1 lot size. 5 leet)	25	Voc	UDI	$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $		
1 Zea mays	1 (10	Voc		Prevalence Index (B/A): 4.00		
2 Cyperus escu	lientus	10	105	FACW	Hudnonhutia Vacatation Indicators		
3				<u> </u>	Build text for buder better mutation		
4					Rapid test for hydrophytic vegetation		
5				. <u></u>	X Dominance test >50%		
6					Prevalence index is $\leq 3.0^*$		
7					Morphological adaptations* (Provide supporting data in remarks)		
9							
10					Problematic hydrophytic vegetation* X (Explain in remarks)		
		35 =	Total Cover				
Woody vine stratum:	(Plot size: 15 feet)				*Indicators of hydric soil and wetland hydrology		
1	,				must be present, unless disturbed or problematic		
2							
2			Total Cover		Hydrophytic vegetation present? Ves		



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Project/Site: Le Su	eur EDA Project	;	Cit	y/County: Le Su	ieur/ Le Sueur		Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Econo	omic Developme	nt Authority	State: Minnesota Sample Point: W			
Investigator(s):	Addeline Theis	& Dan Donayre		Section, Tow			
Landforms (hillside, t	terrace, etc.): F	ootslope		Local Relief	(concave, conve	x, none): Linear	
Slope (%): 2-	-6%	Latitude:		Longitude:		Datum: I	Le Sueur
Soil Map Unit Name	: 414-Hamel Loa	m		NWI Class	ification: None		
Are climatic/hydrolog	gic conditions of t	he site typical for	this time of year?	No	(If no,	explain in remarks)	
Are vegetation	X, soils	, or	hydrology	signit	ficantly disturbed	? Are normal circ	cumstances present? <u>No</u>
Are vegetation	, soils	, or	hydrology	natur	ally problematic?	? (If needed, expla	in any answers in Remarks)
			SUMMAR	RY OF FINI	DINGS		
Hydro	phytic vegetation	present?	No				
Hydrid	c soils present?		Yes		Is the samp	oled area within a we	tland? No
Wetla	nd hydrology pres	ent?	No				
<u>Remarks:</u> Antec	edent precipitati	on was above no	rmal during the sit	te visit. Vegetat	ion is signficant	ly distrubed by agric	ulutre row crops.
				Die selentine		Domina	nce Test Worksheet
Tree Stratum	(Plot size:	30 feet)	Absolute % Cover	Dominant Species	Indicator Status		
1		<u> </u>		species	Status	Number of dom	CW or FAC: 0 (A)
2						Tradel much	
3						species acro	oss all strata: <u>1</u> (B)
4						Percent of dominan	t species that
5				-Total Cover		are OBL, FA	CW or FAC: 0% (A/B)
Sapling/Shrub stratun	n (Plot size:	15 feet)				Prevalen	ce Index Worksheet
1		13 1000 /				Total % cover of:	
2				. <u></u> .		OBL Species:	0 x 1 = 0
3						FACW Species:	$\frac{0}{0}$ x 2 = 0
4						FAC Species:	$\frac{1}{0}$ x 3 = 0
5						FACU species:	$\frac{1}{0}$ x 4 = 0
			0 =	Total Cover		UPL Species:	$\frac{1}{25}$ x 5 = 125
Herb stratum:	(Plot size:	5 feet)				Totals:	25 (A) 125 (B)
1 Zea mays	· —	,	25	Yes	UPL	Prevalence	Index (B/A): 5.00
2							
3						Hydrophytic	c Vegetation Indicators
4						Rapid test fo	r hydrophytic vegetation
5						Dominance t	est >50%
6						Prevalence in	ndex is $\leq 3.0^*$
78						Morphologic supporting d	al adaptations* (Provide ata in remarks)
9 10						Problematic X (Explain in r	hydrophytic vegetation* emarks)
Woody vine stratum:	(Plot size:	15 feet)	25 =	Total Cover		*Indicators of hydr must be present, un	ric soil and wetland hydrology nless disturbed or problematic
2						Hydrophytic ve	egetation
			0 =	Total Cover		present	? <u>No</u>
Remarks: Row of	crops planted and	l no indicator of	hydrophytic veget	ation at sample	point elevation	observed.	



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1101110 2000	Iption. (Describe to	the ucpt	In needed to doct				absence of mulcau	
Depth	Matrix			Redox	Features	T shale		
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-40	10YR 2/1	100		_	<i>c</i>		Clay Loam	
40-46+	10YR 5/1	95	7.5YR 4/6	5	C	М	Clay Loam	
	*Type: C = Concentr	ation, D	= Depletion, RM	= Reduc	ed Matrix, M	S = Masked Sa	nd Grains. **Locatio	on: $PL = Pore Lining, M = Matrix$
lydric Soil I	indicators:						Indicators	for Problematic Hydric Soils*:
Histis	ol (A1)			Sandy C	Gleyed Matrix	x (S4)	Coas	t Prairie Redox (A16)(LRR K,L,R)
Histic	Epipedon (A2)			Sandy H	Redox (S5)		Dark	Surface (S7)(LRR K, L)
Black	Histic (A3)			Strippe	d Matrix (S6)		Iron-	Manganese Masses (F12)(LRR K, L, R)
Hydrogen Sulfide (A4)				Loamy	Mucky Mater	rial (F1)	Very	Shallow Dark Surface (TF12)
Stratif	ied Layers (A5)			Loamy	Gleyed Matri	x (F2)	Othe	r (Explain in remarks)
2 cm 1	Muck (A10)			Deplete	d Matrix (F3))		
Deple	ted Below Dark Surfa	ce (A11)		Redox I	Dark Surface	(F6)		
X Thick	Dark Surface (A12)			Deplete	d Dark Surfac	ce (F7)	*Indicators	of hydrophytic vegetation and wetland
X Thick Dark Surface (A12) Sandy Mucky Material (S1) 5 am Mucky Dept or Dept (S2)				Redox I	Depressions (l	F8)	hydrolog	y must be present, unless disturbed or
				_				hydrology must be present, unless disturbed or
Sandy 5 cm 1	Mucky Material (S1) Mucky Peat or Peat (S	, 53)		-				problematic
Sandy 5 cm 1 Restrictive L	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):	33)		-				problematic
Sandy 5 cm l Restrictive L Type:	Mucky Peat or Peat (S ayer (if observed):	33)		- 		Hvd	ric Soils Present?	problematic Yes
Sandy 5 cm l Restrictive L Type: Depth (inches	Mucky Material (ST) Mucky Peat or Peat (S ayer (if observed):	33)				Hyd	ric Soils Present?	problematic <u>Yes</u>
Sandy 5 cm ľ Restrictive L Гуре: Depth (inches	Mucky Material (ST) Mucky Peat or Peat (S ayer (if observed):	33)		- -		Hyd	ric Soils Present?	problematic <u>Yes</u>
Sandy 5 cm ľ Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):	33)		- -		Hyd	ric Soils Present?	problematic <u>Yes</u>
Sandy 5 cm l Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Material (ST) Mucky Peat or Peat (S ayer (if observed):	53)		- - - I	HYDROL	Hyd OGY	ric Soils Present?	problematic <u>Yes</u>
Sandy 5 cm l Sestrictive L Cype: Depth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S (if observed): (i):				IYDROL	Hyd OGY	ric Soils Present?	Yes
Sandy 5 cm l Sestrictive L Type: Depth (inches Remark Vetland Hyd Primary Indic	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): 	, 33) ne is requ	ired; check all the	It apply)	HYDROL	Hyd OGY	ric Soils Present?	Problematic <u>Yes</u> ndary Indicators (minimum of two required)
Sandy 5 cm l Sype: Depth (inches <u>Remark</u> Vetland Hyd Primary Indic Surfac	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): (S): (is requ	ired; check all that	It apply) Water-S	HYDROLO	Hyd OGY s (B9)	ric Soils Present?	ndary Indicators (minimum of two required)
Sandy 5 cm l Sestrictive L Sype: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed):	he is requ	ired; check all the	tt apply) Water-S Aquatic	HYDROLO Stained Leave Fauna (B13)	Hyd <u>OGY</u> s (B9)	ric Soils Present?	<u>Yes</u> <u> Mary Indicators (minimum of two required)</u> Surface Soil Crack (B6) Drainage Patterns (B10)
Sandy 5 cm 1 Sestrictive L Type: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V Satura	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): (S): (, 33) ne is requ	ired; check all that	It apply) Water-S Aquatic True Ac	IYDROL Stained Leave Pauna (B13) quatic Plants (Hyd OGY s (B9) (B14)	ric Soils Present?	<u>Yes</u> <u> Mary Indicators (minimum of two required)</u> Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Sandy 5 cm l Sestrictive L Type: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V Satura Water	Mucky Material (S1) Mucky Peat or Peat (S (ayer (if observed): (S):	ne is requ	ired; check all tha	It apply) Water-S Aquatic True Ac Hydrog	HYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od	Hyd OGY s (B9) (B14) lor (C1)	ric Soils Present?	problematic Yes Indary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Sandy 5 cm l Sestrictive L Type: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V Satura Water Sedim	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): .ayer (if observed): .s): .s): .s): .so: .	ne is requ	ired: check all the	tt apply) Water-S Aquatic True Ac Hydrog Oxidize	Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher	Hyd OGY (B14) lor (C1) res on Living Ro	ric Soils Present?	Yes ndary 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)
Sandy 5 cm I 5 cm I Restrictive L Type: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): .ayer (and the served): .ayer (and the	ne is requ	ired; check all tha	H At apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc	HYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced	Hyd OGY (B14) lor (C1) res on Living Ro Iron (C4)	ric Soils Present?	Yes Indary 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)
Sandy 5 cm 1 7 c	Mucky Material (S1) Mucky Peat or Peat (S Auger (if observed): S:: rology Indicators: ators (minimum of or te Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4)	he is requ	ired: check all the	H at apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent	IYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio	Hyd OGY (B14) lor (C1) res on Living Ro Iron (C4) on in Tilled Soil	ric Soils Present?	Yes ndary 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)
Sandy 5 cm I 7 spe: Depth (inches Remark Remark Vetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D	Mucky Material (S1) Mucky Peat or Peat (S Auger (if observed): (ayer (if observed): (s): (is requ	ired; check all tha	H at apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M	Etained Leave Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (1	Hyd OGY (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil C7)	ric Soils Present?	Yes ndary 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)
Sandy 5 cm I 7 c	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):	l Imager	y (B7)	It apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge o	IYDROL Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Hyd OGY (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil (C7) (C7)	ric Soils Present?	Yes Indary 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)
Sandy 5 cm 1 7 Restrictive L 7 Pype: Depth (inches Remark Vetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse	Mucky Material (S1) Mucky Peat or Peat (S Aucky Peat or Peat (S) Aucky Peat or Peat (S) Aucky Peat or Peat (S) S): S: S: <td>il Imager e Surface</td> <td>y (B7) (B8)</td> <td>tt apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1</td> <td>IYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Explain in Red</td> <td>Hyd OGY s (B9) (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) marks)</td> <td>ric Soils Present?</td> <td>Yes ndary 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)</td>	il Imager e Surface	y (B7) (B8)	tt apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1	IYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Explain in Red	Hyd OGY s (B9) (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) marks)	ric Soils Present?	Yes ndary 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)
Sandy 5 cm I Second Sec	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): age: rology Indicators: ators (minimum of or ater (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) beposits (B5) ation Visible on Aeria ely Vegetated Concav ations:	l Imager	ired; check all tha	It apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1	IYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Explain in Ren	Hyd OGY (B14) lor (C1) res on Living Rd Iron (C4) on in Tilled Soil (C7) (C7) marks)	ric Soils Present?	Yes Indary 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)
Sandy 5 cm 1 7 million 7 m	Mucky Material (S1) Mucky Peat or Peat (S (ayer (if observed): (a) (if observed): (if obs	ll Imager e Surface	y (B7)	tt apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1	Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Explain in Rei epth (inches):	Hyd OGY s (B9) (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) marks)	ric Soils Present?	Yes ndary 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)
Sandy 5 cm 1 Strictive L Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Sield Observa Surface Wate Water Table I	Mucky Material (S1) Mucky Peat or Peat (S (ayer (if observed): (S):	il Imager e Surface	y (B7)	H at apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge C Other (1) Du	Explain in Rep epth (inches): epth (inches): epth (inches):	Hyd OGY s (B9) (B14) lor (C1) es on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) marks)	ric Soils Present?	Yes ndary 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)



Beal People Re	al Solutions	(Mic	dwest Region)		
Project/Site: Le Su	eur EDA Project	City	y/County: Le Su	ieur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Economic Development	Authority	State	e: Minnesota	Sample Point: W8-A
Investigator(s):	Addeline Theis & Dan Donayre		Section, Tow	nship, Range: Se	ec 17, T112N, R25W
Landforms (hillside,	terrace, etc.): Toeslope		Local Relief	(concave, conve	x, none): Concave
Slope (%): 0-	-2% Latitude:		Longitude:		Datum: Le Sueur
Soil Map Unit Name	: 414-Hamel Loam		NWI Class	ification: None	
Are climatic/hydrolog	gic conditions of the site typical for thi	s time of year?	No	(If no,	explain in remarks)
Are vegetation	, soils , or hy	drology	signif	icantly disturbed	? Are normal circumstances present? Yes
Are vegetation	, soils , or hy	drology	natura	ally problematic?	(If needed, explain any answers in Remarks)
	, solid, resp	SUMMAR	Y OF FINI	DINGS	
Hydro	ophytic vegetation present?	Yes			
Hydri	c soils present?	Yes		Is the sam	oled area within a wetland? Ves
Wetla	nd hydrology present?	Ves		-5 the 5mm	
		105			
<u>Remarks:</u> Antec	edent precipitation was above norm	al during the sit	e visit.		
	VE	GETATION	- Use scientific	names of plants	
		Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum	(Plot size: 30 feet)	% Cover	Species	Status	Number of dominant species
1					that are OBL, FACW, or FAC: 4 (A)
2					Total number of dominant
3					species across all strata: 4 (B)
4					Percent of dominant species that
5					are OBL, FACW or FAC: 100% (A/B)
		0 =	Total Cover		
Sapling/Shrub stratur	<u>m</u> (Plot size: 15 feet)				Prevalence Index Worksheet
1 Salix amygda	aloides	5	Yes	FACW	Total % cover of:
2					OBL Species: 50 $x 1 = 50$
3					FACW Species: $60 x 2 = 120$
4					FAC Species: $0 x 3 = 0$
5					FACU species: 0 x 4 = 0
		5 =	Total Cover		UPL Species: $0 \times 5 = 0$
Herb stratum:	(Plot size: 5 feet)				Totals: 110 (A) 170 (B)
1 Carex stipat	a	35	Yes	OBL	Prevalence Index (B/A): 1.55
2 Phalaris aru	ndinacea	30	Yes	FACW	
3 Solidago giga	antea	25	Yes	FACW	Hydrophytic Vegetation Indicators
4 Iris virginica	1	15	No	OBL	X Rapid test for hydrophytic vegetation
5					X Dominance test >50%
6					\mathbf{X} Prevalence index is $<3.0*$
7					
8					supporting data in remarks)
9 10					Problematic hydrophytic vegetation* (Explain in remarks)
Woody vine stratum:	(Plot size: <u>15 feet</u>)	105 =	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2					Hadaarahadia di di
		0 =	Total Cover		present? Yes
Remarks:					



Real People. Real Solutions.

(Midwest Region) SOILS

	Matrix			Redo	x Features			
Depth	Color (moist)	0/	Color (moist)	0/	Tuno*	L 00**		Derroder
(inches)	10VD 2/1	^{%0}	Color (moist)	70	Type	LOC	Silt Loom	Remarks
15 29	101R 3/1 10VR 2/1	05	7 5VP 4/6	5	C	м	Silt Loam	
15-28+	101 K 2/1	95	7.51K 4/0	5	C	IVI	Sin Loani	
	*Type: C - Concentr	ration D	– Depletion RM	– Redu	red Matrix M	S – Masked Sa	nd Grains **Locatio	n: PI – Pore Lining M – Matrix
ludria Sail	Indicators:	ation, D	- Depietion, Kivi	– Keuu		5 – Maskeu Sa	Indicators	for Problematic Hydric Soils*:
Lyun C Son 1	ol (A1)			Sandy	Cloued Matrix	(S A)	Con	t Prairie Daday (A16)(I DD K I D)
Histis	OI(AI)			Sandy	Dedor (S5)	(34)	Coas	Surface (S7)(LDB K, L)
	Histic (A2)			Sanuy	Motrix (SS)		Dark	Surface (S7)(LKK K, L)
	HISUC (A3)			Surppe	Mualui Matar	+a1 (E1)	Iron-	Shallow Dark Surface (TE12)
	Find Lawren (A5)			Loamy	Gloved Metric	лат (ГТ) х (Е?)	very	r (Explain in remarks)
	Muck (A10)			Doplat	of Matrix (E2)	л (Г <i>2)</i>		(Explain in foliarks)
2 cm	Muck (AIU)	oo (A 11)	<u> </u>	Depiet	Dork Surface) (E6)		
v Thick	Dark Surface (A12)			Doplot	od Dark Surfa	$(\mathbf{F}0)$		
A THICK	Muslay Material (S1)				Doprossions (EQ)	*Indicators	of hydrophytic vegetation and wetland
Salidy	White the state of	,		- Redox	Depressions (1	F0)	liydrolog	problematic
5 am	Muelzy Deat or Deat (S	2)						problematic
5 cm	Mucky Peat or Peat (S	53)						problemate
5 cm	Mucky Peat or Peat (S Layer (if observed):	53)						proteinate
5 cm Restrictive I Гуре:	Mucky Peat or Peat (S Layer (if observed):	33)		<u> </u>		Hyd	Iric Soils Present?	Yes
5 cm 2 Restrictive I Type: Depth (inche	Mucky Peat or Peat (S Layer (if observed): s):	33)				Hyd	lric Soils Present?	Yes
5 cm Restrictive I Type: Depth (inche Remark	Mucky Peat or Peat (S Layer (if observed): s):					Нус	lric Soils Present?	Yes
5 cm Restrictive I Type: Depth (inche <u>Remart</u>	Mucky Peat or Peat (S Layer (if observed): s):			- -		Нус	lric Soils Present?	Yes
5 cm Restrictive I Type: Depth (inche <u>Remark</u> <u>Notland Has</u>	Mucky Peat or Peat (S Layer (if observed): s):			•	HYDROL	Hyd OGY	lric Soils Present?	Yes
5 cm 2 Restrictive I Yype: Depth (inche <u>Remark</u> Vetland Hyd	Mucky Peat or Peat (S Layer (if observed): s): (S): (S): (S): (S): (S): (S): (S): (S	(3)	ired: check all the	-	HYDROL	Hyd	Iric Soils Present?	Yes
5 cm Sestrictive I Suppe: Depth (inche <u>Remark</u> <u>Remark</u> <u>Vetland Hyc</u> <u>rimary India</u> Surfa	Mucky Peat or Peat (S Layer (if observed): s): <u>(S:</u> Irology Indicators: cators (minimum of or ce Water (A1)	is requ	ired; check all that	<u>it apply</u> Water	HYDROL	Hyd OGY	lric Soils Present? 	Yes
5 cm estrictive I ype: Pepth (inche <u>Remark</u> Yetland Hyd Surfac High	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	ne is requ	nired; check all the	at apply Water-	HYDROL Stained Leave	Hyd OGY s (B9)	lric Soils Present? Seco	Yes
5 cm sestrictive I ype: Depth (inche <u>Remark</u> Yetland Hyd rimary India Surfad High X Satura	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	ne is requ	iired; check all the	at apply Water- Aquati	HYDROL() Stained Leave c Fauna (B13)	Hyd OGY s (B9)	lric Soils Present?	Yes
5 cm Exerticitive I Suppe: Depth (inche Remark Vetland Hyd rimary India Surfac High X Satura Water	Mucky Peat or Peat (S Layer (if observed): s): <u>(S:</u> Irology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) Marks (B1)	e is requ	iired; check all tha	tt apply Water- Aquati True A	HYDROLO) Stained Leave c Fauna (B13) quatic Plants (Hyd OGY s (B9) (B14) ler (C1)	lric Soils Present?	<u>Yes</u> <u>ndary Indicators (minimum of two required)</u> Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Cravifich Burrous (C9)
5 cm Restrictive I Sype: Depth (inche Remark /etland Hyd Surfac High X Satura Water Sedin	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	ne is requ	iired; check all the	tt apply Water- Aquati True A Hydrog	HYDROL) Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od od Bhizosphor	Hyd OGY s (B9) (B14) lor (C1)	Iric Soils Present?	Yes
5 cm Restrictive I Type: Depth (inche Remark Vetland Hyd Primary India Surfac High X Satura Water Sedin Drift	Mucky Peat or Peat (S Layer (if observed): s): <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> <u>(S):</u> (S): (S): <u>(S):</u> (S):	ne is requ	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen	HYDROLO) Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher	Hyd OGY (B14) lor (C1) res on Living R	Iric Soils Present?	<u>Yes</u> <u>Mary Indicators (minimum of two required)</u> 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)
5 cm Restrictive I Fype: Depth (inche Remark Remark Vetland Hyd Primary India Surfac High X Satura Water Sedim Drift	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	ne is requ	tired; check all the	at apply Water- Aquati True A Hydrog Oxidiz Presen Record	HYDROL) Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Paduatio	Hyd OGY (B14) (B14) lor (C1) res on Living R Iron (C4)	Iric Soils Present?	<u>Yes</u> <u>Yes</u> <u>ndary Indicators (minimum of two required)</u> 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)
5 cm Restrictive I Type: Depth (inche Remark Vetland Hyd Primary India Surfaa High X Satura Waten Sedim Drift Algal Iron F	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	ne is requ	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin N	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	Hyd OGY (B14) lor (C1) res on Living R Iron (C4) on in Tilled Soil (C7)	Iric Soils Present? Seco X oots (C3) Is (C6)	<u>Yes</u> <u>Yes</u> <u>indary Indicators (minimum of two required)</u> 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) EAC-Neutral Test (D5)
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5 cm 3 Restrictive I Type: Depth (inche Remark Vetland Hyd Primary India Surfac High X Satura Water Sedin Drift 3 Algal Iron I Inund Sparse ield Observ Surface Wate Water Table	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> (c): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u>	ll Imager e Surface <u>N</u>	v (B7) e (B8)	at apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface ((or Well Data (Explain in Res Depth (inches): Depth (inches):	Hyd OGY (B14) (B14) (B14) (B14) (B14) (B14) (B14) (B14) (C1) (B14) (C1) (C1) (C1) (C7) (C7) (C7) (C7) (C7) (C7) (C7) (C7	Iric Soils Present?	Yes



Real People. Re	al Solutions.	(Mid	west Region)		
Project/Site: Le Su	eur EDA Project	City	County: Le Su	eur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Economic Developn	nent Authority	State	e: Minnesota	Sample Point: W8-B
Investigator(s):	Addeline Theis & Dan Donay	re	Section, Town	nship, Range: Se	e 17, T112N, R25W
Landforms (hillside, t	terrace, etc.): Footslope		Local Relief	(concave, conve	x, none): Concave
Slope (%): 5	Latitude:		Longitude:		Datum: Le Sueur
Soil Map Unit Name	: 106C2-Lester Loam		NWI Classi	ification: None	
Are climatic/hydrolog	gic conditions of the site typical f	for this time of year?	No	(If no,	explain in remarks)
Are vegetation	X , soils ,	or hydrology	signif	icantly disturbed	? Are normal circumstances present? No
Are vegetation	, soils ,	or hydrology	natura	ally problematic?	(If needed, explain any answers in Remarks)
		SUMMARY	Y OF FIND	DINGS	
Hydro	phytic vegetation present?	No			
Hydrid	c soils present?	No		Is the samp	oled area within a wetland? <u>No</u>
Wetla	nd hydrology present?	No			
<u>Remarks:</u> Antec	edent precipitation was above a	normal during the site	visit. Vegetati	names of plants	ly distrubed by agriculutre row crops.
		Absoluto	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum	(Plot size: 30 feet)	% Cover	Species	Status	Number of dominant spacios
1			1		that are OBL, FACW, or FAC: (A)
2					Total number of dominant
3					species across all strata: (B)
4					Percent of dominant species that
5					are OBL, FACW or FAC: 0% (A/B)
		0 =1	Fotal Cover		
Sapling/Shrub stratun	<u>n</u> (Plot size: <u>15 feet</u>)				Prevalence Index Worksheet
1					Total % cover of:
2					OBL Species: 0 x 1 = 0
3					FACW Species: 0 x 2 = 0
4					FAC Species: $0 x 3 = 0$
5					FACU species: 0 x 4 = 0
		0 =1	Fotal Cover		UPL Species: 35 $x 5 = 175$
Herb stratum:	(Plot size: 5 feet)				Totals: <u>35</u> (A) <u>175</u> (B)
1 Zea mays 2		35		UPL	Prevalence Index (B/A): 5.00
3					Hydrophytic Vegetation Indicators
4					Rapid test for hydrophytic vegetation
5					Dominance test >50%
6					Prevalence index is $\leq 3.0^*$
78					Morphological adaptations* (Provide supporting data in remarks)
9 10					Problematic hydrophytic vegetation* X (Explain in remarks)
Woody vine stratum:	(Plot size: 15 feet)		fotal Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2		0 =1	Fotal Cover		Hydrophytic vegetation present? No
		<u> </u>			
Remarks: Row of	rops planted and no indiciation	n of hydrophytic veget	ation at sampl	e point elevation	n.



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(Midwest Region)

	Matrix		in needed to doet	Redox	Features		absence of indicato	
Depth (inches)	Color (moist)	0/2	Color (moist)	0%	Type*	Loc**	Toyturo	Bomorko
	10VP 3/2	100	Color (moist)	70	турс	Loc	Silty Clay	Kemarks
0-18	101 K 3/2	100					Silty Clay	
18-32+	10 Y K 2/1	100					Sitty Clay	
	*Type: C = Concentr	ation, D	= Depletion, RM	= Reduc	ed Matrix, M	S = Masked Sar	nd Grains. **Locatio	n: PL = Pore Lining, M = Matrix
ydric Soil 1	Indicators:						Indicators	for Problematic Hydric Soils*:
Histis	ol (A1)			Sandy	Gleyed Matrix	x (S4)	Coast	Prairie Redox (A16)(LRR K,L,R)
Histic	Epipedon (A2)			Sandy	Redox (S5)		Dark	Surface (S7)(LRR K, L)
Black	Histic (A3)			Strippe	d Matrix (S6)		Iron-J	Manganese Masses (F12)(LRR K, L, R)
Hvdro	gen Sulfide (A4)			Loamv	Mucky Mater	rial (F1)	Verv	Shallow Dark Surface (TF12)
Stratif	ied Lavers (A5)			Loamv	Gleved Matri	x (F2)	Other	(Explain in remarks)
2 cm]	Muck $(A10)$			Denlet	ed Matrix (F3))		
 Deple	ted Below Dark Surfa	$c_{\Theta}(\Lambda 11)$		- Pedox	Dark Surface	(E6)		
Depte	Dork Surface (A12)		·	Doplot	Dark Surface	$(\mathbf{F}7)$		
	Dark Surface (A12)			Depieu			*Indicators	of hydrophytic vegetation and wetland
Thick Dark Surface (A12) Sandy Mucky Material (S1)				Redox	Depressions (I	F8)	nyarolog	y must be present, unless disturbed or
Sandy	Mucky Material (S1)			-				problematic
Sandy 5 cm l	Mucky Material (S1) Mucky Peat or Peat (S	33)		-				problematic
Sandy 5 cm I Restrictive I	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):	33)		• • • • • • • • • • • • • • • • • • •				problematic
Sandy 5 cm I Restrictive I	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):	33)		-		Hyd	ric Soils Present?	problematicNo
Sandy 5 cm 1 Restrictive I Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):	3)				Hyd	ric Soils Present?	problematic <u>No</u>
Sandy 5 cm 1 Restrictive I Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):	(3)				Hyd	ric Soils Present?	problematic <u>No</u>
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): S):			- -		Hyd	ric Soils Present?	problematic <u>No</u>
Sandy 5 cm 1 estrictive I ype: epth (inches <u>Remark</u>	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (s): (S): (S): (S): (S): (S): (S): (S): (S	33)		· · ·	HYDROL	Hyd OGY	ric Soils Present?	problematic <u>No</u>
Sandy 5 cm 1 sestrictive I ype: Pepth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): S): S: Irology Indicators:	33)			HYDROL	Hyd OGY	ric Soils Present?	problematic <u>No</u>
Sandy 5 cm 1 estrictive I ype: epth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): S): SS: SS: SS: SS: SS: SS: SS: SS: S	i3)	ired; check all that]	HYDROL	Hyd OGY	ric Soils Present?	problematic <u>No</u> ndary Indicators (minimum of two required
Sandy 5 cm 1 sestrictive I ype: Pepth (inchest Remark Zetland Hyd rimary Indic Surfac	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired; check all that] at apply Water-	HYDROLO Stained Leave	Hyd OGY s (B9)	ric Soils Present?	ndary Indicators (minimum of two required Surface Soil Crack (B6)
Sandy 5 cm 1 estrictive I ype: epth (inches Remark etland Hyd rimary Indic Surfac High ¹	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (s):	i3)	ired; check all the	tt apply) Water- Aquati	HYDROL(Stained Leave c Fauna (B13)	Hyd OGY s (B9)	ric Soils Present?	ndary Indicators (minimum of two required Surface Soil Crack (B6) Drainage Patterns (B10)
Sandy 5 cm 1 sestrictive I ype: Pepth (inchest Remark retland Hyd rimary Indic Surfac High ' Satura	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired: check all the	t apply) Water- Aquati- True A	HYDROLO Stained Leave c Fauna (B13) quatic Plants (Hyd OGY s (B9) (B14)	ric Soils Present?	ndary Indicators (minimum of two required Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Sandy 5 cm 1 sestrictive I ype: bepth (inchest Remark retland Hyd rimary Indic Surfac High ' Satura Water	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired; check all the	t apply Water- Aquati True A	HYDROLO Stained Leave c Fauna (B13) quatic Plants (tren Sulfide Od	Hyd OGY (B14)	ric Soils Present?	ndary Indicators (minimum of two required Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Cravfish Burrows (C8)
Sandy 5 cm 1 5 cm 1 sestrictive I ype: Pepth (inchest Remark Yetland Hyd rimary Indic Surfac High ' Satura Water Sedim	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired; check all the	tt apply) Water- Aquation True A Hydrog	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od	Hyd OGY (B14) lor (C1) res on Living Ro	ric Soils Present?	No No Mary 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 (CC
Sandy 5 cm 1 5 cm 1 vype: Pepth (inchest Remark Vetland Hyd rimary Indic Surfac High Satura Water Sedim Drift 1	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired; check all tha	lt apply Water- Aquati True A Hydrog Oxidize	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher	Hyd OGY (B14) lor (C1) res on Living Ro	ric Soils Present?	<u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>No</u> <u>Surface Soil Crack (B6)</u> <u>Drainage Patterns (B10)</u> <u>Dry-Season Water Table (C2)</u> <u>Crayfish Burrows (C8)</u> <u>Saturation Visible on Aerial Imagery (C9</u> <u>Stuntad or Stresced Plante (D1)</u>
Sandy 5 cm 1 5 cm 1 2 setrictive I 2 pepth (inchest Pepth (inchest Remark 7 7 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 7 8 7 8 7 7 8 7 8 7 8 7 1 1 1 1	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	i3)	ired; check all the	at apply) Water- Aquati True A Hydrog Oxidize Presence	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced	Hyd OGY (B9) (B14) lor (C1) res on Living Ro Iron (C4)	ric Soils Present?	No No No No No No Nature Content 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)
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchese Remark 7 yetland Hyd rimary Indic Surfac High Satura Water Sedim Drift 1 Algal Loop F	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	e is requ	ired: check all the	tt apply) Water- Aquati True A Hydrog Oxidiz Presend Recent	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	Hyd OGY (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soil:	ric Soils Present?	No No No Mary 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) EAC Neutral Table (C5)
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchese Remark Vetland Hyd Primary Indic Surfac High Satura Water Sedim Drift 1 Algal Iron E	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	e is requ	ired; check all tha	lt apply Water- Aquati True A Hydrog Oxidize Present Recent Thin M	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (Hyd OGY (B14) lor (C1) res on Living Ro Iron (C4) on in Tilled Soils (C7)	ric Soils Present?	No No No No No No No No No 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)
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Remark 7 retland Hyd rimary Indic Surfac High ' Satura Water Sedim Drift 1 Algal Iron E Inund:	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	l Imager	y (B7)	l at apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (f or Well Data (Hyd OGY (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soils (C7) (C7)	ric Soils Present?	No No No No No No No No No No No 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)
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchese Remark remark remary Indic Surfac High Satura Water Sedim Orift 1 Algal Iron E Inunda Sparse	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	ll Imager: e Surface	y (B7) (B8)	tt apply) Water- Aquati True A Hydrog Oxidiz Present Thin M Gauge Other (HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (f or Well Data (Explain in Ref	Hyd OGY (B14) (B14) (or (C1) (cr) (cr) (cr) (cr) (cr) (cr) (cr) (cr	ric Soils Present?	No No Mary 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)
Sandy 5 cm 1 Sectrictive I Restrictive I Pype: Depth (inchest Remark Vetland Hyd Primary Indic Surfac High Satura Water Sedim Drift 1 Algal Iron E Inund: Sparse ield Observe	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	l Imager	y (B7) (B8)	at apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (f or Well Data (Explain in Ref	Hyd OGY (B14) (B14) (or (C1) (cr) (C1) (cr) (C7) (c7) (c7) (c7) (c7)	ric Soils Present?	No No No No No No No No No No No 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)
Sandy 5 cm 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Mucky Material (S1) Mucky Peat or Peat (S cayer (if observed): (S):	l Imager e Surface	y (B7)	tt apply) Water- Aquati True A Hydrog Oxidize Presend Recent Thin M Gauge Other (HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (f or Well Data (Explain in Rei epth (inches):	Hyd OGY (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soil: (C7) (C7) (C7) marks)	ric Soils Present?	No ndary 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)
Sandy 5 cm 1 Sestrictive I Cype: Depth (inchest Remark Vetland Hyd Primary Indic Surface Water Sedim Drift 1 Algal Iron E Inunda Sparse Surface Wate Vater Table	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): (S):	l Imager e Surface	y (B7) (B8) o es	tt apply) Water- Aquation True A Hydrog Oxidize Presend Recent Thin M Gauge Other (D D	HYDROLO Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (or Well Data (Explain in Ref epth (inches): epth (inches):	Hyd OGY (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soils (C7) (C7) marks) 26	ric Soils Present?	No



Real People. Rea	al Solutions.		(Mi	dwest Region)		
Project/Site: Le Su	eur EDA Proje	ect	Cit	y/County: Le Su	ieur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Eco	onomic Development	Authority	Stat	e: Minnesota	Sample Point: W1-B
Investigator(s):	Addeline The	eis & Dan Donayre		Section, Tow	nship, Range: Se	ec 17, T112N, R25W
Landforms (hillside, t	errace, etc.):	Footslope/backslope	edge	Local Relief	(concave, conve	x, none): Linear
Slope (%): 2-	4%	Latitude:		Longitude:		Datum: Le Sueur
Soil Map Unit Name:	414-Hamel L	oam		NWI Class	ification: None	
Are climatic/hydrolog	gic conditions o	f the site typical for thi	s time of year?	No	(If no,	explain in remarks)
Are vegetation	X, soils	, or hy	drology	signif	ficantly disturbed	? Are normal circumstances present? No
Are vegetation	, soils	, or hy	drology	natura	ally problematic?	(If needed, explain any answers in Remarks)
			SUMMAR	RY OF FINI	DINGS	
Hydro	phytic vegetation	on present?	No			
Hydric	soils present?	-	Yes		Is the samp	oled area within a wetland? No
Wetlar	nd hydrology pi	resent?	No		-	
	<i>v</i> 0 <i>v</i> 1					
Remarks: Antec	edent precipita	ation was above norm	al during the sit	te visit. Vegetat	ion is signficant	ly disturbed by agriculture row crops.
		VE		[
		V E	GEIAIION	- Use scientific	names of plants	Dominanga Tast Warkshoot
Trac Stratum	(Plot size)	20 (Absolute	Dominant	Indicator	Dominance Test Worksheet
	(Flot size.	30 feet)	% Cover	Species	Status	Number of dominant species
1					·	that are OBL, FACW, or FAC: \mathbf{I} (A)
2					. <u></u>	Total number of dominant
3			<u> </u>			species across all strata: <u>2</u> (B)
4						Percent of dominant species that
5						are OBL, FACW or FAC: 50% (A/B)
	(D1)		0 =	=Total Cover		
Sapling/Shrub stratum	<u>1</u> (Plot size:	15 feet)	_			Prevalence Index Worksheet
1 Acer negundo	0		5	Yes	FAC	Total % cover of:
2						OBL Species: 0 x 1 = 0
3					·	FACW Species: $0 x 2 = 0$
4						FAC Species: $5 x 3 = 15$
5						FACU species: $5 x 4 = 20$
			5 =	=Total Cover		UPL Species: 25 x 5 = 125
Herb stratum:	(Plot size:	5 feet)				Totals: 35 (A) 160 (B)
1 Zea mays			25	Yes	UPL	Prevalence Index (B/A): 4.57
2 Chenopodium	n album		5	No	FACU	
3						Hydrophytic Vegetation Indicators
4						Rapid test for hydrophytic vegetation
5						\mathbf{X} Dominance test >50%
6						Prevalence index is $\leq 3.0^*$
7						Morphological adaptations* (Provide
8						supporting data in remarks)
9						Problematic hydrophytic vegetation*
10						(Explain in remarks)
			30	=Total Cover		*Indicators of hydric soil and method hydrole
Woody vine stratum:	(Plot size:	15 feet)	_			multators of nyuric soft and wetland nydrology must be present, unless disturbed or problematic
1						
2						Hydrophytic vegetation
			0 =	=Total Cover		present? <u>No</u>
						·
Remarks: No hy	drophytic spei	ces within rows.				



Real People. Real Solutions.

(Midwest Region)

Prome Desci	ription: (Describe to	ine acpt	n needed to docu		ne mulcator o		absence of mulcato	
Depth	Matrix			Redo	c Features			
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	10YR 2/1	100					Clay Loam	1
10-24+	10YR 5/1	100					Clay Loam	1
	†						-	+
	 	+						+
	+	+	·					+
	+	╉──╁						+
	<u> </u>	╉━─┤		┟───┤		1		+
	╂─────	╉──┤		 				<u> </u>
		ليب						
	*Type: C = Concentra	ation, D	= Depletion, RM	= Reduc	ed Matrix, M	S = Masked Sa	nd Grains. **Locatio	n: PL = Pore Lining, M = Matrix
Hydric Soil I	indicators:						Indicators	for Problematic Hydric Soils*:
Histise	ol (A1)			Sandy	Gleyed Matrix	x (S4)	Coas	Prairie Redox (A16)(LRR K,L,R)
Histic	Epipedon (A2)			Sandy	Redox (S5)		Dark	Surface (S7)(LRR K, L)
Black	Histic (A3)		-	Strippe	d Matrix (S6)		Iron-	Manganese Masses (F12)(LRR K, L, R)
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)	Very	Shallow Dark Surface (TF12)
Stratif	ried Layers (A5)			Loamy	Gleyed Matrix	x (F2)	Other	(Explain in remarks)
2 cm l	Muck (A10)			Deplet	ed Matrix (F3))		
X Deple	ted Below Dark Surfa	ce (A11)		Redox	Dark Surface	(F6)		
X Thick	Dark Surface (A12)			Deplet	ed Dark Surfac	ce (F7)	*Indiantor	- flor-learly the respectation and motiond
4 - -	Dun Surrice, ,				Doprossions (I	E9)	*Indicators	of hydrophytic vegetation and wedand
Sandy	Mucky Material (S1)			RedOX	· · · · · · · · · · · · · · · · · · ·	HA1		must be present linless distlipped or
Sandy	Mucky Material (S1)	3)		Redox	Depressions (1	Fð)	liydrolog	problematic
Sandy 5 cm N	Mucky Material (S1) Mucky Peat or Peat (S	3)		Redox		F8)	nyurolog	problematic
Sandy 5 cm l Restrictive L	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed):	3)		Redox		rð)	nyulolog	problematic
Sandy 5 cm l Restrictive L Type:	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):	3)		Redox		га) Нус	lric Soils Present?	y must be present, unless disturbed or problematic
Sandy 5 cm l Restrictive L Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):	3)				го) Нус	lric Soils Present?	y must be present, unless disturbed or problematic
Sandy 5 cm l Restrictive L Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): 	3)				F8) Hyd	lric Soils Present?	y must be present, unless disturbed or problematic
Sandy 5 cm l Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):): <u>S:</u>					F8) Hyd	lric Soils Present?	y must be present, unless disturbed or problematicYes
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): ;):	3)			HYDROLO	Hyd OGY	Iric Soils Present?	You be present, unless disturbed or problematic
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Vetland Hyd	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): S): S): Tology Indicators:	3)			HYDROLO	Hyd OGY	lric Soils Present?	Y must be present, unless disturbed or problematicYes
Sandy 5 cm 1 7 Som 1 7	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): s): rology Indicators: ators (minimum of on	3)	ired; check all that	t apply	HYDROLO	Hyd	Iric Soils Present?	Yes
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): s): 	3) <u>e is requ</u>	ired; check all tha	it apply Water-	HYDROL(нус ОGY s (B9)	Iric Soils Present?	y must be present, unless disturbed or problematic
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Vetland Hyd Primary Indic Surfac High V	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): s): s): s: s: rology Indicators: ators (minimum of on water (A1) Water Table (A2)	3)	ired; check all tha	tt apply Water- Aquati	HYDROLO 2 Stained Leaves c Fauna (B13)	Hyd OGY s (B9)	lric Soils Present?	y must be present, unless disturbed or problematic <u>Yes</u> udary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10)
Sandy 5 cm 1 7 spe: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): 	3)	ired; check all tha	tt apply Water- Aquati True A	HYDROLO Stained Leaves c Fauna (B13) quatic Plants (Hyd OGY s (B9) (B14)	Iric Soils Present?	Yes Yes Yes Value of the second star of the seco
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): 	3)	ired; check all tha	tt apply Water- Aquati True A Hydrog	HYDROLO Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od	• (B9) (B14) lor (C1)	Iric Soils Present?	y must be present, unless disturbed or problematic Yes
Sandy 5 cm 1 Restrictive L Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (s):	3)	ired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz	HYDROLO Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere	Hyd OGY s (B9) (B14) lor (C1) res on Living Ro	Iric Soils Present?	Yes Yes udary 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)
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): 	3)	ired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen	HYDROLA Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphera ze or Reduced	F8) Hyd OGY (B14) lor (C1) es on Living R Iron (C4)	Iric Soils Present?	Yes
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal	Mucky Material (S1) Mucky Peat or Peat (S 	e is requ	ired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presena Recent	HYDROLO Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reductio	F8) Hyd OGY (B14) lor (C1) es on Living R Iron (C4) on in Tilled Soil	Iric Soils Present?	<u>Yes</u> <u>Yes</u> <u>Mary Indicators (minimum of two required)</u> 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	3)	ired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Present Recent	HYDROLA Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ze or Reduced Iron Reductio luck Surface (((B14) (B14) (B14) (Ior (C1) (Ior (C1) (Iron (C4) (Ior (C4) (C7)	Iric Soils Present?	<u>Yes</u> <u>Yes</u> <u>Yes</u> <u>Yes</u> <u>Yes</u> <u>Surface Soil Crack (B6)</u> 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) EAC-Neutral Test (D5)
Sandy 5 cm 1 Restrictive I Type: Depth (inchess Remark Wetland Hyd Primary Indic Surfac High V Satura Water Satura Contro D Sedim Drift I Algal Iron D	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	e is requ	ired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M	HYDROLA EXAMPLE 2 HYDROLA Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reductio luck Surface ((cr Wall Data (Hyd OGY (B14) lor (C1) es on Living R Iron (C4) on in Tilled Soil (C7)	bric Soils Present?	Yes Yes udary 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)
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Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	3) e is requ e is requ Surface	<u>v (B7)</u>	tt apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (HYDROLO HYDROLO Stained Leaves c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reduction luck Surface ((or Well Data (Explain in Rei	Hyd OGY s (B9) (B14) lor (C1) res on Living Ru Iron (C4) on in Tilled Soil (C7) (C7) marks)	Iric Soils Present?	y must be present, unless disturbed or problematic Yes ydary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse	Mucky Material (S1) Mucky Peat or Peat (S 	3)	y (B7)	tt apply Water- Aquati True A Hydrog Oxidiz Present Thin M Gauge Other (HYDROLA) Stained Leave: c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reductioo Iuck Surface ((or Well Data (Explain in Ref	Hyd OGY s (B9) (B14) lor (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	Iric Soils Present?	Yes
Sandy 5 cm 1 Restrictive I Type: Depth (inchess Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Field Observa Surface Wate	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed): 	1 Imager Surface	v (B7) (B8)	tt apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (HYDROLA) Stained Leave: c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reduction Iuck Surface (C or Well Data (Explain in Ref bepth (inches):	Hyd OGY (B14) (B14) (or (C1) res on Living Re Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	Iric Soils Present?	y must be present, unless disturbed or problematic
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Field Observa Surface Wate	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):	1 Imager e is requ Surface	uired; check all that y (B7) (B8) 0 0	tt apply Water- Aquati True A Hydrog Oxidiz Presend Recent Thin M Gauge Other (HYDROLO HYDROLO Stained Leave: c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizosphere ce or Reduced Iron Reduction Iuck Surface ((or Well Data (Explain in Rei vepth (inches): vepth (inches):	Hyd OGY s (B9) (B14) lor (C1) res on Living Ru Iron (C4) on in Tilled Soil (C7) (C7) marks)	Iric Soils Present?	y must be present, unless disturbed or problematic Yes ydary 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) Indicators of Wetland Hydrology Present?



Real People, Re	al Solutions.	(Mie	dwest Region)		
Project/Site: Le Su	eur EDA Project	Cit	y/County: Le Su	ieur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Economic Development	Authority	State	e: Minnesota	Sample Point: Site 2
Investigator(s):	Addeline Theis & Dan Donayre		Section, Tow	nship, Range: Se	ec 17, T112N, R25W
Landforms (hillside, t	terrace, etc.): Footslope		Local Relief	(concave, conve	ex, none): Concave
Slope (%): 0-	5% Latitude:		Longitude:		Datum: Le Sueur
Soil Map Unit Name	: 123-Dundas silt loam		NWI Class	ification: None	
Are climatic/hydrolog	gic conditions of the site typical for th	is time of year?	No	(If no,	explain in remarks)
Are vegetation	, soils , or hy	drology	signif	icantly disturbed	Are normal circumstances present? Yes
Are vegetation	, soils , or hy	drology	natura	ally problematic?	? (If needed, explain any answers in Remarks)
	,,	SUMMAR	RY OF FINI	DINGS	
Hvdro	phytic vegetation present?	Yes			
Hydrid	c soils present?	Ves		Is the same	nled area within a wetland? No
Wetla	nd hydrology present?	<u></u> <u>No</u>			
	na nyarology present.	110			
<u>Remarks:</u> Antec	edent precipitation was above norn	nal during the sit	te visit.		
	VE	GETATION	- Use scientific	names of plants	
		Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum	(Plot size: 30 feet)	% Cover	Species	Status	Number of dominant species
1			Ĩ		that are OBL, FACW, or FAC: 4 (A)
2					Total number of dominant
3					species across all strata: 4 (B)
4					Demonst of dominant encodes that
5					are OBL, FACW or FAC: 100% (A/B)
			=Total Cover		()
Sapling/Shrub stratun	n (Plot size: 15 feet)				Prevalence Index Worksheet
1 Acer negund		25	Ves	FAC	Total % cover of:
2 Populus delta	vides		Ves	FAC	OBL Species: $0 \times 1 = 0$
	Jues		105		FACW Species: 85 $x_2 = 170$
3				. <u></u>	$\frac{1100}{\text{EAC Species:}} \frac{40}{10} = \frac{120}{120}$
4 				<u> </u>	$FACU \text{ species:} 0 \qquad \text{ and } 0$
5			Tetel Comm		$\begin{array}{c} 1 \text{ Act species:} 0 \qquad x \neq = 0 \\ 1 \text{ IPL Species:} 0 \qquad z \neq 5 \qquad 0 \end{array}$
Harb stratum	(Diotaiza)	40 =	=1 otal Cover		$\begin{array}{c} \text{OFL Species.} 0 \mathbf{X} 5 = 0 \\ \text{Totals:} 125 (\mathbf{A}) 200 (\mathbf{B}) \end{array}$
	(Flot size. 5 feet)		X 7	EA CUU	$\frac{1}{125} (A) = \frac{290}{290} (B)$
1 Solidago giga	antea		1 es	FACW	Prevalence Index (B/A): 2.32
2 Phalaris aru	ndinacea		Y es	FACW	
3 Taraxacum o	officinale			FACU	Hydrophytic Vegetation Indicators
4 Achillea mill	efolium	10	No	FACU	Rapid test for hydrophytic vegetation
5 Plantago maj	jor	5	No	FAC	A Dominance test >50%
6				<u> </u>	X Prevalence index is $\leq 3.0^*$
78					Morphological adaptations* (Provide supporting data in remarks)
9 10					Problematic hydrophytic vegetation* (Explain in remarks)
Woody vine stratum:	(Plot size: <u>15 feet</u>)	115 =	=Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2					
		0 =	=Total Cover		present? Yes
Remarks:					



Real People. Real Solutions.

(Midwest Region) SOILS

TTOILE DESCI		ine aept	in necucu to uocu				absence of ma	incutor 5	7
Depth	Matrix	T		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-19	10YR 2/1	100					Clay Loa	m	
19-29	10YR 3/2	100	4//		~		Silty Cla	y	
29-48+	1-YR 2/2	90	7.5YR 4/6	10	С	М	Silty Cla	y	
	ļ								
						1			
						-			
						ļ			
	*Type: C = Concentra	ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked Sa	nd Grains. **Le	ocation:	PL = Pore Lining, M = Matrix
Hydric Soil I	Indicators:						Indica	ntors for	r Problematic Hydric Soils*:
Histis	ol (A1)			Sandy	Gleyed Matrix	x (S4)		Coast P	Prairie Redox (A16)(LRR K,L,R)
Histic	Epipedon (A2)			Sandy	Redox (S5)			Dark Su	urface (S7)(LRR K, L)
Black	Histic (A3)		-	Strippe	ed Matrix (S6)			Iron-Ma	anganese Masses (F12)(LRR K, L, R)
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)		Very Sł	nallow Dark Surface (TF12)
Stratif	fied Layers (A5)			Loamy	Gleyed Matri	x (F2)		Other (I	Explain in remarks)
2 cm 1	Muck (A10)		-	Deplet	ed Matrix (F3))	—		
Deple	ted Below Dark Surfa	ce (A11)	·	Redox	Dark Surface	(F6)			
X Thick	Dark Surface (A12)			Deplet	ed Dark Surfa	ce (F7)	*Indic	cators of	f hydrophytic vegetation and wetland
X Thick Dark Surface (A12)					Depressions (F8)	hyd	rology r	nust be present, unless disturbed or
Sandy Mucky Material (S1)									
Sandy 5 cm I	Mucky Peat or Peat (S	3)		•					problematic
Sandy 5 cm l Restrictive L	Mucky Peat or Peat (S aver (if observed):	3)		-	<u> </u>				problematic
Sandy 5 cm l Restrictive L Type:	Mucky Peat or Peat (S Layer (if observed):	3)				Hvd	ric Soils Prese	ent?	problematic Ves
Sandy 5 cm l Restrictive L Type: Depth (inches	Mucky Peat or Peat (S Layer (if observed):	3)				Hyd	lric Soils Prese	ent?	problematic Yes
Sandy 5 cm I Restrictive L Type: Depth (inches	Mucky Peat or Peat (S Layer (if observed):	3)				Hyd	lric Soils Prese	ent?	problematic Yes
Sandy 5 cm l Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Peat or Peat (S Layer (if observed): (S)	3) ed the do	eeper down. 48in	is the s	start of the tra	Hyd ansition zone.	ric Soils Prese	ent?	problematic <u>Yes</u>
Sandy 5 cm l Restrictive L Type: Depth (inches <u>Remark</u>	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): S S S S More deplete	3) ed the do	eeper down. 48in	is the s	start of the transformed by the start of the transformed by the start of the transformed by the start of the	Hyd ansition zone. OGY	lric Soils Prese	ent?	problematic <u>Yes</u>
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd	Mucky Peat or Peat (S) Mucky Peat or Peat (S ayer (if observed): S): More deplete Irology Indicators:	3) ed the do	eeper down. 48in	is the s	start of the transformed by the start of the transformed by the start of the transformed by the start of the	Hyd ansition zone. OGY	lric Soils Prese	ent?	problematic <u>Yes</u>
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): S): More deplete Size More deplete Calory Indicators: Cators (minimum of on	3) ed the de	eeper down. 48in	is the s	start of the trans HYDROL	Hyd ansition zone. OGY	lric Soils Prese	ent?	problematic <u>Yes</u> ary Indicators (minimum of two required)
Sandy 5 cm 1 Restrictive I Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac	Mucky Peat or Peat (S) Mucky Peat or Peat (S) ayer (if observed): (S)	3) ed the do	eeper down. 48in	is the s	start of the trans HYDROL) Stained Leave	Hyd ansition zone. OGY -s (B9)	lric Soils Prese	ent?	problematic <u>Yes</u> ary Indicators (minimum of two required) Surface Soil Crack (B6)
Sandy 5 cm l Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do	eeper down. 48in	is the s it apply Water- Aquati	start of the trans HYDROL Stained Leave c Fauna (B13)	Hyd ansition zone. OGY (B9)	lric Soils Prese	ent?	problematic <u>Yes</u> ary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10)
Sandy 5 cm l 7 Som l Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): S): More deplete S): Trology Indicators: Cators (minimum of on Cators (Mater (A1)) Water Table (A2) ttion (A3)	3) ed the de	eeper down. 48in	is the s at apply Water- Aquati True A	start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (Hyd ansition zone. OGY es (B9)) (B14)	lric Soils Prese	ent? <u>Second</u>	problematic <u>Yes</u> ary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10) Drv-Season Water Table (C2)
Sandy 5 cm 1 Restrictive L Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do	eeper down. 48in ired: check all tha	is the s it apply Water- Aquati True A Hvdrog	start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (pen Sulfide Od	Hyd ansition zone. OGY (B14) dor (C1)	lric Soils Prese	ent?	Yes ary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Cravfish Burrows (C8)
Sandy 5 cm 1 Restrictive I Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water Sedim	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): (S	3) ed the de	eeper down. 48in	is the s is the s water- Aquati True A Hydrog Oxidiz	start of the trans HYDROL Stained Leave c Fauna (B13) quatic Plants of gen Sulfide Od ed Rhizospher	Hyd ansition zone. OGY (B14) dor (C1) res on Living Ro	hric Soils Prese	Second:	problematic Yes ary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Satura Sedim Drift I	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do	eeper down. 48in	is the s t apply Water- Aquati True A Hydrog Oxidiz Presen	start of the trans HYDROL Stained Leave c Fauna (B13) quatic Plants of gen Sulfide Od ed Rhizospher ce or Reduced	Hyd ansition zone. OGY (B14) (B14) dor (C1) res on Living Ro Iron (C4)	bots (C3)	<u>Seconda</u>	Yes ary 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) Sunted or Stressed Plants (D1)
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Sandy 5 cm 1 Restrictive I Type: Depth (inches <u>Remark</u> Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): (S	3) ed the de	eeper down. 48in	is the s is the s ut apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M	start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants of gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (Hyd ansition zone. OGY es (B9)) (B14) lor (C1) res on Living R Iron (C4) on in Tilled Soil (C7)	bric Soils Prese	<u>Second</u>	Yes ary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High Satura Water Sedim Drift I Algal Iron D Inunda	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do e is requ	eeper down. 48in	is the s is the s it apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge	start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (or Well Data (Hyd ansition zone. OGY (B14) dor (C1) res on Living Ru Iron (C4) on in Tilled Soil (C7)	bric Soils Prese	<u>Second</u>	Yes ary 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)
Sandy Sandy Source Sour	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): (S	3) ed the de e is requ l Imager	eeper down. 48in	is the s is the s water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants of gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (or Well Data of Explain in Re	Hyd ansition zone. OGY (B14) (B14) (B14) (C1) res on Living Re Iron (C4) on in Tilled Soil (C7) (C7) marks)	bots (C3)	ent? Second:	Yes ary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Field Observe	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do e is requ l Imager e Surface	eeper down. 48in	is the s is the s it apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (or Well Data (Explain in Re	Hyd ansition zone. OGY (B14) (B14) dor (C1) res on Living Ru Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	bric Soils Prese	<u>Seconda</u>	Yes ary 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)
Sandy Sandy Source Sour	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): (S	3) ed the de e is requ l Imager, e Surface	eeper down. 48in ired; check all tha y (B7) (B8)	is the s is the s it apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reduction fuck Surface (or Well Data (Explain in Re	Hyd ansition zone. OGY (B14) (B14) (B14) (C1) res on Living Re Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	boots (C3)	ent?	Yes ary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Field Observa Surface Wate	Mucky Peat or Peat (S1) Mucky Peat or Peat (S Layer (if observed): (S	3) ed the de e is requ l Imager; e Surface N	eeper down. 48in	is the s is the s it apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (start of the tra HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (or Well Data (Explain in Re Depth (inches):	Hyd ansition zone. OGY (B14) (B14) (B14) (B14) (C1) (C1) (C1) (C1) (C1) (C7) (C7) (C7) (C7) (C7) (C7) (C7) (C7	bric Soils Prese	ent?	Yes ary 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)
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift I Algal Iron D Inunda Sparse Field Observa Surface Wate	Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer (if observed): (S	3) ed the do e is requ l Imager e Surface N N	eeper down. 48in ired; check all tha y (B7) (B8)	is the s is the s it apply Water- Aquati True A Hydrog Oxidiz Present Thin M Gauge Other (start of the tra HYDROL(Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reduction fuck Surface (or Well Data (Explain in Re Depth (inches): Depth (inches):	Hyd ansition zone. OGY (B14) (B14) dor (C1) res on Living Ru Iron (C4) on in Tilled Soil (C7) (C7) (marks)	boots (C3) s (C6)	ent?	yes ary 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)



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Project/Site: Le Su	eur EDA Projec	t		City/Co	ounty: Le S	ueur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Econ	omic Develop	ment Authority	-	Sta	te: Minnesota	Sample Point: Site 5
Investigator(s):	Addeline Theis	& Dan Dona	yre	S	ection, Tow	nship, Range: Se	ec 17, T112N, R25W
Landforms (hillside, t	terrace, etc.):	Hillside			Local Relie	f (concave, conve	x, none): Linear
Slope (%): 0-	2%	Latitude:		I	Longitude:		Datum: Le Sueur
Soil Map Unit Name:	106C2-Lester I	Loam		-	NWI Clas	sification: None	
Are climatic/hydrolog	gic conditions of	the site typical	for this time of ye	ear?	No	(If no,	explain in remarks)
Are vegetation	X , soils		, or hydrology	-	signi	ficantly disturbed	? Are normal circumstances present? No
Are vegetation	. soils		, or hydrology		natu	ally problematic?	(If needed, explain any answers in Remarks)
			SUMN	ARY	OF FIN	DINGS	
Hydro	phytic vegetation	present?	Yes				
Hvdrid	soils present?	1	No	-		Is the same	oled area within a wetland? No
Wetlan	nd hydrology pres	sent?	Yes	-		F	
	ne nyerology pres			-			
<u>Remarks:</u> Antec	edent precipitat	ion was above	e normal during t	he site vi	sit. Vegeta	tion is signficantl	ly distrubed by agriculutre row crops.
			VEGETAT	ION - U	se scientifi	c names of plants	
			Absol	ute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum	(Plot size:	30 feet) % Co	ver	Species	Status	Number of dominant species that are OBL EACW or EAC: 2 (A)
2							
3							Total number of dominant species across all strata: 4 (B)
4							
5							Percent of dominant species that are OBL EACW or EAC: 50% (A/B
5					al Cover		
Sanling/Shrub stratun	n (Plot size:	15 feet)				Prevalence Index Worksheet
1 Acer negund	<u> </u>	15 100	10		Ves	FAC	Total % cover of:
	0				103		OBI Species: $0 \times 1 = 0$
2							FACW Species: 10 $x^2 = -20$
3							FAC Species: 10 $x^2 = 30$
5							FACU species: 10 $x 4 = 40$
			10		al Cover		$\frac{1100 \text{ species:}}{10 \text{ x}^2} = \frac{100}{150}$
Harh stratum:	(Plot size)	5 foot)	=10	al Covel		$\begin{array}{c} \text{Totals:} \underline{50} \underline{\mathbf{X5}} = \underline{150} \\ \text{Totals:} \underline{60} (\mathbf{A}) \underline{240} (\mathbf{B}) \end{array}$
<u>1 7</u>	(1 101 3120.	5 leet	20		Voc	UDI	$\frac{1}{240}$
1 Zea mays					Vec		Prevalence Index (B/A): 4.00
2 Cyperus escu	lientus		10	<u> </u>	Voc		Hydrophytic Vocatation Indicators
3 Amaranthus	retroflexus			<u> </u>	res	FACU	Busid (set for backerbertie an estation
4							Rapid test for hydrophytic vegetation
5							Dominance test >50%
0 7							Prevalence index is $\leq 3.0^*$
8							Morphological adaptations* (Provide supporting data in remarks)
9 10							Problematic hydrophytic vegetation* X (Explain in remarks)
			50	=Tot	al Cover		
Woody vine stratum:	(Plot size:	15 feet)				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2							Hydrophytic vegetation
			0	=Tot	al Cover		present? <u>Yes</u>
Remarks: Row c	rops planted wi	t h some hydr i	ic vegetation volu	nteers			



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	Matuin			Dadau	Eastures					
Depth	Matrix Color (moist)	0/	Calar (maint)	Redox	True *	L oo**	T .			
(inches)		% 100	Color (moist)	%	Type	Loc	Clay	Remarks		
0-10	101 K 2/1 10VR 5/3	05	7 5VD 4/6	15	C	м	Clay			
10-24	101 K 5/5	05	7.51K 4/0	15	t	IVI	Clay			
						<u> </u>				
						+				
	*Type: C = Concentr	ation. D	= Depletion, RM	= Reduc	ed Matrix. M	S = Masked San	d Grains, **Loc	ation: $PL = Pore Lining, M = Matrix$		
vdric Soil]	Indicators:	ution, D		- Iteaue	ou 1111111, 111	5 – Musicu Suir	Indicate	ors for Problematic Hydric Soils*:		
Histis	ol (A1)			Sandy (Gleved Matrix	(S4)	C	oast Prairie Redox (A16)(LRR K.L.R)		
Histic	Epipedon (A2)			Sandy I	Redox (S5)	(51)	D	ark Surface (S7)(LRR K. L)		
Black	Histic (A3)			Strippe	d Matrix (S6)		^D	on-Manganese Masses (E12)(LRR K. L. R)		
Hydro	ogen Sulfide (A4)			Loamv	Mucky Mater	rial (F1)	v	erv Shallow Dark Surface (TF12)		
Stratif	ied Lavers (A5)			Loamy	Gleved Matri	x (F2)	C	ther (Explain in remarks)		
2 cm]	Muck (A10)			Deplete	d Matrix (F3))				
Deple	ted Below Dark Surfa	ice (A11)		Redox I	Dark Surface	(F6)				
Thick	Dark Surface (A12)	,		Deplete	d Dark Surfac	ce (F7)	×Le di aa	tons of hudron hutic respectation and motion d		
	,			- Podovi	Depressions (1	F8)	hvdro	loss of hydrophytic vegetation and wettand		
Sandy	Mucky Material (S1))		INCUUM I		1.01		10g v must be bresent. umess disturbed of		
Sandy 5 cm 1	Mucky Material (S1) Mucky Peat or Peat (S) 53)		- Redux I	Depressions (1	10)	ii jui o	hydrology must be present, unless disturbed or problematic		
Sandy 5 cm 1	Mucky Material (S1) Mucky Peat or Peat (S) 53)		Kedőx I		10)		problematic		
Sandy 5 cm 1 Restrictive I	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):) 33)		Kedox		To)	in Colle Drogen	problematic		
Sandy 5 cm 1 Restrictive I Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed):) 33)				Hydr	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I Type: Depth (inches	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):) 33)				Hydr	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I Type: Depth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):) 53)				Hydr	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I Type: Depth (inches <u>Remark</u>	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):) 53)			HYDROL	Hydr OGY	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I 'ype: Depth (inches Remark	Mucky Material (S1) Mucky Peat or Peat (S cayer (if observed): (S): (S): (S): (S): (S): (S): (S): (S) 33)		I	HYDROL	Hydr OGY	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I Popth (inches Remark Vetland Hyd rimary Indic	Mucky Material (S1) Mucky Peat or Peat (S .ayer (if observed):) 33) ne is requ	ired; check all the	It apply)	HYDROL	Hydr OGY	ic Soils Presen	t? <u>No</u>		
Sandy 5 cm 1 Restrictive I 'ype: Depth (inchest Remark Zetland Hyd rimary Indic Surfac	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S): (S): (S): (S): (S): (S): (S): (S) 33) 	ired; check all the	It apply) Water-S	HYDROL(Hydr OGY :s (B9)	ic Soils Presen	t? <u>No</u> econdary Indicators (minimum of two required) X_Surface Soil Crack (B6)		
Sandy 5 cm 1 Restrictive I Pepth (inchest Remark Vetland Hyd rimary Indic Surfac High Y	Mucky Material (S1) Mucky Peat or Peat (S) 33) ne is requ	ired; check all that	It apply) Water-S	HYDROLO Stained Leave Fauna (B13)	Hydr OGY (8 (B9)	ic Soils Presen	t? <u>No</u> econdary Indicators (minimum of two required) X Surface Soil Crack (B6) Drainage Patterns (B10)		
Sandy 5 cm 1 Restrictive I Popth (inchest Remark Remark Vetland Hyd Primary Indic Surfac High ' Satura	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S): (S): (S): (S): (S): (S): (S): (S) 53) ne is requ	ired; check all the	It apply) Water-S Aquatic True Ac	HYDROLO Stained Leave Fauna (B13) quatic Plants (Hydr OGY (B14)	ic Soils Presen	t? <u>No</u> econdary Indicators (minimum of two required) X Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)		
Sandy Source Sou	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed):) 33) ne is requ	ired; check all the	It apply) Water-S Aquatic True Ac Hydrog	Stained Leave Fauna (B13) quatic Plants (en Sulfide Od	Hydr OGY (B14) lor (C1)	ic Soils Presen 	No t? No econdary Indicators (minimum of two required) X Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)		
Sandy 5 cm 1 Restrictive I Popth (inchest Remark Vetland Hyd Primary Indic Surfac High ' Satura Water Sedim	Mucky Material (S1) Mucky Peat or Peat (S ayer (if observed): (S): (S): (S): (S): (S): (S): (S): (S):) 53) ne is requ	ired; check all tha	It apply) Water-S Aquatic True Ad Hydrog Oxidize	HYDROLO Stained Leave Pauna (B13) quatic Plants (en Sulfide Od ed Rhizospher	Hydr OGY (B9) (B14) lor (C1) res on Living Ro	ic Soils Presen	econdary 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)		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Remark Vetland Hyd Primary Indic Surfac High Satura Water Sedim Drift 1	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): S): S): S: rology Indicators: ators (minimum of or te Water (A1) Water Table (A2) tion (A3) Marks (B1) tent Deposits (B2) Deposits (B3)) 33) ne is requ	ired; check all the	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presence	Expressions (1 TYDROL(Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher re or Reduced	Hydr OGY (B14) lor (C1) res on Living Roo Iron (C4)	ic Soils Presen	No t? No econdary 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)		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inches) Perimary Indic Surface High ' Satura Water Sedim Drift 1 Algal	Mucky Material (S1) Mucky Peat or Peat (S) 33) ne is requ	ired; check all tha	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent	HYDROLO Stained Leave Pauna (B13) quatic Plants (en Sulfide Od ed Rhizospher re or Reduced Iron Reductio	Hydr OGY (B14) lor (C1) res on Living Roo Iron (C4) on in Tilled Soils	ic Soils Presen	No t? No econdary 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)		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Remark Vetland Hyd Primary India Surfac High Satura Water Sedim Drift 1 Algal Iron E	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):) 33) ne is requ	ired; check all the	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent Thin M	Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (Hydr OGY (B14) (B14) (or (C1) res on Living Rou Iron (C4) on in Tilled Soils (C7)	ic Soils Presen	econdary 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)		
Sandy 5 cm 1 5 cm 1 Fype: Depth (inchest Remark Vetland Hyd Primary Indic Surfac High Satura Water Sedim Orift 1 Algal Iron D Inunda	Mucky Material (S1) Mucky Peat or Peat (S) 33) ne is requ	ired: check all tha	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent Thin M Gauge o	HYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher re or Reduced Iron Reductio uck Surface ((or Well Data (Hydr OGY (B14) lor (C1) res on Living Roo Iron (C4) on in Tilled Soils (C7) (C7)	ic Soils Presen	No t? No econdary 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)		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Remark Vetland Hyd Primary Indic Surfac High Satura Sedim Orif I Algal Iron D Inunda Sparsa	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):) 33) ne is requ ll Imager e Surface	y (B7)	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1	Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface ((or Well Data (Explain in Rei	Hydr OGY (B14) (B14) (or (C1) res on Living Rou Iron (C4) on in Tilled Soils (C7) (C7) marks)	ic Soils Presen	econdary 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)		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Perimary Indic Surface High Satura Water Sedim Algal Iron E Inunda Sparse ield Observer	Mucky Material (S1) Mucky Peat or Peat (S) 33) ne is requ ll Imager e Surface	y (B7)	It apply) Water-S Aquatic True Ac Hydrog Oxidize Presenc Recent Thin M Gauge C Other (1	HYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od ed Rhizospher re or Reduced Iron Reductio uck Surface ((or Well Data (Explain in Rei	Hydr OGY (B14) lor (C1) res on Living Roo Iron (C4) on in Tilled Soils (C7) (C7) marks)	ic Soils Presen	No t? No econdary 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)		
Sandy 5 cm 1 5 cm 1 Fype: Depth (inchest Remark Vetland Hyd Primary Indic Surfac High Satura Sedim Drift I Algal Iron D Inunda Sparse ield Observe	Mucky Material (S1) Mucky Peat or Peat (S Layer (if observed): (S):) 33) ne is requ ll Imagery e Surface <u>N</u>	y (B7) (B8)	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent Thin M Gauge o Other (1)	HYDROLO Stained Leave Pauna (B13) quatic Plants (en Sulfide Od ed Rhizospher e or Reduced Iron Reductio uck Surface (or Well Data (Explain in Rei epth (inches):	Hydr OGY (B14) dor (C1) res on Living Rou Iron (C4) on in Tilled Soils (C7) (C7) marks)	ic Soils Presen	t? <u>No</u> econdary 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) Indicators of Wetland		
Sandy 5 cm 1 5 cm 1 7 ype: Depth (inchest Permark Vetland Hyd Primary Indic Surface Water Sedim Orift 1 Algal Iron D Inunda Sparse ield Observe Surface Water Vater Table	Mucky Material (S1) Mucky Peat or Peat (S cayer (if observed): (S):) 33) ne is requ l Imager; e Surface N N	y (B7)	It apply) Water-S Aquatic True Ad Hydrog Oxidize Presenc Recent Thin M Gauge Other (1) D D	Explosions (1 TYDROLO Stained Leave Fauna (B13) quatic Plants (en Sulfide Od en Sulfide Od en Sulfide Od en Sulfide Od en Sulfide Od to Reduced Iron Reduced Iron Reduced Iron Reduced (0 or Well Data (Explain in Rei epth (inches): epth (inches):	Hydr OGY (B14) (B14) (B14) (B14) (C1) res on Living Roo Iron (C4) on in Tilled Soils (C7) (C7) marks)	ic Soils Presen	t? <u>No</u> econdary 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) Indicators of Wetland Hydrology Present? <u>Yes</u>		



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Project/Site: Le Su	eur EDA Project	City	/County: Le Su	ieur/ Le Sueur	Sampling Date: 6/2/2021
Applicant/Owner:	Le Sueur Economic Developm	ent Authority	State	e: Minnesota	Sample Point: Site 6
Investigator(s):	Addeline Theis & Dan Donayı	re	Section, Tow	nship, Range: Se	e 17, T112N, R25W
Landforms (hillside, t	errace, etc.): Footslope		Local Relief	(concave, conve	x, none): Concave
Slope (%): 0-	2% Latitude:		Longitude:		Datum: Le Sueur
Soil Map Unit Name:	106C2-Lester Loam		NWI Class	ification: None	
Are climatic/hydrolog	gic conditions of the site typical for	or this time of year?	No	(If no,	explain in remarks)
Are vegetation	X , soils , o	or hydrology	signif	icantly disturbed	? Are normal circumstances present? No
Are vegetation	, soils,	or hydrology	natura	ally problematic?	(If needed, explain any answers in Remarks)
		SUMMAR	Y OF FINI	DINGS	
Hydro	phytic vegetation present?	Yes			
Hydric	e soils present?	No		Is the samp	oled area within a wetland? <u>No</u>
Wetlar	nd hydrology present?	Yes			
<u>Remarks:</u> Antec	edent precipitation was above r	normal during the site	• visit. Vegetati	ion is signficantl	ly distrubed by agriculutre row crops.
		Absolute	Dominant	Indiantor	Dominance Test Worksheet
Tree Stratum	(Plot size: 30 feet)	% Cover	Species	Status	Number of dominant spacios
1					that are OBL, FACW, or FAC: 1 (A)
2					Total number of dominant
3					species across all strata: 2 (B)
4					Percent of dominant species that
5					are OBL, FACW or FAC: 50% (A/B)
		0 =	Total Cover		
Sapling/Shrub stratun	<u>n</u> (Plot size: 15 feet)				Prevalence Index Worksheet
1					Total % cover of:
2					OBL Species: 0 x 1 = 0
3					FACW Species: 15 x 2 = 30
4					FAC Species: 0 x 3 = 0
5					FACU species: 0 x 4 = 0
		0 =	Total Cover		UPL Species: 25 x 5 = 125
Herb stratum:	(Plot size: 5 feet)				Totals: 40 (A) 155 (B)
1 Zea mays		25	Yes	UPL	Prevalence Index (B/A): 3.88
2 Amaranthus	retroflexus	15	Yes	FACW	
3					Hydrophytic Vegetation Indicators
4					Rapid test for hydrophytic vegetation
5					Dominance test >50%
6					Prevalence index is $\leq 3.0^*$
78					Morphological adaptations* (Provide supporting data in remarks)
9 10					Problematic hydrophytic vegetation* X (Explain in remarks)
Woody vine stratum:	(Plot size: 15 feet)	<u>40</u> =	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2			Total Cover		Hydrophytic vegetation
		<u> </u>	Total Cover		present: <u>Yes</u>
Remarks: Row c	rops planted with some hydric	vegetation volunteers	5		



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(Midwest Region) SOILS

Dent	Matrix			Redo	k Features					
Depth (inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-10	10YR 2/1	100			51		Clay			
10-24	10YR 5/3	85	7.5YR 4/6	15	С	М	Clay			
					-		0			
	*Type: C = Concentr	ation, D	= Depletion, RM	= Redu	ed Matrix, M	S = Masked Sa	nd Grains. **Loc	ation: PL = Pore Lining, M = Matrix		
ydric Soil	Indicators:		1				Indicat	ors for Problematic Hydric Soils*:		
Histis	ol (A1)			Sandy	Gleyed Matrix	x (S4)	С	oast Prairie Redox (A16)(LRR K,L,R)		
Histic	Epipedon (A2)			Sandy	Redox (S5)		D	Dark Surface (S7)(LRR K. L)		
Black	Histic (A3)			Strippe	d Matrix (S6)		Ir	Iron-Manganese Masses (F12)(LRR K L R)		
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)	v	ery Shallow Dark Surface (TF12)		
Stratif	fied Layers (A5)			Loamy	Gleyed Matri	x (F2)	0	Other (Explain in remarks)		
2 cm	Muck (A10)			Deplet	ed Matrix (F3)					
Deple	ted Below Dark Surfa	ce (A11))	Redox Dark Surface (F6)						
 Thick	Dark Surface (A12)			Deplet	ed Dark Surfa	ce (F7)	*Indica	*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or		
Sandy	Mucky Material (S1)			Redox	Depressions (F8)	hydro			
, source y				- redox Depressions (10) right of problematic						
5 cm 1	Mucky Peat or Peat (S	(3)		•	1 .			problematic		
5 cm 3	Mucky Peat or Peat (S	3)						problematic		
5 cm 1 Sestrictive I	Mucky Peat or Peat (S Layer (if observed):	3)				, U.d.	via Saila Duagan	problematic		
5 cm 1 Sestrictive I	Mucky Peat or Peat (S Cayer (if observed):	33)				Hyd	ric Soils Presen	problematic t? <u>No</u>		
5 cm 2 5 cm 2 Sestrictive I	Mucky Peat or Peat (S Layer (if observed): s):	3)				Hyd	ric Soils Presen	problematic t? <u>No</u>		
5 cm 1 sestrictive I ype: lepth (inches <u>Remark</u>	Mucky Peat or Peat (S Layer (if observed): s):	3)				Hyd	ric Soils Presen	problematic t? <u>No</u>		
5 cm 1 estrictive I ype: repth (inche: <u>Remark</u>	Mucky Peat or Peat (S Layer (if observed): s):	3)			HYDROL	Hyd OGY	ric Soils Presen	problematic t? <u>No</u>		
5 cm 1 estrictive I ype: epth (inche: <u>Remark</u> etland Hyd	Mucky Peat or Peat (S Layer (if observed): s): <u>(S:</u> hrology Indicators:	3)]	HYDROL	Hyd OGY	ric Soils Presen	problematic t? <u>No</u>		
5 cm 1 sestrictive I ype: epth (inche: <u>Remark</u> etland Hyd	Mucky Peat or Peat (S Layer (if observed): s): ss: ss: ss: ss: ss: ss: ss: ss: s	i3)	nired; check all the			Hyd	ric Soils Presen	problematic t? <u>No</u> econdary Indicators (minimum of two required		
5 cm 1 estrictive I ype: epth (inches <u>Remark</u> etland Hyd fimary Indic	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> Irology Indicators: cators (minimum of or ce Water (A1)	i3)	ired; check all the	it apply Water-	HYDROL	Hyd OGY •s (B9)	ric Soils Presen	problematic t? <u>No</u> econdary Indicators (minimum of two required X_Surface Soil Crack (B6)		
5 cm 1 estrictive I ype: epth (inche: <u>Remark</u> etland Hyd imary India Surfac High	Mucky Peat or Peat (S Layer (if observed): s): ss: Arology Indicators: cators (minimum of or ce Water (A1) Water Table (A2)	3)	iired; check all tha	tt apply Water- Aquati	HYDROL Stained Leave c Fauna (B13)	Hyd OGY :s (B9)	ric Soils Presen	problematic t? <u>No</u> econdary Indicators (minimum of two required X Surface Soil Crack (B6) Drainage Patterns (B10)		
strictive I estrictive I epth (inche: <u>Remark</u> etland Hyd imary India Surfac High	Mucky Peat or Peat (S Layer (if observed): s): cs: hrology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3)	i3)	ired; check all the	tt apply Water- Aquati True A	HYDROL Stained Leave c Fauna (B13) quatic Plants (Hyd OGY ss (B9)) (B14)	ric Soils Presen	problematic t? <u>No</u> econdary Indicators (minimum of two required X Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)		
strictive I estrictive I epth (inche: <u>Remark</u> etland Hyd imary India Surfac High Satura Water	Mucky Peat or Peat (S Layer (if observed): s): cs: hrology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	(3)	iired; check all tha	t apply Water- Aquati True A Hydrog	HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od	Hyd OGY (B14) lor (C1)	ric Soils Presen	econdary Indicators (minimum of two required X Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)		
strictive I estrictive I epth (inchest Remark etland Hyd surfac Surfac High ' Satura Water Sedim	Mucky Peat or Peat (S Layer (if observed): s): <u>s</u> : <u>rology Indicators:</u> cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)	e is requ	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz	HYDROL Stained Leave c Fauna (B13) quatic Plants gen Sulfide Od ed Rhizospher	Hyd OGY es (B9)) (B14) lor (C1) res on Living Ro	ric Soils Presen			
strictive I estrictive I epth (inchest epth (inchest Remark etland Hyd surfac Surfac High Satura Satura Water Sedim Drift 1	Mucky Peat or Peat (S Layer (if observed): s): cs: hrology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	e is requ	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen	HYDROL Stained Leave c Fauna (B13) quatic Plants gen Sulfide Od ed Rhizospher ce or Reduced	Hyd OGY (B14) (B14) dor (C1) res on Living Ro Iron (C4)	ric Soils Presen	econdary 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)		
5 cm l 5 cm l gestrictive I ype: lepth (inchest Surfact Surfact High ' Satura Water Sedim Drift l Algal	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s)</u>	3)	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent	HYDROL Stained Leave c Fauna (B13) quatic Plants gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	Hyd OGY es (B9)) (B14) lor (C1) res on Living Ro Iron (C4) on in Tilled Soil	ric Soils Presen	Image: problematic problematic t? No econdary 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 X Geomorphic Position (D2)		
Sedim Set in States See Strictive I Septh (inches Remark Set in Algal Iron I	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> (s): <u>(s):</u> (s): <u>(s):</u> (s): (s): (s): (s): (s): (s): (s): (s):	e is requ	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M	HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio fuck Surface (Hyd OGY (B14) dor (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7)	ric Soils Presen	econdary 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)		
Sedim Set and Sedim Set and Sedim Set and Sedim Set and Sedim Set and Sedim Drift 1 Algal Iron D Inund	Mucky Peat or Peat (S Layer (if observed): s): <u>cs:</u> Irology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria	13)	iired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge	HYDROLO Stained Leave c Fauna (B13) quatic Plants of gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (or Well Data of	Hyd OGY (B14) (B14) (bor (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7) (C7)	ric Soils Presen	Problematic t? No econdary 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)		
strictive I sprictive I epth (inchest epth (inchest etland Hyd cimary Indic Surfac High ' Satura Satura Vater Sedim Drift I Algal Iron I Inund Sparse	Mucky Peat or Peat (S Layer (if observed): s): <u>cs:</u> Hrology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria ely Vegetated Concave	13)	uired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (or Well Data (Explain in Re	Hyd OGY (B9) (B14) dor (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	ric Soils Presen	Problematic Problematic No Construct on the 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)		
5 cm 1 cestrictive I ype: epth (inche: <u>Remark</u> fetland Hyd fimary India Surfac High Satura Water Sedim Drift 1 Algal Iron I Inund Sparse eld Observ	Mucky Peat or Peat (S Layer (if observed): s): <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> <u>(s):</u> (c):	13)	tired; check all that y (B7) e (B8)	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (HYDROL HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (or Well Data (Explain in Re	Hyd OGY (B14) (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) (C7) marks)	ric Soils Presen	Image: problematic t? No t? No econdary 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)		
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5 cm 1 Sectoric Sectoria Sect	Mucky Peat or Peat (S Layer (if observed): s): <u>(s)</u> : <u>(s)</u>	l Imager e Surface	uired; check all tha	tt apply Water- Aquati True A Hydrog Oxidiz Presen Recent Thin M Gauge Other (HYDROL Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (or Well Data (Explain in Re Depth (inches):	Hyd OGY (B14) (B14) (or (C1) res on Living Ro Iron (C4) on in Tilled Soil (C7) (C7) marks)	ric Soils Presen	t? <u>No</u> econdary 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) Indicators of Wetland Hydrology Present? <u>Yes</u>		



EXHIBIT G: OTHER AQUATIC RESOURCES DATA FORM

Real People. Rea	l Solutions.						
Project/Site: Le Su	eur EDA Project City/County: Le Su	ieur/ 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 DonayreSec, Tw	p, Ran: 17, T112N, F	R25W Associated WTL:				
MN DNR ID - DNR Hydro ID: 124050							
WATERC	OURSE ATTRIBUITES (Within project limits)	WATERBOD	Y ATTRIBUTES (Within project limits)				
Watercourse Type:	Stream Watercourse Depth		Pond				
Flow Type:	Perennial (inches): 0-12						
		Waterbody Type:					
Width (feet):	1 op of Bank (at sample location): 3	-					
width (leet).	Water Surface (at sample location): 2.5	-					
Watercourse is:	Natural Subsurface flow? Unknown	Waterbody depth:	Subsurface flow?				
OHWM Width a	t sample location (feet): 6	Watercourse is:					
	✓ Natural line impressed on banks		□ Natural line impressed on banks				
	Changes in character of soil		Changes in character of soil				
	\checkmark Presence of litter or debris		Presence of liter or debris				
	✓ Vegetation matted down, bent or absent		U Vegetation matted down, bent, absent				
	Sediment sorting		Sediment sorting				
	Scour		Scour				
OHWM Indicator	Multiple observed flow events	OHWM Indicator	Multiple observed flow events				
(Check all	Water staining	(Check all	Water staining				
applicable):	✓ Shelving	applicable):	Shelving				
	\checkmark Litter disturbed or washed away		Litter disturbed or washed away				
	\checkmark Destruction of terrestrial vegetation		Destruction of terrestrial vegetation				
	✓ Wracking		Wracking				
	\Box Change in plant community		Change in plant community				
	\checkmark Deposition						
	\checkmark Bed and bank		Bed and bank				
Bank Height							
(Downstream at	Left: 0-2 feet		Sand bar				
sample location):	Right: 0-2 feet		Gravel bar				
	Silts Bedrock		Mud bar				
Watercourse	Concrete Vegetation		Undercut banks				
substrate (Check	Cobbles Sands	Aquatic habitats	Gravel riffles				
all that apply)	✓ Muck	(check all that	Deep pools				
	✓ Gravel	apply)	Bank root system				
	✓ Sand bar		Overhanging trees/shrubs				
	Gravel bar		In-stream emergent plants In-stream submergent plants				
	✓ Mud bar						
	✓ Undercut banks		Fringing wetlands				
Aquatic habitats	Gravel riffles						
(check all that	✓ Deep pools		Silts Bedrock				
apply)	✓ Bank root system		Concrete Vegetation				
	✓ Overhanging trees/shrubs	Shoreland type:	\Box Cobbles \Box Sands				
	☐ In-stream emergent plants		Muck Other:				
	In-stream submergent plants		Gravel				
	✓ Fringing wetlands						



EXHIBIT G: OTHER AQUATIC RESOURCES DATA FORM

Real People. Rea	l Solutions.			
Project/Site: Le Su	eur EDA Project City/County: Le Su	eur/ 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, Tw	p, Ran: 17, T112N, I	R25W Associated WTL:	
MN DNR ID -		DNR Hydro ID:		
		-		
WATERC	OURSE ATTRIBUITES (Within project limits)	WATERBOD	DY ATTRIBUTES (Within project limits)	
Watercourse Type:	Stream Watercourse Depth		Pond	
Flow Type:	Seasonal (inches): 0-6	Watarbody Type:	Lake	
Watercourse	Top of Bank (at sample location): 1ft	waterbody Type.	Gravel Pit	
Width (feet):	Water Surface (at sample location): 1/2 ft	_	Other:	
Watercourse is:	Manipulated Subsurface flow? Unknown	Waterbody depth:	Subsurface flow?	
OHWM Width a	t sample location (feet): 5ft	Watercourse is:		
	✓ Natural line impressed on banks		Natural line impressed on banks	
	Changes in character of soil		Changes in character of soil	
	✓ Presence of litter or debris		Presence of liter or debris	
	Vegetation matted down, bent or absent		U Vegetation matted down, bent, absent	
	Sediment sorting		 Sediment sorting Scour Multiple observed flow events Water staining Shelving 	
	Scour			
OHWM Indicator	Multiple observed flow events	OHWM Indicator		
(Check all	Water staining	(Check all		
applicable):	✓ Shelving	applicable):		
	Litter disturbed or washed away		Litter disturbed or washed away	
	Destruction of terrestrial vegetation		Destruction of terrestrial vegetation	
	Wracking		Wracking	
	Change in plant community		Change in plant community	
	J Deposition		Deposition	
Don't Height	✓ Bed and bank		Bed and bank	
(Downstream at	Left: 0-2 feet		Sand bar	
sample location):	Right: 0-2 feet		Gravel bar	
	✓ Silts		Mud bar	
Watercourse	Concrete Vegetation		Undercut banks	
substrate (Check	Cobbles Sands	Aquatic habitats	Gravel riffles	
all that apply)	✓ Muck	(check all that	Deep pools	
	Gravel	apply)	Bank root system	
	✓ Sand bar		Overhanging trees/shrubs	
	Gravel bar		In-stream emergent plants	
	Mud bar		In-stream submergent plants	
	Undercut banks		Fringing wetlands	
Aquatic habitats	Gravel riffles			
(check all that	Deep pools		Silts Bedrock	
apply)	Bank root system		Concrete Vegetation	
	✓ Overhanging trees/shrubs	Shoreland type:	Cobbles Sands	
	In-stream emergent plants		Muck Other:	
	In-stream submergent plants		Gravel	
	Fringing wetlands			



EXHIBIT G: OTHER AQUATIC RESOURCES DATA FORM

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Project/Site: Le Su	eur EDA Project City/County: Le Su	eur/ 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, Tw	p, Ran: 17, T112N, F	R25W Associated WTL:		
MN DNR ID -		DNR Hydro ID:			
WATERC	OURSE ATTRIBUITES (Within project limits)	WATERBOD	OY ATTRIBUTES (Within project limits)		
Watercourse Type:	Stream Watercourse Depth		Pond		
Flow Type:	Seasonal (inches): 0-3	Waterbody Type:	Lake		
Watercourse	Top of Bank (at sample location): 2ft	waterbody Type:	Gravel Pit		
Width (feet):	Water Surface (at sample location): 1ft		Other		
Watercourse is:	Natural Subsurface flow? Unknown	Waterbody depth:	Subsurface flow?		
OHWM Width a	t sample location (feet): 3ft	Watercourse is:			
	✓ Natural line impressed on banks		Natural line impressed on banks		
	Changes in character of soil		Changes in character of soil		
	✓ Presence of litter or debris		Presence of liter or debris		
	Vegetation matted down, bent or absent		Vegetation matted down, bent, absent		
	Sediment sorting		Sediment sorting		
	Scour		 Scour Multiple observed flow events 		
OHWM Indicator	Multiple observed flow events	OHWM Indicator			
(Check all	Water staining	(Check all	Water staining		
applicable):	✓ Shelving	applicable):	Shelving		
	✓ Litter disturbed or washed away		 Litter disturbed or washed away Destruction of terrestrial vegetation 		
	Destruction of terrestrial vegetation				
	✓ Wracking		Wracking		
	✓ Change in plant community		Change in plant community		
	J Deposition		Deposition		
Deuls Heisht	✓ Bed and bank		Bed and bank		
(Downstream at	Left: 0-2 feet		Sand bar		
sample location):	Right: 0-2 feet		Gravel bar		
	✓ Silts		Mud bar		
Watercourse	Concrete Vegetation		Undercut banks		
substrate (Check	Cobbles Sands	Aquatic habitats	Gravel riffles		
all that apply)	✓ Muck	(check all that	Deep pools		
	Gravel	apply)	Bank root system		
	✓ Sand bar		Overhanging trees/shrubs		
	Gravel bar		In-stream emergent plants		
	✓ Mud bar		In-stream submergent plants		
	Undercut banks		Fringing wetlands		
Aquatic habitats	Gravel riffles				
(check all that	Deep pools		☐ Silts		
apply)	✓ Bank root system		└ Concrete		
	Overhanging trees/shrubs	Shoreland type:	Cobbles Sands		
	In-stream emergent plants		Muck Other:		
	In-stream submergent plants		Gravel		
	Fringing wetlands	1			



Exhibit H-1: Historical Imagery 1938-1980

June 2021





Exhibit H-2: Historical Imagery 1981-1987

June 2021





Exhibit H-3: Historical Imagery 1989-1994

June 2021





Exhibit H-4: Historical Imagery 1995-1999

June 2021

Exhibit H-5: Historical Imagery 2003-2010

June 2021

Exhibit H-6: Historical Imagery 2013-2019

June 2021

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 Addeline Theis Sec 17, T112N, R25W Investigator(s): Sec, Twp, Ran: WETS Station ID: Date: June 1st 2021 Climatic Image Interpretations Assumed Date: Source: Month: Condition: Site 1 Site 2 Site 4 Site 3 Notes 8/21/1938 MHAPO NV NV NV NV Site 1 is forested at this point Normal 7/14/1951 MHAPO Wet NV DO NV NV Site 1 is forested at this point NV NV Site 1 is no longer forested 1979 FSA June Normal NV NV 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	
		W	Vet 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			

City of Le Sueur, Le Sueur TWP, MN

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