WETLAND DELINEATION REPORT

PREPARED BY: HZ UNITED

TRUNK HIGHWAY 19 MARSHALL, MN LYON COUNTY

STATE PROJECT 4240-40 DATE: OCTOBER 22, 2021

PREPARED FOR: THE MINNESOTA DEPARTMENT OF TRANSPORTATION

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I. Introduction

In the city of Marshall, MN, the Minnesota Department of Transportation (MnDOT) has proposed to fully reconstruct Trunk Highway (TH) 19 between 4th Street and Bruce St, including drainage structure and sidewalk improvements. This urban section of TH 19 runs through the downtown commercial area of Marshall and crosses the Redwood River on two separate occasions. Since wetland areas may be impacted by the proposed construction, HZU conducted a field wetland delineation within 200 feet of TH 19's centerline. The purpose of this Wetland Delineation Report is to provide an accurate record of wetland areas within the TH 19 Project Corridor.

II. Wetland Delineation Methodology

This wetland delineation report followed methods outlined in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (Environmental Laboratory, 2010). To aid in field wetland delineation, published resources were reviewed previously, during, and after field work activities. The published resources included precipitation data, the National Wetland Inventory (NWI) maps, DNR Public Waters, and Lyon County Web Soil Surveys, and DNR topographic maps. The Minnesota Routine Assessment Method (MnRAM Version 3.2) was also conducted to understand the functions and values of the project's wetlands.

Areas of study that were used in office and site activities were based on any wetland occurrences within 200 feet of TH 19's centerline. Since the Redwood River flowed under and along TH19, its riparian areas were chosen for wetland delineation. There were three main riparian areas in the total project, which were labeled as WL-1 and WL-2 (combined as one riparian area), WL-3, and WL-4. The study areas can be referred to in **Appendix A: Maps**.

Review of Published Resources

Precipitation

On September 29 and 30, 2021, Marcus Lewis and Tim DeCesare conducted a field wetland delineation on two sunny and warm days. Although it did rain briefly on September 30. To determine if site precipitation was normal, antecedent precipitation conditions were evaluated using the Three-Prior-Month Method and summarized in *Table 1: Antecedent Precipitation*. For Section 4, Township 111 North, Range 41 West, antecedent precipitation was determined to be dry (Minnesota Board of Water & Soil Resources, 2015; Minnesota Climatology Working Group, 2016).

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: August 2021	second prior month: July 2021	third prior month: June 2021
estimated precipitation total for this location:	3.77R	1.15R	1.01R
there is a 30% chance this location will have less than:	2.19	2,64	2.84
there is a 30% chance this location will have more than:	3.89	4.48	4.13
type of month: dry normal wet	normal	dry	dry
monthly score	3 * 2 = 6	2 * 1 = 2	1 * <mark>1</mark> = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		9 (Dry)	

Table 1: Antecedent Precipitation. Score using 1981-2010 normal period.

National Wetland Inventory (NWI)

To identify potential areas of wetlands, NWI data was collected from the US Fish and Wildlife Service (FWS) website (U.S. Fish and Wildlife Service, 2016) and summarized in *Table 2: NWI Wetland*. Refer to **Appendix A: Maps** to observe the NWI mapping.

Table 2: NWI Wetlands

COWARDIN CLASSIFICATION	LOCATION	DELINEATED RESOURCE
R2UBH/R2UBG	S4, T111N, R41W	WL-1, WL-2, WL-3 and WL-4
R2UBH/R2UBG	S5, T111N, R41W	WL-4

DNR Public Waters Inventory (PWI) and Public Waters Wetlands

Public waters are defined as any lake, wetland, or water course that are under the jurisdiction of the DNR. Within the extents of the project, the only public water indicated was the Redwood River, summarized in *Table 3: DNR Public Waters Inventory (PWI)*. Please refer to **Appendix A: Maps** to see where the Redwood River crosses TH 19 in two sections and runs along the roadway within 200 feet from the highway centerline.

Table 3: DNR Public Waters Inventory (PWI)

DNR PUBLIC WATER	LOCATION	DELINEATED RESOURCE		
Redwood River	S4, T111N, R41W; S5, T111N, R41W	WL-1, WL-2, WL-3, and WL-4		

Soil Surveys

Soil surveys were consulted before and during fieldwork activities. The soil maps were overlaid onto aerial photos and colored by hydric soil rating percentage, shown in **Appendix A: Maps**. See *Table 4*: Soil Surveys for a summary of the soil map unit name and the hydric soil rating.

Table 4: Soil Surveys

MAP UNIT SYMBOL	MAP UNIT NAME	HYDRIC SOIL RATING (%)	HYDRIC SOIL	DRAINAGE CLASSIFICATION
51	La Prairie loam	0	No	Moderately well drained
86	Canisteo clay loam, 0 to 2 percent slopes	100	Yes	Poorly drained
421B	Amiret loam 2 to 6 percent slopes	3	No	Well drained
L201A	Normania loam, 1 to 3 percent slopes	5	No	Moderately well drained
L220A	Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	98	Yes	Poorly drained
W	Water	-	-	-

Field Wetland Delineation

HZU followed the routine US Army Corps of Engineers, Level 2 – Onsite Inspection Necessary to identify the wetland boundaries within the project corridor. Data collected from published resources, field maps, and onsite visual inspection helped determine sampling transect locations. Sampling locations were taken at several locations along TH19 and the Redwood River and were based on hydrophytic plant communities and wetland hydrology indicators. To determine if the soil was hydric, one soil sample was collected for each of the three major study areas, WL-1 and 2 (combined), WL-3, and WL-4. The sampling points were recorded with a Trimble Geo 7X device as well as written down in the US Army Corps of Engineers Wetland Determination Data Forms. See Appendix B, Wetland Determination Data Forms.

Sampling points were labeled by section and in the order they were taken. For example, WL-1 had six transects, so wetland sample points were labeled as 1A, 1B, 1C etc. Each sampling point has a corresponding upland sample points labeled as 1AU, 1BU, 1CU etc. The first sampling point started closest to TH19's centerline and then another sampling point was taken every 50 feet or so along the Redwood River. Once a sampling point was 200 feet away from TH19's centerline, the next sampling point was placed on the other side of the river and then additional points were recorded every 50 feet until the last sampling point was across the river from the first sampling point.

The Minnesota Routine Assessment Method (MnRAM)

The MnRAM 3.2 spreadsheet was used to determine the functions and values of the delineated wetlands. MnRAM uses numerous questions to determine the rate of a wetland. See **Appendix C** for complete MnRAM documentation.

Vegetation diversity/integrity, the water quality of the wetland, and the amphibious habitation are rated low for the wetlands because the wetland is surrounding a river with minimal vegetative buffer width and the vegetation is comprised of mainly invasive species. The flood attenuation and shoreline protection are rated high for all the wetlands because the wetlands were in riparian zones surrounding the Redwood River. The hydrology and water quality downstream are rate medium due to the flow of water through the system as well as the potential for stormwater to be introduced into the system. The wetlands are rated medium for Fish and wildlife habitat due to them being part of a riverine system in an urban area. For the aesthetics, recreation, education, and cultural rating the wetlands received a medium rating because of the easy access of the wetlands. These wetlands did not get rated for commercial use because they are not currently being used commercially.

III. Results

Three areas were identified as wetlands within the study area: WL-1 and WL-2 (combined), WL-3, and WL-4. The wetlands were then classified using the Circular 39 and Cowardin classification, summarized in Table 5: Wetland Classification and Type. Type 90, a later additional code to the Circular 39 system, was found throughout the project. Eggers and Reed Plant Communities Floodplain Forest and Fresh (Wet) Meadow were determined throughout each identified wetland (WL1-WL4). The total delineated wetlands within the study area was 2.321 acres.

NUMBER	LOCATION		CLAS	DNR	AREA			
		CIRCULAR 39	COWARDIN	TYPE NAME	PLANT COMMUNITY		(ACRES)	
WL-1	S4, T111N, R41W	Type 90	R2UBH/R2UBG	Rivers and Streams	Floodplain Forest	Redwood River	0.449	
WL-2	S4, T111N, R41W	Type 90	R2UBH/R2UBG	Rivers and Streams	Floodplain Forest Fresh (Wet) Meadow	Redwood River	0.620	
WL-3	S4, T111N, R41W	Type 90	R2UBH/R2UBG	Rivers and Streams	Fresh (Wet) Meadow	Redwood River	0.425	
WL-4	S4, T111N, R41W; S5, T111N, R41W	Type 90	R2UBH/R2UBG	Rivers and Streams	Floodplain Forest	Redwood River	0.827	

Table 5: Wetland Classification and Type

A) WL-1, WL-2

WL-1 and WL-2 are Redwood River riparian areas near Bridge No. 5083. One part of the river flows through a park and the other flows through a residential area. Indicators for hydrology included A1 surface water and A3 saturation. In some transects, the vegetation was sparse, so the boundary was identified at the toe of slope or at the lowest terrace. Other times, vegetation indicated the wetland boundary. For example, 1A was delineated on a hillslope between dominant reed canary grass and

dominant smooth brome. There were several instances where there was an abrupt change between upland dominant species and wetland species on the hillslope.



Figure 1: WL-1 near Bridge 5093. Boundary was delineated between smooth brome and reed canary grass.

Sampling transect 2D was not considered as a wetland. The riverbanks at 2D had riprap on one side and a road on the other side. The rip rap side was someone's property, so the existing plants were ornamental. There was not a safe way to sample the vegetation and soil on the road side to consider the small patch a wetland.



Figure 2: Sampling transect 2D

B) WL-3

WL-3 was delineated near Bridge 91352, which crossed over the Redwood River. This section was near a busy intersection in downtown Marshall Hydrology indicators included A1 and A3, and hydric soil was indicated by S1 Sandy Mucky Mineral as well as S4 Sandy Gleyed Matrix. Dominant species consisted of reed canary grass, common nettle, smooth brome and rough horsetail. Most of the sampling transects

were identified at the toe of slope or at the lowest terrace. Occasionally, reed canary grass would change into smooth brome on the same hillslope, so some points were delineated near this crossover.



Figure 3: WL-3 near pedestrian bridge in Memorial Park.

3C and 3F were considered as wetlands. These points were adjacent to water's edge at the bottom of the stabilized rip rap bank. Determination as wetland was based on the hydrology and vegetation seen, as well as comparisons with other sample points in WL-3.



Figure 4: Sampling transects 3C (left) and 3F (right).

C) WL-4

The last Redwood River riparian area was delineated as WL-4, which was located near 4th Street. The river flowed through residential areas parallel to TH19, adjacent to ornamental plants and managed gardens. All sampling transects were identified as the wetland boundary. The indicators for hydrology were A1 and A3. In this case, F1 Loamy Mucky Mineral and A1 Histisol specified hydric soil. The majority

of sampling transects were placed at the toe of slope or at the lowest terrace for wetland samples and the top of the slope for upland samples. Wood nettle and reed canary grass were some of the dominant species in this section, which indicated that there was hydrophytic plants.

IV. Conclusion

A fully reconstructed roadway is proposed along TH19, including sidewalk and drainage structure improvements. A DNR public water known as the Redwood River crosses TH19 in two areas and runs parallel to the road. Three wetland areas were identified within the study area in the riparian areas of the Redwood River, totaling 2.321 acres. Based on the project, impacts to the wetland should be minimal and any wetlands impacted should be restored to their existing or improved condition.

V. Literature Cited

Cowardin, LM, V Carter, FC Golet, ET LaRoe. 1979. Classification of Wetlands and Deepwater Habitats

of the U.S. as modified for National Wetland Inventory Mapping Convention.

< https://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-

Habitats-of-the-United-States.pdf >.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. US Army Corps

of Engineers, Waterways Experiment Station, Vicksburg, MS.

<a>https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4532>.

Environmental Laboratory. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). US Army Engineer Research and Development Center, Vicksburg, MS.

<https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/7630>.

- Kloiber, S.M., Norris, D.J., and Bergman, A.L. 2019. Minnesota Wetland Inventory: User Guide and Summary Statistics [June, 2019]. Minnesota Department of Natural Resources, St. Paul, MN. 66 pp.
- Minnesota Board of Water & Soil Resources. 2015. Evaluating Antecedent Precipitation Conditions. https://bwsr.state.mn.us/sites/default/files/2018-12/WETLANDS_delin_Eval_Antecedent_Precip_MN_Guidance.pdf>.
- Minnesota Board of Water & Soil Resources. 2019. Wetlands Regulation In Minnesota (Version 2.1) < https://bwsr.state.mn.us/sites/default/files/2019-04/WETLAND_General_Wetlands__Regu

lation_in_Minnesota_v2.1_March_2019.pdf>.

- Minnesota Board of Water and Soil Resources. 2019. Wetland Functional Assessment. http://www.bwsr.state.mn.us/wetland-functional-assessment
- Minnesota Climatology Working Group. 2020. Wetland Delineation Precipitation Data Retrieval from

a Gridded Database. < http://climate.umn.edu/gridded_data/precip/wetland/wetland.asp>.

Soil Survey Staff. Undated. Web Soil Survey. Natural Resources Conservation Service, United

States Department of Agriculture. http://websoilsurvey.sc.egov.usda.gov.

U.S. Army Corps of Engineers. 2018. National Wetland Plant List (Version 3.4). Engineer Research and

Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.

<http://wetland_plants.usace.army.mil>.

U.S. Fish and Wildlife Service. 2016. National Wetland Inventory (Version 2) - Surface Waters and

Wetlands. <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper>.

VI. Delineators' Credentials

Daniel Nechkash
I have the qualifications, education, training, and
determinations in accordance with federal and state
requirements.
Marcus Lewis EIT
I have the qualifications, education, training, and experience to complete wetland delineations and determinations in accordance with federal and state requirements.
Tim DeCesare EIT
I have the qualifications, education, training, and experience to complete wetland delineations and determinations in accordance with federal and state requirements.

Appendix A: Maps













ZE HZUNITED DATE: 10/27/2021 CITY OF MARSHALL

LYON COUNTY, MINNESOTA



STUDY AREA SAMPLE PTS WETLAND / UPLANE WETLAND - WL CULVERT BRIDGE



ZZ HZUNITED DATE: 10/27/2021

Wetland Delineation

CITY OF MARSHALL LYON COUNTY, MINNESOTA



SAMPLE PTS WETLAND / UPLAND WETLAND - WL CULVERT BRIDGE









Appendix B: Wetland Determination Data Forms

WETLAND DETERMINATION	ON DATA	FORM - Mic	lwest Region	
Project/Site TH 19 Marshall City/	County:	Marshall/Lyon C	County Sampling D	Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State:	MN	Sampling P	oint: 1A
Investigator(s): Lewis, DeCesare	Sec	ction, Township	, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local	l relief (concave	e, convex, none):	Concave
Slope (%): Lat: 44°26'57.08"N	Long:	95°47'7.65"'	W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI C	lassification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year?	Y (If	no, explain in remarl	ks)
Are vegetation, soil, or hydrology	significant	ly disturbed?	Are "norma	l circumstances"
Are vegetation, soil, or hydrology	naturally p	oroblematic?		present? Yes
SUMMARY OF FINDINGS			(If needed, explain	any answers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? Y	Is the	sampled area	within a wetland?	Y
Indicators of wetland hydrology present? Y	lf yes, o	optional wetland	d site ID:	
Remarks: (Explain alternative procedures here or in a separate re	enort)			
	50010)			
VECETATION Lies estentific nomes of plants				
VEGETATION Use scientific names of plants.			Dominanaa Toot V	Norkohaat
Absolute Trop Stratum (Plot size: 30' Padius) % Cover	Dominant	Indicator	Dominance Test v	vorksneet
1	Opecies	Olaus	that are OBL_EACW	Species
2		·	Total Number of F	
3			Species Across a	all Strata: 1 (B)
4			Percent of Dominant	t Species
5			that are OBL, FACW	, or FAC: 100.00% (A/B)
0	= Total Cov	er		
<u>Sapling/Shrub stratum</u> (Plot size: 5' Radius)			Prevalence Index	Worksheet
1			Total % Cover of:	
2		·		$0 \times 1 = 0$
3			FACW species	$\frac{35}{0}$ x 2 = 190
5		·	FAC species	$\frac{0}{5}$ x 4 - 20
	- Total Cov	er		$\frac{5}{0} \times 5 = 0$
Herb stratum (Plot size: 5' Radius)	- 10101000	01	Column totals 1	$\frac{0}{00}$ (A) 210 (B)
1 Elymus virginicus 95	Y	FACW	Prevalence Index =	= B/A = 2.10
2 Cirsium arvense 5	N	FACU		
3			Hydrophytic Veae	tation Indicators:
4		· ——	Rapid test for h	ydrophytic vegetation
5		·	X Dominance tes	t is >50%
6			X Prevalence inde	ex is ≤3.0*
7			Morphogical ad	laptations* (provide
8			supporting data	in Remarks or on a

100

0

)

(Plot size: 30' Radius

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

= Total Cover

= Total Cover

US Amy Corps of Engineers

9

10

1

2

Woody vine stratum

separate sheet)

Hydrophytic

vegetation

present?

comm.

(explain): Adjacent to managed plant

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

Depth Matrix Eadox Features (inches) Color (moist) % Type' Texture Remarks 0-11 7.5YR 2.5/1 Image: Color (moist) % Type' SELTY CLAY LOAM 11-24 10YR 2/1 Image: Color (moist) % Type' SELTY CLAY LOAM 11-24 10YR 2/1 Image: Color (moist) % Type' Color (moist) Type: Comparison of the color (accord) Image: Color (accord) Image: Color (accord) Image: Color (accord) Matrix Type: Comparison of the color (accord) Image: Color (accord) Startice (ST Problematch Hydric Solid) Image: Color (Accord)	Profile Dese	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
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Water Marks (b1) Cold/Ded National Cold Cold/Ded National Cold Staturation Visible on Aerial Imagery (C9) Sediment Deposits (B3) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) X FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Water M	arke (B1)			Ovidizod			Living Poots Cravfi	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
Dorit Deposits (B2)	Sedimer	at Denosits (B2)				і кпігозр	neres on	Living Roots Crayin	tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) X FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Indicators of wetland Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland Gitcudes capillary fringe) No X Depth (inches): Y Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Drift Der	(B3)			Presenc	e of Redu	iced Iron	(C4) Stunte	d or Stressed Plants (D1)
Iron Deposits (B5) (C6) X FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Other (Explain in Remarks) Surface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? Yes No X Depth (inches): Saturation present? Yes No X Includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	Algal Ma	t or Crust (B4)			Recent I	ron Redu	uction in T	illed Soils Geom	orphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Surface water present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Saturation present? Yes No X Depth (inches): (includes capillary fringe) No X Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Iron Dep	osits (B5)			(C6)			X FAC-N	leutral Test (D5)
Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Y (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Inundatio	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)		
Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y (includes capillary fringe) No X Depth (inches): Y Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge o	or Well Da	ata (D9)		
Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland Water table present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland (includes capillary fringe) No X Depth (inches): Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Surface water present? Yes No X Depth (inches): Indicators of wetland Water table present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland (includes capillary fringe) No X Depth (inches): Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Field Obser	vations:							
Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? Y Cincludes capillary fringe) No X Depth (inches): Indicators of wetland hydrology present? Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	Surface wate	er present?	Yes	No	х	Depth (i	nches):		
Saturation present? Yes No X Depth (inches): hydrology present? Y (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Water table	present?	Yes	No	Х	Depth (i	nches):	ı	ndicators of wetland
(includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Saturation p	resent?	Yes	No	Х	Depth (i	nches):	——— I	hydrology present? Y
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	(includes ca	pillary fringe)				<u> </u>	,		
Remarks:	Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	spections), if available:	
Remarks:			3		P	-			
Remarks:									
	Remarks:								

Project/Site TH 19 Marshall C	ity/County: N	/larshall/Lyon C	County Sampling	Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State:	MN	Sampling F	oint: 1AU
Investigator(s): Lewis, DeCesare	Sec	tion, Township	, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Terrace	Local	relief (concave	, convex, none):	None
Slope (%): Lat: 44°26'56.92"N	Long:	95%47'7.64"	W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI C	lassification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	e of the year?	Y (If	no, explain in remar	rks)
Are vegetation X , soil , or hydrology	significantl	y disturbed?	Are "norma	al circumstances"
Are vegetation , soil , or hydrology	naturally p	roblematic?		present? No
SUMMARY OF FINDINGS	_		(If needed, explain	any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	Is the	sampled area	within a wetland?	Ν
Indicators of wetland hydrology present? N	lf yes, c	ptional wetland	d site ID:	
Remarks: (Explain alternative procedures here or in a separate	e report.)			
I he vegetation is a	rtificially plar	ited and mai	nicured.	
VEGETATION Use scientific names of plants.				
Absolut	te Dominant	Indicator	Dominance Test	Worksheet
Tree Stratum (Plot size: 30' Radius) % Cove	er Species	Staus	Number of Dominan	t Species
1			that are OBL, FACW	/, or FAC: 0 (A)
2			Total Number of	Dominant
3			Species Across	
5			that are OBL. FACW	it Species /. or FAC: 0.00% (A/B)
	= Total Cove	er		,
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index	Worksheet
1			Total % Cover of:	
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	$0 \times 3 = 0$
<u> </u>	- Total Cove		FACU species	$\frac{100}{0} \times 4 = 400$
Herb stratum (Plot size: 5' Radius)		71	Column totals	$\frac{0}{100}$ (A) $\frac{400}{400}$ (B)
1 Festuca arundinacea	v	FACU	Prevalence Index -	- B/A = 4.00
2		1700		- 5/7 - 4.00
3			Hydrophytic Vege	etation Indicators:
4			Rapid test for I	nydrophytic vegetation
5			Dominance tes	st is >50%
6			Prevalence inc	lex is ≤3.0*
7			Morphogical ad	daptations* (provide
8			supporting data	a in Remarks or on a
10				opent to managed plant
100	= Total Cove	er	comm.	cent to managed plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric s	oil and wetland bydrology must be
1			present, unles	is disturbed or problematic
2			Hydrophytic	
0	= Total Cove	er	vegetation present?	N
Pomorko: (Ipoludo photo pumboro horo er er e esperato d'arte	+)		p.000m.	
remarks. (include photo numbers here or on a separate sheet	u)			

Profile Dese	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth	Matrix		Rec	lox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	7.5YR 4/3						CLAY LOAM	
8-21	7.5YR 3/2						CLAY LOAM	
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix								
Hydric So	il Indicators:						Indicators for Prob	lematic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coast Prairie R	edox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark Surface (S	67) (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Manganes	e Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shallow D	ark Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (explain i	n remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(⊢6)		
	ck Dark Surface (A12)	Dep	leted Da	irk Surfa	ce (⊢7)	*Indicators of hyd	rophytic vegetation and weltand
San	idy Mucky Minera	II (S1) Deet (C2	, <u> </u>	lox Depr	essions ((F8)	hydrology must	be present, unless disturbed or
5 CI	n Mucky Peat or	Peat (53)					problematic
Restrictive	Layer (if observe	ed):						
Туре:							Hydric soil prese	nt? <u>N</u>
Depth (inche	es):							
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Secondary In	dicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	e Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	Drainaç	e Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) Dry-Sea	ason Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayfis	n Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Saturat	ion Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	iced Iron	(C4) Stunted	l or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in 1	Illed Soils Geomo	rphic Position (D2)
	osiis (BD) on Visible on Aeria	Imagen	(B7)	(CO) Thin Mu	ck Surfac	e (C7)	FAC-No	eutral Test (D5)
Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge o	r Well Da	e (C7) ata (D9)		
Water-S	tained Leaves (B9)		Other (F	xolain in	Remarks)	
Field Obser	vations:	/					/	
Surface wate	er present?	Yes	No	х	Depth (i	nches):		
Water table	present?	Yes	No	X	Depth (i	nches):	Ir	dicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):	I I	ydrology present? N
(includes ca	pillary fringe)				• • •			
Describe rec	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if available:	
	•	- 0	-					
Remarks:								
1								

Project/Site TH 19 Marshall City	/County: Marshall/Lyon	County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point: 1B
Investigator(s): Lewis, DeCesare	Section, Townshi	o, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concav	re, convex, none): Concave
Slope (%): Lat: 44°26'57.38"N		6"W Datum:
Soil Map Unit Name 51: La Prairie Loam	NWI (Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y (I	f no, explain in remarks)
Are vegetation , soil , or hydrology	significantly disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	- naturally problematic?	present? Yes
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area	a within a wetland? Y
Indicators of wetland hydrology present? Y	f yes, optional wetlar	
Remarks: (Explain alternative procedures here or in a separate r	eport)	
	oporaj	
VEGETATION Use scientific names of plants		
VEGETATION Use scientific names of plants.	Dominan Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30' Radius) % Cover	t Species Staus	Number of Dominant Species
1 Acer negundo 20	Y FAC	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
5		that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
Sapling/Shrub stratum (Plot size: 5' Padius)	= I otal Cover	Brovalanca Indax Warkshoot
1		Total % Cover of
2	·	OBL species $30 \times 1 = 30$
3		FACW species 0 x 2 = 0
4		FAC species 20 x 3 = 60
5	· ·	FACU species $50 \times 4 = 200$
	= Total Cover	UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A) 290 (B)
1 Parthenocissus vitacea 50	- <u>Y</u> FACU	Prevalence Index = B/A = 2.90
2 Cardamine buibosa 30	Y OBL	Hydrophytic Vogetation Indicators:
4	·	Rapid test for hydrophytic vegetation
5		X Dominance test is >50%
6		X Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9	·	separate sheet)
10	- Total Cavar	(explain): Adjacent to managed plant
		Comm.
		*Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic
2	·	Hydrophytic
0	= Total Cover	vegetation
		present? Y
Remarks: (Include photo numbers here or on a separate sheet)		

1B

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)	
Depth	Matrix		Re	dox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ıre	Remarks	
									UNSAFE FOR SOIL SAMPLE	
*Type: C = (Concentration, D =	= Depleti	on, RM = Reduc	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix	
Hydric Sc	oil Indicators:					(a 1)	Indicator	s for Proble	ematic Hydric Soils:	
His	tisol (A1)		Sa	ndy Gleye	ed Matrix	(S4)	Coas	t Prairie Re	dox (A16) (LRR K, L, R)	
His	tic Epipedon (A2)		Sa	ndy Redo	x (S5)		Dark	Surface (S7	() (LRR K, L)	
Bla	ck Histic (A3)		Str	ipped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)	
Hyo	drogen Sulfide (A4	-)	Loa	amy Mucl	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)	
Stra	atified Layers (A5)		Loa	amy Gley	ed Matrix	‹ (F2)	Othe	r (explain in	remarks)	
2 ci	m Muck (A10)		De	pleted Ma	atrix (F3)					
Dep	oleted Below Dark	Surface	e (A11) Re	dox Dark	Surface	(F6)				
Thie	ck Dark Surface (A12)	De	pleted Da	ark Surfa	ce (F7)	*Indica	tors of hydr	ophytic vegetation and weltand	
Sar	ndy Mucky Minera	l (S1)	Re	dox Depr	essions ((F8)	hydro	logy must b	e present, unless disturbed or	
5 ci	m Mucky Peat or I	Peat (S3)						problematic	
Restrictive	Laver (if observe	ed):								
Type:							Hvdric	soil presen	t? Y	
Depth (inche	es):				-		,			
= (•					
Remarks:										
Determir	ned as wetland	by hydi	rology, vegetat	ion at 1	B, along	g with si	miliarity and	proximity	to samples at 1A and 1C.	
						-	-			
HYDROL	DGY									
Wetland Hy	drology Indicato	rs:								
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		<u>Se</u>	condary Ind	icators (minimum of two required)	
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface \$	Soil Cracks (B6)	
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	_	Drainage	Patterns (B10)	
X Saturation	on (A3)			Hydroge	n Sulfide	Odor (C1) –	Dry-Seas	son Water Table (C2)	
Water N	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)	
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)	
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)	
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	bhic Position (D2)	
Iron Dep	oosits (B5)			(C6)			_	FAC-Neu	ıtral Test (D5)	
Inundati	on Visible on Aeria	I Imager	/ (B7)	Thin Mu	ck Surfac	æ (C7)				
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		_Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wat	er present?	Yes	No	Х	Depth (i	nches):				
Water table	present?	Yes	X No		Depth (i	nches):	2"	Ind	licators of wetland	
Saturation p	resent?	Yes	X No		Depth (i	nches):	2"	hy	vdrology present? Y	
(includes ca	pillary fringe)									
Describe red	corded data (strea	m gauge	e, monitoring wel	l, aerial p	hotos, pi	revious ir	spections), if	available:		
			-	-	-					
Remarks:										

Project/Site TH 19 Marshall Cit	y/County:	Marshall/Lyo	n County	Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Sta	ate: M	N	Sampling Point:	1BU
Investigator(s): Lewis, DeCesare		Section, Townsł	hip, Range:	S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Terrace	Lo	ocal relief (conca	ave, convex	, none):	Concave
Slope (%): Lat: 44°26'57.23"N	Long:	95°47'6.5	58"W	Datum:	
Soil Map Unit Name51: La Prairie Loam		NW	I Classificat	ion: R2UE	3H, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the yea	ar? Y	(If no, expla	ain in remarks)	
Are vegetation X, soil, or hydrology	signific	antly disturbed?	?	Are "normal circum	stances"
Are vegetation , soil , or hydrology	_ natural	ly problematic?			present? No
SUMMARY OF FINDINGS	-		(If need	ed, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? Y	ls t	he sampled are	ea within a	wetland?	Ν
Indicators of wetland hydrology present? N	lf ye	es, optional wetla	and site ID:		
Remarks: (Explain alternative procedures here or in a separate	report)				
	roport.)				
The vegetation is ar	tificially p	planted and m	nanicured.		
VEGETATION Use scientific names of plants					
	Domin	ant Indicator	Domina	ance Test Workshi	et
Tree Stratum (Plot size: 30' Radius) % Cover	r Specie	es Staus	Number	of Dominant Species	
1	·		that are 0	OBL, FACW, or FAC	: 0 (A)
2			Total	Number of Dominan	t
3	_		Spec	cies Across all Strata	: <u> </u>
4			Percent	of Dominant Species	6
5			that are 0	OBL, FACW, or FAC	: <u>0.00%</u> (A/B)
	= 1 otal C	Cover	Drevela		t
<u>Sapling/Shrub straturr</u> (Plot size: <u>5 Radius</u>)			Total %	Cover of:	leet
2	_		OBL sp	ecies 0 x 1	= 0
3			FACW	species 0 x 2	$rac{0}{2} = 0$
4	_		FAC sp	ecies 0 x 3	B = 0
5			FACU s	pecies 100 x 4	400
0	= Total C	Cover	UPL sp	ecies <u>0</u> x5	<u> </u>
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column	totals 100 (A)) <u>400</u> (B)
1 Festuca arundinacea 100	Y	FACU	Prevale	nce Index = B/A =	4.00
2			·		
3			Hydrop	hytic Vegetation I	ndicators:
5				ninance test is >50°	%
6			Pre	valence index is ≤3	.0*
7			Mor	robogical adaptation	s* (provide
8			sup	porting data in Rem	arks or on a
9			sep	arate sheet)	
10			(exp	plain): Adjacent to n	nanaged plant
100	= Total C	Cover	com	nm.	
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)			*Indicato	rs of hydric soil and we	tland hydrology must be
			р Нус	resent, unless disturbe	d or problematic
<u> </u>	- Total (over	veg	etation	
0	- 101010		pre	sent? N	_
Remarks: (Include photo numbers here or on a separate sheet)					
, , ,					

Profile Desc	ription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence	of indicators.)
Depth	Matrix		Red	Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-8	7.5YR 5/2						SANDY LOAM		
8-21	7.5YR 3/2						LOAM		
0 = .							207.00		
*Type: C - C	oncentration D.	- Depleti	on RM – Reduce	d Matrix	MS – M	laskod S	and Grains **	1 ocation:	PL – Pore Lining M – Matrix
Hydric So	il Indicators:	- Depieti			, 1013 = 10	laskeu S	Indicators fo	r Problem	r = role Lining, M = Matrix
	is all $(A1)$		Sor		od Matrix	(\$4)	Coast Pra	airia Rada	$\times (A16) (I PP K I P)$
	isul (AT) is Eningdon (A2)					(34)	Coast Fie		$(\mathbf{IPP} \mathbf{K} \mathbf{I})$
Black	L Epipedon (A2)		Sai	anad Ma	triv (SG)		Iron-Man	danese M	asses (F12) (IRR K I R)
	rogen Sulfide (A)	1)		my Mucl	(UIX (SO)) (F1)	Very Sha	llow Dark	Surface $(TE12)$
Stra	tified Lavers (A5)	+) \	Loa	my Glov	od Matrix	(E2)	Other (ex	nlain in re	marks)
	n Muck (A10)	,	Der	lated Ma	triv (F3)	((Z)			marks)
2 U	leted Relow Dark	Surface		lox Dark	Surface	(F6)			
	k Dark Surface (Δ12)			ounace	(F7)	*!	a f la salara a	
	dv Mucky Minera	L (S1)		lov Denr	essions i	(F8)	"Indicators	or nyarop must bor	procept, uplace disturbed or
5 cr	n Mucky Peat or	n (01) Daat (93)	ion Depi	63310113	(10)	nyurology	nusi be p	oblematic
	IT MUCKY I Eat OF	i eat (00)					P	obiematic
Restrictive	Layer (if observe	ed):						_	
Туре:							Hydric soil	present?	<u>Y</u>
Depth (inche	es):								
Remarks:						I			
HYDROLO)GY								
Wetland Hy	drology Indicato	ors:							
Primary India	cators (minimum	of one is	required: check a	all that a	(vlac		Secon	dary Indic:	ators (minimum of two required)
Surface	Water (A1)	0. 0.10 10		Aquatic	- e : // Fauna (B	13)	<u></u>	Surface So	il Cracks (B6)
High Wa	ter Table (A2)			True Aa	uatic Plar	nts (B14)		Drainage P	atterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seasor	n Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish Bu	irrows (C8)
Sedimen	t Deposits (B2)			(C3)			° — s	Saturation	Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) S	Stunted or	Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorphi	c Position (D2)
Iron Dep	osits (B5)			(C6)			F	FAC-Neutra	al Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-St	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Indic	ators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hydi	rology present? N
(includes ca	billary tringe)								
Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if avail	lable:	
Domort									
Remarks:									

I

Project/Site TH 19 Marshall	City/	County: M	larshall/Lyon	County Samp	ling Date:	9/29/21
Applicant/Owner: Minnesota Department of Trans	portation	State:	MN	Sampl	ing Point:	1C
Investigator(s): Lewis, DeCesare		Sect	ion, Townshij	p, Range:	S4, T1111	N, R41W
Landform (hillslope, terrace, etc.): Hills	slope	Local ı	relief (concav	e, convex, none): C	Concave
Slope (%): Lat: 44°26'57.3	7"N	Long:	95°47'6.25	"W Datum	n:	
Soil Map Unit Name51: La Prairie Loam			NWI (Classification:	R2UBH	I, R2UBG
Are climatic/hydrologic conditions of the site typical f	or this time o	f the year?	Y (I	f no, explain in r	emarks)	
Are vegetation , soil , or hydro	ology	significantly	/ disturbed?	Are "n	ormal circums	tances"
Are vegetation , soil , or hydro	ology	naturally pr	oblematic?		рі	resent? Yes
SUMMARY OF FINDINGS				(If needed, ex	plain any answ	ers in remarks.)
Hydrophytic vegetation present?						
Hydric soil present? Y		Is the s	ampled area	a within a wetla	nd?	N
Indicators of wetland hydrology present? Y		lf yes, o	ptional wetlar	nd site ID:		
Remarks: (Explain alternative procedures here or in	a separate re	eport.)				
	Abcoluto	Dominant	Indiantor	Dominance T	est Workshee	at
Tree Stratum (Plot size: 30' Radius)	% Cover	Species	Staus	Number of Dom	ninant Species	
1		·		that are OBL, F	ACW, or FAC:	0 (A)
23	·			Total Numbe Species Ac	er of Dominant ross all Strata:	1 (B)
4				Percent of Don	ninant Species	()
5				that are OBL, F	ACW, or FAC:	0.00% (A/B)
	0	= Total Cove	r			
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence In	ndex Workshe	et
1				Total % Cover	r of:	
2				OBL species	0 x1=	=
3				FACW specie	S U XZ=	= 0
45				FACU species	$\frac{100}{x4}$	$= \frac{0}{400}$
°	0	= Total Cove	r	UPL species	$\frac{100}{0}$ x 5 =	= 0
Herb stratum (Plot size: 5' Radius)			Column totals	100 (A)	400 (B)
1 Parthenocissus quinquefolia	100	Y	FACU	Prevalence In	dex = B/A =	4.00
3				Hydrophytic	Vegetation In	dicators:
4				Rapid test	t for hydrophyti	c vegetation
5				Dominanc	e test is >50%	
6				Prevalenc	e index is ≤3.0	*
7	. <u> </u>			Morphogic	cal adaptations	* (provide
8				supporting	g data in Rema	rks or on a
9 10				separate s	sneet)	
10	100	= Total Covo		(explain):	Adjacent to ma	anaged plant
Woody vine stratum (Plot size: 30' Radius)		I			
1				*Indicators of hy present,	dric soil and wetla unless disturbed	and hydrology must be or problematic
2				Hydrophy	/tic	-
	0	= Total Cove	r	vegetatio	n	
				present?	<u>N</u>	
Remarks: (Include photo numbers here or on a sepa	rate sheet)					

Profile Dese	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix	Matrix Redox Features						-	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-10	7.5YR 4/1	65	7.5YR 5/5	35	D	PL/M	LOAM		BEDROCK HIT AT 10"
0.0						,			
*Type: C = C	Concontration D	– Doploti	on PM - Poduc	od Matrix		laskod S	and Grains	**Location	e: PL – Poro Lining M – Matrix
Hydric So	il Indicators:	= Depleti	OII, RIVI = Reduc		., 1013 = 10	laskeu S	Indicator		m. FL = Fole Lining; M = Matrix
High			Sa	ndy Glavy	ad Matrix	(\$4)	Coast	t Prairie Red	dox (A16) (IRR K I R)
Hist	is Eninedon (A2)		 		50 Matrix vy (95)	(04)	Dark	Surface (S7	
Black	$A = \frac{1}{2} \left(\frac{1}{2} \right)^{1}$				triv (S6)		Iron-N	Janganese	Masses (F12) (I RR K, L, R)
	Irogen Sulfide (A2	1)		amy Mucl	ky Miners	al (E1)		Shallow Day	rk Surface (TE12)
Stra	atified Lavers (A5)	+) \	Lo:	any Glev	od Matrix	(F2)	Other	(evolain in	remarks)
2 cr	n Muck (A10)	,	De	nleted Ma	atrix (F3)	(i 2)			Temanoj
Der	leted Below Dark	Surface	(A11) Re	dox Dark	Surface	(F6)			
	k Dark Surface (A12)	De	oleted Da	ark Surfa	(F7)	*Indiaa	tore of budg	aphytic vegetation and weltand
San	dv Mucky Minera	l (S1)		dox Depr	essions ((F8)	hvdro	loav must b	e present unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)			(10)	nyaro	logy must b	problematic
			/			1			F
Turney	Layer (If observe	ea):					Liveria e		• 2 V
Type: Donth (incho	<i>vc)</i> :				-		Hydrics	son presen	
Deptil (Inche					-				
Remarks:									
COLLAP	SED SLOPE N	NEAR E	SY						
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Se	condary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plan	nts (B14)		X Drainage	Patterns (B10)
X Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1	l)	Dry-Seas	son Water Table (C2)
X Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Drift Dor				$-\frac{(U3)}{Dropono}$	o of Dodu	upod Iron	(C4)	Saturatio	n Visible on Aerial Imagery (C9)
	t or Crust (B1)			- Presenc				Geomorr	bic Position $(D2)$
Iron Den	osits (B5)			(C6)	IIOII Keuu			EAC-Nei	itral Test (D5)
Inundatio	on Visible on Aeria	l Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)	_		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	. ,	Other (E	xplain in	Remarks)		
Field Obser	vations:	,		- `	•		,		
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	X No		Depth (i	nches):	5	Ind	licators of wetland
Saturation p	resent?	Yes	X No		Depth (i	nches):	5	hy	vdrology present? Y
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring wel	l, aerial p	hotos, pr	evious ir	spections), if a	vailable:	
		-	-		-		-		
Remarks:									

Project/Site TH 19 Marshall City/	County: Marshall/Lyor	County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	N Sampling Point: 1CU
Investigator(s): Lewis, DeCesare	Section, Townsh	ip, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none): Concave
Slope (%): Lat: 44°26'57.23"N	 Long: 95°47'06.2	24"W Datum:
Soil Map Unit Name 51: La Prairie Loam	NMI	Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y	(If no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	naturally problematic?	present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N		
Hydric soil present? N	Is the sampled are	a within a wetland? N
Indicators of wetland hydrology present? N	f yes, optional wetla	nd site ID:
Remarks: (Explain alternative procedures here or in a separate re	eport.)	
The vegetation is artit	ficially planted and m	anicured.
VEGETATION Use scientific names of plants.		
Absolute	Dominan Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover	t Species Staus	Number of Dominant Species
1 Celtis occidentalis 40	Y FAC	that are OBL, FACW, or FAC:(A)
2		Total Number of Dominant
3		Species Across all Strata: 2 (B)
4		Percent of Dominant Species
<u> </u>	= Total Cover	
Sapling/Shrub stratum (Plot size: 5' Radius)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species $0 \times 2 = 0$
4		FAC species $40 \times 3 = 120$
	= Total Cover	$\frac{1}{100} = \frac{1}{100} = \frac{1}$
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A) 360 (B)
1 Taraxacum officinale 60	Y FACU	Prevalence Index = $B/A = 3.60$
2		
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
6		Prevalence index is $\leq 3.0^*$
8		Morphogical adaptations* (provide
9		supporting data in Remarks of on a separate sheet)
10		(explain): Adjacent to managed plant
60	= Total Cover	comm.
Woody vine stratum (Plot size: 30' Radius)		*Indicators of hydric soil and wetland hydrology must be
1		present, unless disturbed or problematic
2		Hydropnytic vegetation
0	= i otal Cover	present? N
Remarks: (Include photo numbers here or on a separate sheet)		

SOIL

1CU

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abso	ence of indicators.)
Depth	Matrix		Re	edox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-21	7.5YR 5/2						CLAY LOAM	
*Type: C = C	Concentration. D =	= Depleti	on, RM = Reduc	ed Matrix	MS = M	lasked S	and Grains. **I oca	ation: PL = Pore Lining M = Matrix
Hvdric So	bil Indicators:	Dopiou			., 1110 11		Indicators for Pro	blematic Hydric Soils:
Hist	tisol (A1)		Sa	ndv Gleve	ed Matrix	(S4)	Coast Prairie	Redox (A16) (LRR K. L. R)
Hist	tic Epipedon (A2)			indy Redo	x (S5)	(04)	Dark Surface	(S7) (LRR K. L)
Blac	ck Histic (A3)			rinned Ma	f(00) trix (S6)		Iron-Mangane	se Masses (F12) (LRR K. L. R)
	drogen Sulfide (A4	1)		amy Mucl	kv Minera	al (F1)	Very Shallow	Dark Surface (TE12)
Stra	atified Lavers (A5)			amy Glev	ed Matrix	x (F2)	Other (explain	in remarks)
2 cr	m Muck (A10)			enleted Ma	atrix (F3)	· (· _/		in onlance)
	pleted Below Dark	Surface	e (A11) - Re	dox Dark	Surface	(F6)		
	ck Dark Surface (A12)	De	epleted Da	ark Surfa	(F7)	*Indicators of h	drophytic vegetation and weltand
San	ndv Mucky Minera	l (S1)		dox Depr	essions ((F8)	hydrology mus	t be present unless disturbed or
5 cr	m Mucky Peat or I	Peat (S3				(10)	nyarology mac	problematic
0 0.	Leven (if a become		,					F
	Layer (If observe	ea):					Hydria coil proc	ont? N
Type. Donth (inche	20):				-		Hydric soli pres	
Deptil (Inche					-			
HYDROLO	DGY							
Wetland Hy	drology Indicato	rs:						
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Secondary	Indicators (minimum of two require
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfa	ce Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Drain	age Patterns (B10)
Saturatio	on (A3)			_Hydroge	n Sulfide	Odor (C1	l) Dry-S	eason Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayf	sh Burrows (C8)
Sedimer	nt Deposits (B2)			- (C3)		مرمط الممتح	Satur	ation Visible on Aerial Imagery (C9)
	DUSILS (D3)			- Presenc	e of Real	uced from	(C4) Stunt	ed of Stressed Plants (DT)
	ac of Clusi (D4)			(C6)	ron Redu			Neutral Test (D5)
Inundatio	on Visible on Aeria	Imagen	(B7)	- Thin Mu	ck Surfac	e (C7)		veultai rest (D3)
Sparsely	/ Vegetated Conca	ve Surfa	ce (B8)	- Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
 Field Obser	vations:	,			•		, 	
Surface wate	er present?	Yes	No	х	Depth (i	inches):		
Water table	present?	Yes	No	X	Depth (i	inches):		Indicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	inches):		hydrology present? N
(includes ca	pillary fringe)				-			
Describe rec	corded data (strea	im gauge	e, monitoring we	ll, aerial p	hotos, pi	revious ir	nspections), if available	:
Remarks:								
Remarks:								

Project/Site TH 19	Marshall		City/County	y: Ma	arshall/Lyon Co	ounty	Sampling	Date:	9/29/21	
Applicant/Owner:	Minnesota Der	partment of Transportatic	on S	State: MN			Sampling Point: 1D		1D	
Investigator(s): Le	wis, DeCesare			Secti	on, Township,	Range:		S4, T11 ⁻	1N, R41W	
Landform (hillslope	e, terrace, etc.):	Hillslope		Local r	elief (concave,	convex	, none):		Concave	
Slope (%):	Lat:	44º26'58.17"N	Lon	g:	95%17'3.48"W	V	Datum:			
Soil Map Unit Nam	e51: La Prairie	Loam			NWI Cla	assificat	ion:	R2UE	BH, R2UBG	
Are climatic/hydrol	ogic conditions of	of the site typical for this t	time of the y	ear?	Y (lf r	no, expla	ain in rema	arks)		
Are vegetation	, soil	, or hydrology	signi	ficantly	disturbed?		Are "norm	nal circum	stances"	
Are vegetation	, soil	, or hydrology	natu	naturally problematic?					present? Yes	;
SUMMARY OF	FINDINGS					(If need	led, explai	n any ans	wers in remark	(s.)
Hydrophytic ve	getation presen	t? Y								
Hydric soil pres	sent?	Y	ls	Is the sampled area within a wetland? Y						
Indicators of w	etland hydrology	/ present? Y	lf	yes, op	tional wetland	site ID:				
Remarks: (Explain	alternative proc	edures here or in a sepa	rate report.)							
VEGETATION	Use scientif	ic names of plants.								
		Absr	olute Dom	inant	Indicator	Domina	ance Test	Workshe	et	
Tree Stratum	(Plot size:	30' Radius) % C	over Spe	cies	Staus	Number	of Domina	int Species	6	
1 Caltia anaida	natelie -	- ,	<i>-</i> ،	~		hat are				A)

1 Celtis occidentalis	5	Y	FAC	that are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across all Strata: 2 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
	5	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)		—		Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 85 x 1 = 85
3				FACW species $0 \times 2 = 0$
4				FAC species $5 \times 3 = 15$
5				FACU species 10 x 4 = 40
	0	= Total Cover		UPL species 0 x 5 = 0
Herb stratum (Plot size: 5' Radius)		_		Column totals 100 (A) 140 (B)
1 Carex pedunculata	85	Y	OBL	Prevalence Index = $B/A = 1.40$
2 Parthenocissus vitacea	10	N	FACU	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	95	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius)		_		*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separa	te sheet)			•
SOIL

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the absen	ce of indicators.)
Depth	Matrix		Red	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-10	7 5YR 2 5/2						LOAM	
10.15	7.511(2.5/2							
10-15	7.5YR 4/1						LOAM	
15-21	7.5YR 4/1	70	7.5YR 6/5	30	С		LOAM	
*Type: C = 0	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicators for Probl	ematic Hydric Soils:
Hist	tisol (A1)		Sar	ndv Gleve	ed Matrix	(S4)	Coast Prairie Re	dox (A16) (LRR K. L. R)
Hist	tic Epipedon (A2)		Sar	dv Redo	ox (S5)	(-)	Dark Surface (S	7) (LRR K. L)
Blac	ck Histic (A3)		Stri	nned Ma	rrix (S6)		Iron-Manganese	Masses (F12) (LRR K. L. R)
	trogen Sulfide (A4	n -		my Mucl	ky Minera	al (F1)	Very Shallow Da	rk Surface (TE12)
Stra	atified Lavers (A5)	r)	Loa	my Glev	nd Matrix	(F2)	Other (explain in	remarks)
× 2 cr	m Muck (A10)		Der		otriv (E3)	((<i>L</i>)		Temanay
	I NUCK (ATO)	Surface		lov Dork		(E6)		
	ok Dork Surfage ((Sunace (1 2)				(10) 00 (E7)		
	dy Mucky Minoro	HIZ) I (Q1)					*Indicators of hydi	ophytic vegetation and weltand
	a Musluk Dester	1 (01) Deet (02		iox Depi	essions	(ГО)	nydrology must c	e present, unless disturbed or
^{5 Cl}	This worky Pear of	Pear (55)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					_		Hydric soil preser	nt? Y
Depth (inche	es):				-			
Romarks:								
rtemanto.								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that a	pply)		Secondary Inc	dicators (minimum of two required)
Surface	Water (A1)		-	Aquatic	Fauna (B	13)	Surface	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	X Drainage	e Patterns (B10)
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1) Dry-Sea	son Water Table (C2)
X Water M	larks (B1)			Oxidized	d Rhizosp	heres on	Living Roots Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)	·		Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)			Presenc	e of Redu	uced Iron	(C4) Stunted	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	ction in T	illed Soils Geomor	phic Position (D2)
X Iron Dep	oosits (B5)			(C6)			FAC-Ne	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge of	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wat	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):	Inc	dicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):	h	ydrology present? Y
(includes ca	pillary fringe)							
Describe red	corded data (strea	m daude	e, monitoring well	aerial p	hotos, pr	revious ir	spections), if available:	
2 0001120 100		gaag	,	, aonai p				
Remarks:								
NEAR R	ETAINING WA	LL						
1								

Project/Site TH 19 Marshall Ci	ty/County:	Marshall/Lyon	County Sampling	Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	I Sampling	Point: 1DU
Investigator(s): Lewis, DeCesare	s	ection, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'58.54"N	Long:	95%47'3.49	9"W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	e of the year	? Y (If no, explain in rema	arks)
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "norm	al circumstances"
Are vegetation , soil , or hydrology	naturall	y problematic?		present? Yes
SUMMARY OF FINDINGS	_		(If needed, explai	n any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	ls th	e sampled are	a within a wetland?	' N
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate	e report.)			
	dificielly a	مرامحة مامر	a miau ma al	
I he vegetation is a	rtificially p	lanted and m	anicured.	
VEGETATION Use scientific names of plants.				
Absolute	e Domina	nt Indicator	Dominance Test	Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cove 1	r Specie	s Staus	Number of Domina that are OBL, FAC	nt Species <i>N</i> , or FAC: 0 (A)
2	_		Total Number of Species Across	f Dominant s all Strata: 1 (B)
4			Porcent of Domina	
5			that are OBL, FAC	N, or FAC: 0.00% (A/B)
0	= Total Co	over		(, ,
Sapling/Shrub stratum (Plot size: 5' Radius)	_		Prevalence Index	x Worksheet
1			Total % Cover of:	
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	$0 \times 3 = 0$
	= Total Co	over		$\frac{100}{0}$ x 5 = 0
Herb stratum (Plot size: 5' Radius)			Column totals	$\frac{100}{100}$ (A) $\frac{100}{400}$ (B)
1 Festuca arundinacea 100	Y	FACU	Prevalence Index	= B/A = 4.00
2				
3			Hydrophytic Veg	etation Indicators:
4			Rapid test for	hydrophytic vegetation
5			Dominance te	est is >50%
6			Prevalence in	ldex is ≤3.0*
			Morphogical a	adaptations* (provide
0			supporting da	ita in Remarks or on a
10			(explain): Adi	acent to managed plant
100	= Total Co	over	comm.	abont to managed plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric	soil and wetland hydrology must be
			Present, unie	ss disturbed or problematic
<u> </u>	= Total C	over	vegetation	
	- 10tai 0		present?	<u>N</u>
Remarks: (Include photo numbers here or on a separate sheet)		-	

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of	indicators.)
Depth	Matrix		Rec	dox Featu	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-11	7.5YR 4/2						CLAY		
11-22	7.5YR 4/1						CLAY		
1122	7.511(4/1						OLAT		
*T		Devilet		al NA a tair				*!	Dens Lisis a M. Matrix
"Type: $C = C$	oncentration, D =	= Depieti	on, $RIVI = Reduce$	a Matrix	, IVIS = IV	lasked S	and Grains.	"Location: PL	= Pore Lining, M = Matrix
Hydric So	Il Indicators:		0			(0.1)	Indicators fo	or Problemat	
Hist			San	idy Gleye	ed Matrix	(S4)		airie Redox (/	A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		San	idy Redo	x (S5)		Dark Sur	nace (S7) (LF	
Blac	CK HISTIC (A3)	•		pped Ma	trix (S6)				$(TE_{12}) (LKK K, L, K)$
Hyd	rogen Sulfide (A4	+)	Loa	my Muck	ky Minera	al (F1)	Very Sha	allow Dark Su	
Stra	itified Layers (A5))	Loa	my Gleye	ed Matrix	(F2)	Other (e)	xplain in rema	irks)
2 cn	n Muck (A10)	0		leted Ma	atrix (F3)	(50)			
	leted Below Dark		(A11)Rec	IOX Dark	Surface	(F6)			
	k Dark Surface (A12)		leted Da	irk Suria		*Indicators	s of hydrophyt	ic vegetation and weltand
San	dy Mucky Minera	II (51) Deet (00	, <u> </u>	iox Depre	essions	(F8)	hydrology	y must be pre	sent, unless disturbed or
5 cn	n Mucky Peat or	Peat (53)					prob	lematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric soil	present?	N
Depth (inche	es):								
Remarks:									
HYDROLC)GY								
Wetland Hy	drology Indicate	ors:							
Primary India	ators (minimum	of ono is	roquired: check	all that ar			Saaaa	don Indianta	re (minimum of two required)
<u>Finaly indic</u>	Mator (A1)		required, check a	Aquatia I	<u>Spiy)</u> Found (B	12)	Secon	Surface Soil C	racks (R6)
High Wa	ter Table (A2)				rauna (D	13) ste (B14)	`	Drainage Patto	(B0)
Saturatio	$(\Delta 3)$			Hydroge	n Sulfida	Odor (C1	·	Dry-Season W	(ater Table (C2)
Water M	arks (B1)			Oxidized	Rhizosn	heres on	Living Roots	Cravfish Burro	ws (C8)
Sedimen	t Deposits (B2)			(C3)	11112000			Saturation Visi	ble on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presence	e of Redu	uced Iron	(C4)	Stunted or Stre	essed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorphic P	osition (D2)
Iron Dep	osits (B5)			(C6)			I	FAC-Neutral T	est (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	r Well Da	ata (D9)			
Water-St	ained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicato	ors of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hydrol	ogy present? N
(includes cap	oillary fringe)								
Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if avai	ilable:	
_									
Remarks:									
I									

I

Project/Site TH 19	Marshall		City/Cour	ity: N	Marshall/Lyon	n County	Sampling	Date:	9/29/21	
Applicant/Owner:	Minnesota Depar	tment of Transportatio	'n	State:	M	N	Sampling	Point:	1E	
Investigator(s): Le	wis, DeCesare			Section, Township, Range:				S4, T111N, R41W		
Landform (hillslope	e, terrace, etc.):	Hillslope		Local	relief (conca	ve, conve	k, none):		Concave	
Slope (%):	Lat:	44°26'57.91"N	Lor	ng:	95%17'5.42	2"W	Datum:			
Soil Map Unit Nam	e51: La Prairie Loa	am			NWI	Classifica	tion:	R2U	3H, R2UBG	
Are climatic/hydrole	ogic conditions of th	ne site typical for this t	ime of the	year?	Y	(If no, expl	ain in rem	arks)		
Are vegetation	, soil	, or hydrology	sigr	nificant	ly disturbed?		Are "norn	nal circum	istances"	
Are vegetation	, soil	, or hydrology	nat	urally p	roblematic?				present? Yes	
SUMMARY OF	FINDINGS					(If need	ded, explai	in any ans	wers in remarks.)	
Hydrophytic ve	getation present?	Y								
Hydric soil pres	sent?	Y		Is the	sampled are	a within a	wetland?	?	Y	
Indicators of w	etland hydrology pr	esent? Y	1	f yes, o	optional wetla	and site ID:				
Remarks: (Explain	alternative procedu	ures here or in a separ	rate report.	.)						
VEGETATION ·	Use scientific	names of plants.								
		Abso	olute Dor	minant	Indicator	Domin	ance Test	t Worksh	eet	

<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1 <i>Fraxinus americana</i>	% Cover 10	Species Y	Staus FACU	Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
2 3				Total Number of Dominant Species Across all Strata: 3 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)
	10	= Total Cover		
Sapling/Shrub stratur (Plot size: 5' Radius)			Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species $70 \times 1 = 70$
3				FACW species $0 \times 2 = 0$
4				FAC species $20 \times 3 = 60$
5				FACU species $10 \times 4 = 40$
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 170 (B)
1 Carex pedunculata	70	Y	OBL	Prevalence Index = B/A = 1.70
2 Toxicodendron radicans	20	Y	FAC	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	90	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u> 1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			•

SOIL

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Red	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ıre	Remarks
0-6	7.5YR 5/2						CLAY LOAN	Л	
6-18	7.5YR 4/1						SANDY CL	AY LOAM	
18-23	7 5YR 3/1	60	10YR 8/4	40	П	М	SANDY CL	ΔΥ	
10 20	7.011(0/1	00	10111 0/4	-10		101	0, 1101 02	ι.	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coas	t Prairie Ree	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	r (explain in	remarks)
2 cr	n Muck (A10)		X Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indica	tors of hydr	ophytic vegetation and weltand
San	dy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydro	logy must b	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:					-		Hydric	soil presen	t? <u>Y</u>
Depth (inche	es):								
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that ap	oply)		Se	condary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	-	X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1)	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	t Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	X Stunted o	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in 1	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	OSIIS (B5) on Visible on Aeria	Imagen	(B7)	(CO) Thin Mu	ok Surfaa	(C7)	_	FAC-Net	itrai Test (D5)
Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge o	or Well Da	e (C7) ata (D9)			
Water-S	tained Leaves (B9)		Other (F	xolain in	Remarks)		
Field Obser	vations:	/		00. (=	, and the second se		/	<u> </u>	
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	vdrology present? Y
(includes ca	pillary fringe)				- · ·	,			
Describe rec	corded data (strea	am gaude	e, monitorina well	, aerial p	hotos, pr	evious ir	spections), if a	available:	
		5 5	0	•	<i>·</i> •		. ,,		
Remarks:									

Project/Site TH 19 Marshall	City/Cou	unty: Ma	rshall/Lyon (County	Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportatio	on	State:	MN	;	Sampling Point:	1EU
Investigator(s): Lewis, DeCesare		Sectio	n, Township	, Range:	S4, T	111N, R41W
Landform (hillslope, terrace, etc.): Hillslope		Local re	lief (concave	e, convex,	, none):	Concave
Slope (%): Lat: 44°26'58.20"N	L	ong:	95°47'5.79"	'W	Datum:	
Soil Map Unit Name51: La Prairie Loam			NWI C	Classificati	ion: R2	UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this t	time of th	e year?	Y (If	no, expla	ain in remarks)	
Are vegetation X , soil , or hydrology	si	gnificantly of	disturbed?		Are "normal circ	umstances"
Are vegetation , soil , or hydrology	na	aturally prot	blematic?			present? No
SUMMARY OF FINDINGS				(If need	ed, explain any a	answers in remarks.)
Hydrophytic vegetation present? N						
Hydric soil present? N		Is the sa	mpled area	within a	wetland?	Ν
Indicators of wetland hydrology present? N		lf yes, opt	ional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a separ	rate repo	rt.)		-		
The vegetation is	s artificia	ally plante	ed and ma	nicured.		
L VEGETATION Use scientific names of plants.						
Abso	olute D	ominant	Indicator	Domina	nce Test Work	sheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Co 1	over S	Species	Staus	Number that are C	of Dominant Spec DBL, FACW, or F	cies AC: 0 (A)
2				Total	Number of Domir	nant
3				Spec	ies Across all Str	а.а. <u>2</u> (В)
5				Percent that are (of Dominant Spec	cies AC: 0.00% (A/B)
<u></u>	D = T	otal Cover				
Sapling/Shrub stratum (Plot size: 5' Radius)			ľ	Prevale	nce Index Worl	ksheet
1				Total %	Cover of:	
2				OBL spe	ecies 0	x 1 = 0
3				FACW s	species 0	x 2 = 0
4				FAC spe	ecies 0	x 3 =
5				FACU s	pecies 100	x 4 = 400
(Distaire) (Distaire) (Distaire)	<u> </u>	otal Cover		UPL spe	ecies 0	x = 0
Herb stratum (Plot size: 5 Radius)			-	Column		(A) $\frac{400}{100}$ (B)
1 Festuca arundinacea //	0	Y	FACU	Prevalei	nce Index = B/A	= 4.00
		<u> </u>	FACU	Hydron	hytic Vogotatio	n Indicators:
4				Ran	id test for hydro	phytic vegetation
5				Don	ninance test is >	50%
6				Prev	valence index is	≤3.0*
7				 Mor	nhonical adaptat	tions* (provide
8				sup	porting data in R	emarks or on a
9				sepa	arate sheet)	
10	00 = T0	otal Cover		(exp com	blain): Adjacent t nm.	o managed plant
Woody vine stratum (Plot size: 30' Radius)				*Indicator	rs of hydric soil and resent. unless distu	wetland hydrology must be
2				Hyd	Irophytic	
() = To	otal Cover		veg pres	etation sent?	J
Remarks: (Include photo numbers here or on a separate sh	eet)			-		

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	e absence	e of indicators.)
Depth	Matrix		Rec	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-6	7.5YR 3/3						SANDY LOAM	1	PLANT ROOTS/WORMS
6-23	7.5YR 3/2						LOAM		
							-		
*Type: C = C	Concentration, D :	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators f	or Proble	matic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	: (S4)	Coast P	Prairie Red	ox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark Su	urface (S7)	(LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Ma	nganese N	/lasses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Sh	allow Dark	s Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (e	explain in r	emarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)	·			
Dep	leted Below Dark	Surface	(A11)Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Dep	leted Da	irk Surfa	ce (F7)	*Indicator	rs of hydro	phytic vegetation and weltand
San	ndy Mucky Minera	II (51) Deet (52		iox Depr	essions	(F8)	hydrolog	gy must be	present, unless disturbed or
5 CI	п миску Реагог	Peal (55)					ŀ	biobiernatic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric so	il present	? <u>N</u>
Depth (inche	es):				-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		<u>Seco</u>	ndary India	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	oil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C	1)	Dry-Seaso	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish B	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			· · · · ·	Saturation	Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	LCED Iron	(C4)	Stunted or	Stressed Plants (D1)
				Recent I	ron Reau	ICTION IN I			ral Test (D5)
	on Visible on Aeria	Imager	(B7)	Thin Mu	ck Surfac	e (C7)			
Sparselv	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks	.)		
Field Obser	vations:	,		, , , , , , , , , , , , , , , , , , ,			,	I	
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Indi	cators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hyo	drology present? N
(includes ca	pillary fringe)				•				
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if ava	ailable:	
Remarks:									

Project/Site TH 19	Marshall		City/Counf	ty: <u>M</u> ;	arshall/Lyon (County	Sampling	Date:	9/29/2	21
Applicant/Owner:	Minnesota Depar	tment of Transportatic	n	State:	MN		Sampling I	Point:	1F	
Investigator(s): Le	wis, DeCesare			Secti	on, Township	o, Range:		S4, T111N,	R41W	
Landform (hillslope	e, terrace, etc.):	Hillslope		Local r	elief (concave	e, convex	(, none):	Co	ncave	
Slope (%):	Lat:	44°26'57.66"N	Lon	ıg:	95°47'6.87"	"W	Datum:			
Soil Map Unit Nam	ie51: La Prairie Loa	am			NWI C	Classificat	lion:	R2UBH,	R2UBC	3
Are climatic/hydrol	ogic conditions of the	he site typical for this t	ime of the y	year?	Y (If	f no, expla	ain in rema	rks)		
Are vegetation	, soil	, or hydrology	sign	ificantly	disturbed?		Are "norm	al circumsta	nces"	
Are vegetation	, soil	, or hydrology	natu	urally pro	oblematic?			pre	sent?	Yes
SUMMARY OF	FINDINGS					(If need	led, explair	ا any answe	rs in rer	narks.)
Hydrophytic ve	getation present?	Y								
Hydric soil pres	sent?	Y	1	is the sa	ampled area	within a	wetland?	<u> </u>	(
Indicators of w	etland hydrology pr	resent? Y	lf	f yes, or	otional wetlan	d site ID:				
Remarks: (Explain	alternative procedu	ures here or in a separ	ate report.))						
VEGETATION ·	Use scientific	names of plants.			,					
<u>Tree Stratum</u> 1 2 3	(Plot size: 30	Abso 'Radius_) % Co	olute Dom over Spe	hinant ecies	Indicator Staus	Domina Number that are Total	of Dominar OBL, FACW Number of	Worksheet nt Species V, or FAC: Dominant all Strata:	2	(A)
4						500				_(B)

4Percent of Dominant Species that are OBL, FACW, or FAC:100.00% (A50= Total CoverPrevalence Index Worksheet Total % Cover of:20Total % Cover of:OBL species30FACW species70 x 2 =40= Total Cover50= Total CoverHerb stratum(Plot size:5' Radius)1Elymus virginicus70 YFACW2Carex pedunculata20 YOBL	/B)
5Image: Signal colspan="2">Image: Signal colspan="2">Image: Signal colspan="2">Image: Signal colspan="2" Image: Signal colspan="2" Image	/B)
Sapling/Shrub stratum(Plot size:5' Radius)Prevalence Index Worksheet1Total % Cover of:OBL species20x 1 =203Sapling/Shrub stratumSapling/Shrub stratumOBL species20x 1 =204Sapling/Shrub stratumSapling/Shrub stratumSapling/Shr)
Sapling/Shrub stratum (Plot size: 5' Radius) 1)
1Total % Cover of:2 3 <td>)</td>)
2OBL species20 $x 1 =$ 203FACW species70 $x 2 =$ 1404FAC species0 $x 3 =$ 050FACU species10 $x 4 =$ 4060=Total CoverUPL species0 $x 5 =$ 01Elymus virginicus70YFACWPrevalence Index = B/A =2.00)
3FACW species70 $x 2 =$ 1404FAC species0 $x 3 =$ 050= Total CoverFAC species0 $x 3 =$ 060= Total Cover0FAC species0 $x 5 =$ 01Elymus virginicus70YFACWPrevalence Index = B/A =2.002Carex pedunculata20YOBIPrevalence Index = B/A =2.00)
4FAC species0x 3 =050= Total CoverFACU species10x 4 =40 $Herb stratum$ (Plot size:5' Radius)0= Total CoverUPL species0x 5 =01Elymus virginicus70YFACWPrevalence Index = B/A =2.00(B))
5 G FACU species 10 $x 4 =$ 40 $Herb stratum$ (Plot size: 5' Radius)) 0 $=$ Total CoverUPL species 0 $x 5 =$ 0 1 Elymus virginicus 70 YFACWPrevalence Index = B/A = 2.00 2 Carex pedunculata 20 YOBI 0 0 $x 4 =$ 40)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$)
Herb stratum (Plot size: 5' Radius) Column totals 100 (A) 200 (E 1 Elymus virginicus 70 Y FACW Prevalence Index = B/A = 2.00 2 Carex pedunculata 20 Y OBI)
1 Elymus virginicus 70 Y FACW Prevalence Index = B/A = 2.00 2 Carex pedunculata 20 Y OBI	
2 Carex pedunculata 20 Y OBL	
3 Cirsium arvense 10 N FACU Hydrophytic Vegetation Indicators:	
4 Rapid test for hydrophytic vegetation	
5 X Dominance test is >50%	
6 X Prevalence index is ≤3.0*	
7 Morphogical adaptations* (provide	
8 supporting data in Remarks or on a	
9 separate sheet)	
10 (explain): Adjacent to managed plant	
100 = Total Covercomm.	
Woody vine stratum (Plot size: 30' Radius) *Indicators of hydric soil and wetland hydrology mupresent, unless disturbed or problematic 1 *Indicators of hydric soil and wetland hydrology mupresent, unless disturbed or problematic	st be
2 Hydrophytic	
0 = Total Cover vegetation	
present? Y	
Remarks: (Include photo numbers here or on a separate sheet)	

Profile Dese	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absence	e of indicators.)
Depth	Matrix		Rec	dox Featu	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	re	Remarks
0-7	7.5YR 2.5/1						CLAY LOAM		
7-23	7.5RY 4/1						CLAY LOAM		
-									
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains.	**Location	: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Proble	matic Hydric Soils:
X Hist	tisol (A1)		San	dy Gleye	ed Matrix	: (S4)	Coast	Prairie Red	ox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	idy Redo	x (S5)	. ,	Dark S	Surface (S7)	(LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-M	langanese N	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dark	< Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in r	emarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
X Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicate	ors of hydro	phytic vegetation and weltand
San	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions	(F8)	hydrolo	ogy must be	present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)					ł	problematic
Restrictive	Layer (if observe	ed):							
Type:		-					Hydric s	oil present	? Y
Depth (inche	es):				•				
Romarks:					-				
	JGY								
Wetland Hy	drology Indicate	vre.							
		ns. of one is	required, checks	all that ar	anh ()		Coo	المعارية والمعاد	
Surface	Vator (A1)	or one is	required, check a	<u>Agustia</u>	<u>opiy)</u> Found (P	12)	<u>Sec</u>	Surface S	cators (minimum of two required)
High Wa	V aler (AT)				гаила (в uatic Plar	(R14)		Drainage	OII CIACKS (B0) Patterns (B10)
Saturatio	(A3)			Hydrone	n Sulfide	Odor (C1	D	Drv-Seaso	on Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	living Roots	Cravfish E	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturation	Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) X	Stunted of	r Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorpl	nic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neut	ral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	r (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	X	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Indi	cators of wetland
Saturation p	resent? pillary fringo)	res	NO	Χ	Depth (I	ncnes):		nyo	drology present? Y
	pinally initige		monitoriaru-I	oorial -	hotos =		anastiana) if	voiloble:	
Describe rec	corded data (strea	am gauge	e, monitoring well	, aenai p	notos, pr	revious ir	ispections), il av	valiable:	
Remarks:									

Project/Site TH 19 Marshall City	County: Marshall/Lyor	County Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: M	Sampling Point:	1FU
Investigator(s): Lewis, DeCesare	Section, Townsh	uip, Range: S4, T111	IN, R41W
Landform (hillslope, terrace, etc.): Terrace	Local relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'57.94"N		3"W Datum:	
Soil Map Unit Name51: La Prairie Loam	NWI	Classification: R2UE	H, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y	(If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circum	stances"
Are vegetation , soil , or hydrology	naturally problematic?		present? No
SUMMARY OF FINDINGS		(If needed, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N			
Hydric soil present? N	Is the sampled are	a within a wetland?	Ν
Indicators of wetland hydrology present? N	If yes, optional wetla	and site ID:	
Remarks: (Explain alternative procedures here or in a separate r	enort)		
	epon.)		
The vegetation is arti	ficially planted and m	anicured.	
VEGETATION Use scientific names of plants			
VEGETATION Use scientific frames of plants.	Dominant Indiantar	Dominance Test Workshe	et.
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus	Number of Dominant Species	
1	•	that are OBL, FACW, or FAC	, : 0 (A)
2	·	Total Number of Dominan	t
3		Species Across all Strata	<u> </u>
4		Percent of Dominant Species	5
5		that are OBL, FACW, or FAC	<u>0.00%</u> (A/B)
0	= I otal Cover	Drevelen ee Index Werkel	
<u>Sapling/Shrub stratur</u> (Plot size: <u>5 Radius</u>)		Total % Cover of:	eet
2	·	OBL species 0 x 1	= 0
3	·	FACW species 0 x 2	= 0
4		FAC species 0 x 3	= 0
5		FACU species 100 x 4	= 400
0	= Total Cover	UPL species 0 x 5	= 0
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A)	<u>400</u> (B)
1 Festuca arundinacea 100	Y FACU	Prevalence Index = B/A =	4.00
2	·	lludranhutia Varatatian l	diantara
3	·	Rapid test for hydrophy	tic vegetation
5		Dominance test is >50°	%
6	·	Prevalence index is ≤3.	0*
7	·	Morphogical adaptation	s* (provide
8		supporting data in Rem	arks or on a
9	. <u> </u>	separate sheet)	
10	Total Cavar	(explain): Adjacent to m	nanaged plant
Woody vine stratum (Plot size: 30' Radius)			
1		*Indicators of hydric soil and wet present, unless disturbe	tland hydrology must be d or problematic
2	·	Hydrophytic	
0	= Total Cover	vegetation	
		present? N	
Remarks: (Include photo numbers here or on a separate sheet)			

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm tl	he absenc	e of indicators.)
Depth	Matrix		Redox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	е	Remarks
0-8	7.5YR 5/2						SANDY LOA	М	
8-18	7.5YR 3/1						LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:		_				Indicators	for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coast	Prairie Rec	lox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	x (S5)		Dark S	Surface (S7) (LRR K, L) Magagag (F12) (LBB K, L, B)
Blac	CK HISTIC (A3)	•	Stri	pped Ma	trix (S6)			anganese i	Masses (F12) (LRR K, L, R)
	arogen Suilide (A2	+)	Loa		cy Minera	al (F1) (E2)	Very S	nallow Dar (ovoloin in l	k Surface (TFT2)
	m Muck (A10))	L0a	any Gley	eu Malin atriv (E3)	(Г2)			lemarks)
2 ci	leted Below Dark	Surface	(A11) Re(dox Dark	Surface	(F6)			
	ck Dark Surface (A12)		pleted Da	ark Surfa	(FO) ce (F7)	*Indicate	are of bydro	phytic vogetation and weltand
Sar	ndv Muckv Minera	l (S1)	Re	dox Depr	essions ((F8)	hvdrolo	bav must be	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)			()	nyaroie	ygy maor be	problematic
Restrictive	l aver (if observe								
Type:	Layer (II Observe	<i>su)</i> .					Hydric s	oil present	2 N
Depth (inche	es):				-		i i julio e		
= = =					-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that ap	oply)		Sec	ondary Indi	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1)	_ Dry-Seas	on Water Table (C2)
Water M	larks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Drift Der	(D2)			Presenc	e of Redu	iced Iron	(C4)	Saturation	r Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	tral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		_	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wat	er present?	Yes	No	X	Depth (i	nches):			
Water table	present?	Yes	No No	<u> </u>	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent? nillary fringe)	res		X	Depth (I	ncnes):		ny	drology present? N
Describe rec	plindly minge)	m aqua		ooriol n	hotos pr	iovious ir	anastiona) if a	voilable:	
Describered		ani yauyi	e, morntoning wei	, aenai p	notos, pi	evious ii	ispections), if at	aliable.	
Remarks:									

WETLAND DETERMIN	NATION DAT	A FORM - M	dwest Region			
Project/Site TH 19 Marshall	City/County:	Marshall/Lyon	County Sampling Date:	9/29/21		
Applicant/Owner: Minnesota Department of Transportation	on State	e:MN	Sampling Point:	2A		
Investigator(s): Lewis, DeCesare	Se	ection, Townshi	p, Range: S4, T1	11N, R41W		
Landform (hillslope, terrace, etc.): Hillslope	Loc	al relief (concav	re, convex, none):	Cancave		
Slope (%): Lat: 44°26'57.89"N	Long:	95°47'7.92	"W Datum:			
Soil Map Unit Name51: La Prairie Loam		NWI	Classification: R2L	JBH, R2UBG		
Are climatic/hydrologic conditions of the site typical for this t	ime of the year?	? <u>Y</u> (f no, explain in remarks)			
Are vegetation, soil, or hydrology	significa	ntly disturbed?	Are "normal circu	mstances"		
Are vegetation , soil , or hydrology	naturally problematic? present? Yes					
SUMMARY OF FINDINGS			(If needed, explain any ar	nswers in remarks.)		
Hydrophytic vegetation present? Y						
Hydric soil present? Y	Is the	e sampled area	a within a wetland?	Y		
Indicators of wetland hydrology present? Y	If yes	, optional wetlar	nd site ID:			
Remarks: (Explain alternative procedures here or in a sepa	rate report)					
VEGETATION Use scientific names of plants						
		t Indicator	Dominance Test Works	heet		
Abso Tree Stratum (Plot size: 30' Radius) % C	over Species	Staus	Number of Dominant Speci			
1			that are OBL, FACW, or FA	C: 1 (A)		
2			Total Number of Domina	ant		
3			Species Across all Stra	ta: 1 (B)		
4			Percent of Dominant Speci	les		
5			that are OBL, FACW, or FA	.C: 100.00% (A/B)		
() = Total Co	ver				
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Works	sheet		
1			Total % Cover of:			
2			OBL species 0 x	1 = 0		
3			FAC vv species 90 x	2 = 180		
			FAC species $0 x$	3 = 0		
) = Total Co	ver	LIPL species 0 x	$4 = \frac{40}{10}$		
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 220 (B)		
1 Elymus virainicus	0 Y	FACW	Prevalence Index = B/A =	= 2.20		
2 Cirsium arvense	0 <u>N</u>	FACU				
3			Hydrophytic Vegetation	Indicators:		
4			Rapid test for hydropl	hytic vegetation		
5			X Dominance test is >5	0%		
6			X Prevalence index is ≤	3.0*		
7			Morphogical adaptation	ons* (provide		
8			supporting data in Re	marks or on a		
9			separate sheet)	,		
10			(explain): Adjacent to	managed plant		

100 = Total Cover

= Total Cover

0

comm.

Hydrophytic

vegetation

present?

*Indicators of hydric soil and wetland hydrology must be

present, unless disturbed or problematic

Y

US Amy Corps of Engineers

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

Woody vine stratum (Plot size: 30' Radius)

1

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absence	e of indicators.)
Depth	Matrix		Red	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	е	Remarks
0-14	7.5YR 4/2						SANDY CLA	Y LOAM	
14-23	7.5YR 2.5/2						LOAM		
							-		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Proble	matic Hydric Soils:
X Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Red	lox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark S	Surface (S7) (LRR K, L)
Blac	Black Histic (A3) Stripped						Iron-M	anganese l	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	hallow Dar	k Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in I	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicate	ors of hydro	ophytic vegetation and weltand
San	idy Mucky Minera	ll (S1)	Rec	lox Depr	essions ((F8)	hydrolo	ogy must be	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	oil present	? <u>Y</u>
Depth (inche	es):				-				
	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that ar	oply)		Sec	ondary Indi	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Eauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	×	Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish E	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatior	n Visible on Aerial Imagery (C9)
X Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	r Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	_Geomorp	hic Position (D2)
Iron Dep	osits (B5) on Visible on Aoria	Imagan	(P7)	(C6) Thin Mu	ok Surfoo			FAC-Neu	tral Test (D5)
Sparsely	Vegetated Conca	we Surfa	r (B7)	Gauge c	or Woll Da	e (C7) ata (D9)			
Water-S	tained Leaves (B9			Other (F	volain in	Remarks)		
Field Obser	vations:	/		00. (=	, and the second se		/		
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No		Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	drology present? Y
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if a	vailable:	
Domenter									
Remarks:									

Project/Site TH 19 Marshall City	County: Marshall/Lyon	County Sampling Date: 9/29/21					
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point: 2AU					
Investigator(s): Lewis, DeCesare	Section, Township, Range: S4, T111N, R41W						
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concav	ve, convex, none): Concave					
Slope (%): Lat: 44°26'58.02"N	Long: 44°26'58.0	2"N Datum:					
Soil Map Unit Name51: La Prairie Loam	NWI	Classification: R2UBH, R2UBG					
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y (If no, explain in remarks)					
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circumstances"					
Are vegetation , soil , or hydrology	naturally problematic?	present? No					
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)					
Hydrophytic vegetation present? N							
Hydric soil present? N	Is the sampled area	a within a wetland? N					
Indicators of wetland hydrology present? N	If yes, optional wetlan	nd site ID:					
Remarks: (Explain alternative procedures here or in a separate r	eport)						
	0001)						
The vegetation is art	ificially planted and ma	anicured.					
VEGETATION Use scientific names of plants							
Absolute	Dominant Indicator	Dominance Test Worksheet					
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus	Number of Dominant Species					
1		that are OBL, FACW, or FAC: 0 (A)					
2		Total Number of Dominant					
3	·	Species Across all Strata: 1 (B)					
4	·	Percent of Dominant Species					
<u> </u>		that are OBL, FACW, or FAC: 0.00% (A/B)					
Sapling/Shrub strature (Plot size: 5' Padius)	= I otal Cover	Provalance Index Workshoot					
1		Total % Cover of					
2	·	OBL species $0 \times 1 = 0$					
3	·	FACW species $0 \times 2 = 0$					
4		FAC species 0 x 3 = 0					
5	·	FACU species 100 x 4 = 400					
0	= Total Cover	UPL species $0 \times 5 = 0$					
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)		Column totals 100 (A) 400 (B)					
1 Festuca arundinacea 100	Y FACU	Prevalence Index = $B/A = 4.00$					
2	·	Hudronhutia Vagatatian Indiastora					
4	·	Rapid test for hydrophytic vegetation					
5	·	Dominance test is >50%					
6	·	Prevalence index is ≤3.0*					
7		Morphogical adaptations* (provide					
8	·	supporting data in Remarks or on a					
9		separate sheet)					
10	= Total Cover	(explain): Adjacent to managed plant comm.					
Woody vine stratum (Plot size: 30' Radius)	-	*Indicators of hydric soil and wetland hydrology must be					
1		present, unless disturbed or problematic					
2		Hydrophytic					
0	= Total Cover	present? N					
Pomarke: (Include photo numbers here or an a constrate share)							
Incentaines. (Include photo numbers here of on a separate sheet)							

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absence	e of indicators.)
Depth	Matrix		Redox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-11	7.5YR 3/1						SANDY LOA	M	
11-20	7.5YR 4/1						LOAM		
-									
*Tvpe: C = C	Concentration. D =	= Depleti	on. RM = Reduce	d Matrix	. MS = N	lasked S	and Grains.	**Location	: PL = Pore Lining. M = Matrix
Hvdric So	il Indicators:				,		Indicators	for Proble	matic Hydric Soils:
Hist	isol (A1)		Sar	dv Gleve	ed Matrix	: (S4)	Coast	Prairie Red	lox (A16) (LRR K. L. R)
Hist	ic Epipedon (A2)		Sar	dv Redo	x (S5)	(-)	Dark S	Surface (S7) (LRR K. L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-M	langanese l	Masses (F12) (LRR K, L, R)
	lrogen Sulfide (A4	4)	Loa	mv Mucl	kv Minera	al (F1)	Verv S	Shallow Dar	k Surface (TF12)
Stra	tified Lavers (A5)	,	Loa	mv Glev	ed Matrix	(F2)	Other	(explain in I	remarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)	()		V 1 -	,
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
	k Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicat	ors of hydro	ophytic vegetation and weltand
San	dy Mucky Minera	í (S1)	Rec	lox Depr	essions ((F8)	hydrole	ogy must be	e present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)	·		. ,	,	5,	problematic
	l avor (if obsorv	<u>d)</u> .	-						
Type	Layer (II Observe	.					Hydric s	oil prosont	2 N
Depth (inche	<i>be)</i> .				-		Hyunc s	on present	
Deptil (inche					-				
Remarks:									
wetland Hy	drology indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that a	oply)		Sec	condary Indi	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I)	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish E	Burrows (C8)
Drift Dor				(US) Drocono	o of Dodu	upod Iron	(CA)	Saturation	r Stressed Plants (D1)
	t or Cruct (B4)			Presenc	ron Redu	uction in T			his Position (D2)
	nosite (B5)			(C6)	Ion Redu			EAC-Neur	tral Test (D5)
	on Visible on Aeria	l Imagery	(B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xolain in	Remarks)		
Field Obser	vations:	/					/		
Surface wat	er present?	Yes	No	х	Denth (i	nches).			
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	X X	Depth (i	nches):		hv	drology present? N
(includes ca	pillary fringe)						<u> </u>	,	
Describe rec	Describe recorded data (stream gauge monitoring well aerial photos, previous inspections), if available:								
Remarks:									

Project/Site TH 19	Marshall		City/County:	Marshall/L	larshall/Lyon County		g Date:	9/29/21			
Applicant/Owner:	Minnesota Depart	ment of Transportatio	n State	e:	MN	Sampling	Point:	2B			
Investigator(s): Le	wis, DeCesare		S	Section, Township, Range			S4, T1	11N, R41W			
Landform (hillslope	e, terrace, etc.):	Hillslope	Loc	Local relief (concave, convex, none): Concav				Concave			
Slope (%):	Lat:	44°26'58.97"N	Long:	95%47	'8.71"W	Datum:					
Soil Map Unit Nam	e51: La Prairie Loa	m		N	WI Classific	ation:	R2L	JBH, R2UBG			
Are climatic/hydrole	ogic conditions of th	e site typical for this t	ime of the year	? Y	(If no, exp	olain in rem	arks)				
Are vegetation	, soil	, or hydrology	significa	ntly disturbe	ed?	Are "norr	mal circu	mstances"			
Are vegetation	, soil	, or hydrology	naturally	problemati	c?			present? Yes			
SUMMARY OF	FINDINGS				(If nee	eded, expla	in any ar	swers in remarks.)			
Hydrophytic ve	getation present?	Y									
Hydric soil pres	sent?	Y	Is th	e sampled	area within	a wetland	?	Y			
Indicators of w	etland hydrology pr	esent? Y	If yes	If yes, optional wetland site ID:							
Remarks: (Explain	alternative procedu	ires here or in a separ	ate report.)								
VEGETATION	VEGETATION Use scientific names of plants.										
		•			Dami	T	4 \M/a #l!	haat			

	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30' Radius)	% Cover	Species	Staus	Number of Dominant Species
1 Acer negundo	5	Y	FAC	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
5				that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
	5	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species $0 \times 2 = 0$
4		· ·		FAC species $25 \times 3 = 75$
5				FACU species $75 \times 4 = 300$
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 375 (B)
1 Parthenocissus vitacea	75	Y	FACU	Prevalence Index = $B/A = 3.75$
2 Solanum dulcamara	20	Y	FAC	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	95	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

SOIL

Profile Des	cription: (Descr	ibe to th	e depth neede	d to docu	iment the	e indicat	or or confirm the a	bsence of indicators.)		
Depth	Matrix		<u> </u>	edox Feat	tures		1			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Rema	arks	
0-4	7.5YR 5/3	['			T	T	SANDY LOAM			
4-8	7.5YR 3/2			1	1	1 1	SANDY LOAM			
8-11	7.5YR 2.5/1	'	<u> </u>	+	1	1 1	SANDY CLAY LC	DAM		
		'	<u> </u>	+	+	╂───┦				
		'	<u> </u>	+	+	┨───┤		<u> </u>		
	ļ	 '	 	+	──	┨───┤		<u> </u>		
		 '			──	 /				
		 '		┥	\downarrow					
		<u> </u>								
*Type: C = C	Concentration, D =	= Depleti	ion, RM = Redu	ced Matrix	κ, MS = Ν	Aasked S	and Grains. **L	ocation: PL = Pore Lining	g, M = Matrix	
Hydric So	il Indicators:		_	-	-		Indicators for	Problematic Hydric So	ils:	
Hist	(isol (A1)		Sa	andy Gley	ed Matrix	trix (S4) Coast Prairie Redox (A16) (LRR K, L, R				
Hist	ic Epipedon (A2)			andy Redo	эх (S5)		Dark Surra	ICE (S7) (LRR K, L)		
	ck Histic (A3)	4	St	ripped Ma	atrix (S6)	1/54)			Κ Ν, Ε, Ν)	
	Irogen Sullide (A4	+) `	L0	amy iviuci	ky Milliera	al (F1) ∵ (⊑2)		OW Dark Surface (IFIZ)		
	Muck (A10)	1	— <u></u>	arriy Giey	(EQ IVIALITY	X(F∠) \		alfin in remarks)		
2 01	Neted Relow Dark		- (Δ11)R	edox Dark	4 Surface	(F6)				
	rk Dark Surface (A12)	D	enleted Dr	ark Surfa	(F7)	*Indicators (of hydrophytic vegetation	and woltand	
X Sar	X Sandy Mucky Mineral (S1) Redox Depressions (F8) hydrology must be present, unless disturbed or									
5 cr	n Mucky Peat or	Peat (S3	3)	-	•••••	()	11, 6. 6. 6. 6. 7	problematic		
Postrictive	- Lovor (if observe	<u>,</u>								
TVDA.		suj.					Hydric soil p	vresent? Y		
Depth (inche	25):				-		i iyano ban p	<u> </u>		
Dop an ()										
HYDROLO	DGY									
Wetland Hy	drology Indicate	ors:								
Primary Indi	cators (minimum	of one is	required: check	< all that a	(vlani		Seconda	ary Indicators (minimum	of two required)	
Surface	Water (A1)	01 01.2	1044.102., 21.2.	Aquatic	Fauna (B	313)	Si	urface Soil Cracks (B6)	01 (110 10 40	
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	X Dr	rainage Patterns (B10)		
X Saturatio	on (A3)		×	Hydroge	ən Sulfide	Odor (C1	i)Dr	ry-Season Water Table (C	2)	
X Water M	arks (B1)			Oxidized	d Rhizosp	heres on	Living Roots Cr	rayfish Burrows (C8)		
Sedimen	nt Deposits (B2)		_	(C3)			Sa	aturation Visible on Aerial I	magery (C9)	
Drift Dep	osits (B3)		_	Presenc	ce of Redu	uced Iron	(C4)St	unted or Stressed Plants ((D1)	
Algai Ivia	t or Crust (B4)			Recent i	Iron Reau	JCtion In I		$\begin{array}{c} \text{Proposition} (D2) \\ \text{Proposition} (D5) \\ \text{Proposition} \\ Prop$		
Inundatio	וסט) on Visible on Aeria	al Imager	v (B7)		ick Surfac	ce (C7)				
Sparsely	Vegetated Conca	ve Surfa	.ce (B8)	Gauge	or Well D:	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	Explain in	Remarks)			
Field Obser	vations:									
Surface wate	er present?	Yes	No	х	Depth (i	inches):				
Water table	present?	Yes	X No		Depth (i	inches):	8	Indicators of wetlan	d	
Saturation p	resent?	Yes	X No		Depth (i	inches):	8	hydrology present?	? <u>Y</u>	
(includes ca	pillary fringe)						L			
Describe rec	corded data (strea	am gauge	e, monitoring we	୬II, aerial p	ohotos, pr	revious ir	spections), if availa	ble:		
Domarke										
Remains.										

Project/Site TH 19 Marshall City/	County: Marshall/Lyon	County Sampling Date:	9/29/21			
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point:	2BU			
Investigator(s): Lewis, DeCesare	Section, Township, Range: S4, T111N, R41W					
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none):	Concave			
Slope (%): Lat: 44º26'58.86"N	Long: 95%47'7.97	/"W Datum:				
Soil Map Unit Name51: La Prairie Loam	NWI	Classification: R2U	BH, R2UBG			
Are climatic/hydrologic conditions of the site typical for this time of	f the year? Y (If no, explain in remarks)				
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circun	nstances"			
Are vegetation , soil , or hydrology	naturally problematic?		present? No			
SUMMARY OF FINDINGS		(If needed, explain any an	swers in remarks.)			
Hydrophytic vegetation present? N						
Hydric soil present? N	Is the sampled are	a within a wetland?	Ν			
Indicators of wetland hydrology present? N	If yes, optional wetla	nd site ID:				
Remarks: (Explain alternative procedures here or in a separate r	aport)					
The vegetation is arti	ficially planted and ma	anicured.				
VECETATION Lies scientific names of plants						
VEGETATION Ose scientific frames of plants.	Deminent Indiactor	Dominance Test Worksh	eet			
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus	Number of Dominant Spacie				
1 Acer negundo 5	Y FAC	that are OBL, FACW, or FAC	C: 1 (A)			
2		Total Number of Dominar	nt			
3		Species Across all Strata	a: <u> </u>			
4		Percent of Dominant Specie	s			
5		that are OBL, FACW, or FAC	C: <u>50.00%</u> (A/B)			
5	= Total Cover					
<u>Sapling/Shrub stratur</u> (Plot size: <u>5 Radius</u>)		Total % Cover of:	neet			
2		OBL species 0 x	1 = 0			
3		FACW species 0 x	2 = 0			
4		FAC species 5 x	3 = 15			
5		FACU species 95 x	4 = 380			
0	= Total Cover	UPL species 0 x	5 = 0			
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A	(B) <u>395</u>			
1 Festuca arundinacea 95	Y FACU	Prevalence Index = B/A =	3.95			
2						
3		Hydrophytic Vegetation	Indicators:			
	<u> </u>	Dominance test is >50				
6		Prevalence index is ≤	3-0*			
7		Morphonical adaptatio	ns* (provido			
8		supporting data in Rer	narks or on a			
9		separate sheet)				
10		(explain): Adjacent to	managed plant			
95	= Total Cover	comm.				
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1		*Indicators of hydric soil and we present, unless disturb	etland hydrology must be ed or problematic			
2		Hydrophytic				
0	= Total Cover	vegetation present? N				
Remarks: (Include photo numbers here or on a separate sheet)		<u> </u>				

Profile Dese	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the absen	ce of indicators.)		
Depth	Matrix		Rec	dox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-11	7.5YR 4/2						SANDY LOAM			
11-15	7.5YR 5/2						SANDY LOAM	BEDROCK HIT AT 15"		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Locatio	on: PL = Pore Lining, M = Matrix		
Hydric So	oil Indicators:					(a 1)	Indicators for Prob	lematic Hydric Soils:		
Hist	tisol (A1)		San	idy Gleye	ed Matrix	(S4)	Coast Prairie Re	dox (A16) (LRR K, L, R)		
Hist	tic Epipedon (A2)		San	idy Redo	X (S5)		Dark Surface (S	(LRR K, L) Massas (E12) (LPP K L P)		
	CK FISUC (AS)			pped ivia	uix (SO) w Minor	J (⊑1)		$r_{\rm resp}$ (TE12) (ERR R, E, R)		
Stra	atified Lavers (A5)	•)	Loa	my Glev	od Matrix	(F2)	Other (explain in	remarks)		
2 cr	m Muck (A10)		Der	leted Ma	atrix (F3)	((Z)		(international)		
	Depleted Below Dark Surface (A11) Redox Dark Surface (F6)									
Thic	Thick Dark Surface (A12) Depleted Dark Surface (F7) *Indicators of hydrophytic vegetation and weltand									
San	ndy Mucky Minera	í (S1)	Rec	lox Depr	essions	(F8)	hydrology must b	be present, unless disturbed or		
5 cr	5 cm Mucky Peat or Peat (S3) problematic									
Restrictive	Laver (if observe	ed):								
Type:	Type: Hydric soil present? N									
Depth (inche	es):				-		,			
Pomarka:										
CDAVE										
GRAVEL		FOUN		0130	νΓ					
HYDROLO	DGY									
Wetland Hy	drology Indicato	ors:								
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Secondary Inc	dicators (minimum of two required)		
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	Soil Cracks (B6)		
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Drainag	e Patterns (B10)		
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) Dry-Sea	son Water Table (C2)		
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayfish	Burrows (C8)		
Drift Dor	nt Deposits (B2)			(C3) Drocono	a of Podu	upod Iron	(C4) Saturate	on Visible on Aerial Imagery (C9)		
	ousius (B3)			Presenc	e ol Redu ron Redu	uction in T	(C4) Siunied	of Stressed Plants (DT)		
Iron Dep	osits (B5)			(C6)	Ion Redu		FAC-Ne	utral Test (D5)		
Inundatio	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)				
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wate	er present?	Yes	No	X	Depth (i	nches):				
Water table	present?	Yes	No	Х	Depth (i	nches):	In	dicators of wetland		
Saturation p	resent?	Yes	No	X	Depth (i	nches):	h	ydrology present? N		
Uncludes ca	piliary minge)				h = 4					
Describe rec	corded data (strea	im gauge	e, monitoring well	, aerial p	notos, pr	evious ir	ispections), if available:			
Remarks:										

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Project/Site TH 19 Marshall City	//County:	Marshall/Lyon	County Sampling	J Date: 9/29/21	
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MN	Sampling	Point: 2C	
Investigator(s): Lewis, DeCesare	E	Section, Townshi	ip, Range:	S4, T111N, R41W	
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	concave	
Slope (%): Lat: 44°27'00.51"N	Long:	95°47'06.9	94"W Datum:		
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG	
Are climatic/hydrologic conditions of the site typical for this time	of the yea	ar? <u>Y</u> (If no, explain in rem	arks)	
Are vegetation, soil, or hydrology	signific	antly disturbed?	Are "norr	nal circumstances"	
Are vegetation, soil, or hydrology	natural	lly problematic?		present? Yes	
SUMMARY OF FINDINGS			(If needed, explai	n any answers in remarks.)	
Hydrophytic vegetation present? Y					
Hydric soil present? Y	ls t	he sampled are	a within a wetland	? <u>Y</u>	
Indicators of wetland hydrology present? Y	f yes	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separate	report.)				
VEGETATION Use scientific names of plants.					
Absolute	Domin	an Indicator	Dominance Test	Worksheet	
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover 1	t Speci	ies Staus	Number of Domina that are OBL, FAC	ant Species W, or FAC: 1 (A)	
2			Total Number o	of Dominant	
3			Species Acros	s all Strata:1(B)	
4			Percent of Domina	ant Species	
5	- <u> </u>		that are OBL, FAC	W, or FAC: <u>100.00%</u> (A/B)	
Sanling/Shrub stratum (Plot size: 5' Radius)		Jover	Prevalence Inde	x Worksheet	
			Total % Cover of:	A WORSHEEL	
2			OBL species	0 x 1 = 0	
3			FACW species	85 x 2 = 170	
4			FAC species	0 x 3 = 0	
5			FACU species	$15 \times 4 = 60$	
U U	= I otal C -	Cover	UPL species _	$\frac{0}{100} \times 5 = 0$	
<u>Herb stratum</u> (Plot size: <u>5 Radius</u>)	V			100 (A) 230 (B)	
1 Phalans arundinacea 85 2 Cirsium aruense 15	- <u>ř</u>		Prevalence index	A = B/A = 2.30	
3 10			Hydrophytic Veg	aetation Indicators:	
4			Rapid test for	r hydrophytic vegetation	
5			X Dominance te	est is >50%	
6			X Prevalence ir	1dex is ≤3.0*	
7			Morphogical	adaptations* (provide	
8			supporting da	ata in Remarks or on a	
9			(evolain): Adi	econt to managed plant	
100	= Total C	Cover	comm.	accilit to managed plant	
Woody vine stratum (Plot size: 30' Radius)	-		*Indicators of hydric	soil and wetland hydrology must be	
1			present, unl	ess disturbed or problematic	
2			Hydrophytic		
0	= Total C	Cover	present?	Y	
Remarks: (Include photo numbers here or on a separate sheet)					

2C

Profile Des	cription: (Descri	be to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		<u>R</u> e	dox Feat	ures				•
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ire	Remarks
									UNSAFE FOR SOIL SAMPLE
*Type: C = 0	Concentration, D =	= Depleti	on, RM = Reduc	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicator	s for Probl	ematic Hydric Soils:
His	tisol (A1)		Sa	ndy Gleye	ed Matrix	: (S4)	Coast	t Prairie Re	dox (A16) (LRR K, L, R)
His	tic Epipedon (A2)		Sa	ndy Redo	x (S5)	()	Dark	Surface (S7	7) (LRR K, L)
Bla	ck Histic (A3)		Str	ipped Ma	trix (S6)		Iron-N	/anganese	Masses (F12) (LRR K, L, R)
	droaen Sulfide (A4	.)	Lo	amv Mucl	kv Minera	al (F1)	Verv	Shallow Da	rk Surface (TF12)
Stra	atified Lavers (A5)	,	l o	amv Glev	ed Matrix	(F2)	Other	(explain in	remarks)
2 ci	m Muck (A10)		De	nleted Ma	atrix (E3)	· (· _/		(oxplain in	(emaine)
	pleted Below Dark	Surface	(A11) Re	dox Dark	Surface	(F6)			
	ck Dark Surface (Δ12)		nleted Da	ark Surfa	(F7)	*Indiaa	tore of bydr	ophytic vogetation and weltand
	dy Mucky Minera	1(\$1)		dov Denr			hydrol	logy must b	e present unless disturbed or
5 ci	m Mucky Peat or I	Deat (93	·	иох Бері	63310113 ((10)	nyuru	logy must b	problematic
	IT MUCKY Feat OF	-eat (33)						problematic
Restrictive	Layer (if observe	ed):							
Туре:					_		Hydric s	soil presen	t? <u>Y</u>
Depth (inche	es):				_				
Remarks:									
Determir	ned as wetland	with Hy	/drology and √	egetatio	on at 2C	as wel	l as similarity	to vegeta	ation, and hydrology of 2E.
HYDROLO	DGY								
Wetland Hy	drology Indicato	rs:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Sec	condary Ind	<u>icators (minimum of two required)</u>
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)		X Drainage	e Patterns (B10)
X Saturation	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
X Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			_(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	ron Redu	iction in T	illed Soils	Geomorp	ohic Position (D2)
Iron Dep	oosits (B5)			(C6)				FAC-Neu	ıtral Test (D5)
Inundati	on Visible on Aeria	I Imager	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	/ Vegetated Conca	ve Surfa	ce (B8)	_Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wat	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	X No		Depth (i	nches):	9	Inc	licators of wetland
Saturation p	resent?	Yes	X No		Depth (i	nches):	9	hy	/drology present? Y
(includes ca	pillary fringe)				-				
Describe red	corded data (strea	m gauge	e, monitoring we	l, aerial p	hotos, p	revious ir	nspections), if a	available:	
Remarks:									

Project/Site TH 19 Marshall Cit	y/County: Marshall/Ly	yon County Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	State:	MN Sampling Point:	2CU
Investigator(s): Lewis, DeCesare	Section, Town	∩ship, Range: S4, T12	11N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (con	ncave, convex, none):	Concave
Slope (%): Lat: 44°27'0.35"N	Long: 95%47'6	6.41"W Datum:	
Soil Map Unit Name51: La Prairie Loam	NV	WI Classification: R2U	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y	(If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed	d? Are "normal circur	nstances"
Are vegetation , soil , or hydrology	naturally problematic	c?	present? No
SUMMARY OF FINDINGS		(If needed, explain any an	swers in remarks.)
Hydrophytic vegetation present? N			
Hydric soil present? N	Is the sampled a	area within a wetland?	Ν
Indicators of wetland hydrology present? N	If yes, optional we	etland site ID:	
Remarks: (Explain alternative procedures here or in a separate	report.)		
The vegetation is an	tificially planted and	l manicured.	
VEGETATION Use scientific names of plants.			
Absolute	e Dominant Indicato	Dominance Test Worksh	neet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cove	r Species Staus	Number of Dominant Specie	es
2		Total Number of Domina	nt 0 (A)
3		Species Across all Strat	a: <u>1</u> (B)
4		Percent of Dominant Specie	
5	Total Caulor	- that are OBL, FACW, or FAC	.: <u>0.00%</u> (A/B)
Sanling/Shruh stratur (Plot size: 5' Radius)		Prevalence Index Works	heet
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 100 x	4 = 400
	= Total Cover	UPL species 0 x	5 = 0
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A	A) <u>400</u> (B)
1 Festuca arundinacea 100	Y FACU	Prevalence Index = B/A =	4.00
3		Hydrophytic Vegetation	Indicators:
4		Rapid test for hydroph	ytic vegetation
5		Dominance test is >50)%
6		Prevalence index is ≤	3.0*
7		Morphogical adaptatic	ons* (provide
8		supporting data in Rer	marks or on a
10		(ovnlain): Adjacent to	managed plant
100	= Total Cover	comm.	manageu plant
Woody vine stratum (Plot size: 30' Radius)		*Indicators of hydric soil and w	etland hydrology must be
1		present, unless disturb	ed or problematic
2		- Hydrophytic	
0	= 1 otal Cover	present? N	_
Remarks: (Include photo numbers here or on a separate sheet)			

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of indicators.)
Depth	Matrix		Red	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	7.5YR 2.5/1						SANDY CLAY	
6-21	7.5YR 4/1						CLAY	
							-	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	*Location: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for	or Problematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast Pr	airie Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Sur	face (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Man	ganese Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Sha	allow Dark Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Other (ex	plain in remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicators	s of hydrophytic vegetation and weltand
Sar	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions	(F8)	hydrology	must be present, unless disturbed or
5 cr	n Mucky Peat or ∣	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Type:		,					Hydric soil	present? N
Depth (inche	es):				-		•	·
Demerliei	·							
r tomanto.								
	JGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required: check :	all that ar	only)		Secon	dary Indicators (minimum of two require
Surface	Water (Δ1)		required, check a		<u>opiy)</u> Fauna (B	13)	<u>36001</u>	Surface Soil Cracks (B6)
High Wa	iter Table (A2)				uatic Plar	nts (B14)		Drainage Patterns (B10)
Saturatio	on (A3)			Hvdroge	n Sulfide	Odor (C1)	Drv-Season Water Table (C2)
Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			<u> </u>	Saturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorphic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wat	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	NO	X	Depth (i	nches):		nydrology present? N
	piliary minge)							
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	ispections), if avai	lable:
Remarks:								
Remarks.								

Project/Site TH 19 Marshall City/	County: Marshall/Lyor	County Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point:	2D
Investigator(s): Lewis, DeCesare	Section, Townsh	ip, Range: S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°27'02.44"N	 Long: 95°47'03.6	61"W Datum:	
Soil Map Unit Name 51: La Prairie Loam	NWI	Classification: R2UE	3H, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y (If no, explain in remarks)	
Are vegetation , soil , or hydrology	significantly disturbed?	Are "normal circum	stances"
Are vegetation , soil , or hydrology	naturally problematic?		present? Yes
SUMMARY OF FINDINGS		(If needed, explain any ans	wers in remarks.)
Hydrophytic vegetation present? Y			
Hydric soil present? N	Is the sampled are	a within a wetland?	N
Indicators of wetland hydrology present? Y	f yes, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate re	eport.)		
	5001)		
VEGETATION Use scientific names of plants			
Absolute	Dominan Indicator	Dominance Test Workshe	et
Tree Stratum (Plot size: 30' Radius) % Cover	t Species Staus	Number of Dominant Species	3
1 , , , , , , , , , , , , , , , , , , ,		that are OBL, FACW, or FAC	: 1 (A)
2		Total Number of Dominan	t
3		Species Across all Strata	: <u>1</u> (B)
4		Percent of Dominant Species	S
5	- Total Cavar	that are OBL, FACW, or FAC	: <u>100.00%</u> (A/B)
Sanling/Shrub stratum (Plot size: 5' Radius)	= Total Cover	Prevalence Index Worksh	eet
1		Total % Cover of:	
2		OBL species 0 x 1	= 0
3		FACW species 90 x 2	2 = 180
4		FAC species 0 x 3	3 = 0
5		FACU species 10 x 4	= 40
U Ulark stratum (Dist size) 5' Dadius)	= Iotal Cover	$\begin{array}{c c} UPL \text{ species} & 0 \\ \hline 0 \hline$	p = 0
<u>Heid stratum</u> (Piol size. <u>5 Radius</u>)		$\frac{1}{2} Column totals - \frac{1}{2} \frac{1}$) <u>220</u> (B)
2 Asclenias svriaca 90		Prevalence index = B/A =	
		Hydrophytic Vegetation I	ndicators:
4		Rapid test for hydrophy	tic vegetation
5		X Dominance test is >50	%
6		X Prevalence index is ≤3.	.0*
7		Morphogical adaptation	ns* (provide
8		supporting data in Rem	arks or on a
9		separate sheet)	~
100	= Total Cover		nanaged plant
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1		*Indicators of hydric soil and we present, unless disturbe	tland hydrology must be d or problematic
2		Hydrophytic	
0	= Total Cover	vegetation present? Y	_
Remarks: (Include photo numbers here or on a separate sheet)		L	

2D

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the ab	esence of indicators.)
Depth	<u>Matrix</u>		Red	dox Featu	ures			,
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
								SAMPLE POINT IS IN A
								PROTECTED YARD
								WITH RIP RAP ON ONE SIDE
								OF RIVER.
* T 0 (++1	
^Type: C = C	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Lo	cation: PL = Pore Lining, M = Matrix
	tisol (A1)		Sar	dy Clave	ad Matrix	(\$4)	Coast Prairi	Problematic Hydric Solis:
His	tic Eninedon (A2)		Sar	idy Gleye idy Redo	(S5)	(04)	Dark Surfac	(\mathbf{A}, \mathbf{C}) (LRR K , L)
Black Histic (A3)							Iron-Manga	nese Masses (F12) (LRR K, L, R)
Hyd	drogen Sulfide (A	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shallo	w Dark Surface (TF12)
Stra	atified Layers (A5)	Loa	my Gley	ed Matrix	(F2)	Other (expla	ain in remarks)
2 ci	m Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	oleted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
Thio	ck Dark Surface (A12)	Dep	oleted Da	ark Surfa	ce (F7)	*Indicators of	hydrophytic vegetation and weltand
Sar	ndy Mucky Minera	al (S1)	、	lox Depr	essions ((F8)	hydrology m	ust be present, unless disturbed or
^{5 Cl}	m миску Peat or	Peat (S3						problematic
Restrictive	Layer (if observ	ed):						
Type:					-		Hydric soil pr	resent? N
Depth (Inche	es):							
HYDROLO	OGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		<u>Secondar</u>	y Indicators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)	Sur	face Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Dra	inage Patterns (B10)
X Saturatio	on (A3) Jorke (B1)			Hydroge	n Sulfide	Odor (C1	I) Dry	-Season Water Table (C2)
	nt Deposits (B2)			(C3)		neres on	Sat	uration Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)			Presenc	e of Redu	uced Iron	(C4)Stu	nted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Geo	omorphic Position (D2)
Iron Dep	oosits (B5)			(C6)			FA	C-Neutral Test (D5)
Inundati	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	xe (C7)		
Sparsely Water-S	y vegetated Conca	ave Surra	се (В8)	Gauge o	r well Da volain in	ata (D9) Romarke)	
)				Remains	, 	
Surface wat	er present?	Yes	No	x	Denth (i	nches).		
Water table	present?	Yes	X No		Depth (i	nches):	5	Indicators of wetland
Saturation p	present?	Yes	X No		Depth (i	nches):	5	hydrology present? Y
(includes ca	pillary fringe)							
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pi	revious ir	nspections), if availab	ole:
Domorkov								
		ATI /-						
RIVERE	DGE, DECOR	AIIVE	RIPRAP PLAC			WINER		

Project/Site TH 19 Marshall City/C	County: Marshall/Lyon	County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point: 2DU
Investigator(s): Lewis, DeCesare	Section, Townshi	ip, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none): Concave
Slope (%): Lat: 44°27'02.00"N	_ Long: 95°47'04.2	21"W Datum:
Soil Map Unit Name 51: La Prairie Loam	NWI	Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time o	f the year? Y (If no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	naturally problematic?	present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N		
Hydric soil present? N	Is the sampled are	a within a wetland? N
Indicators of wetland hydrology present? N	f yes, optional wetla	nd site ID:
Remarks: (Explain alternative procedures here or in a separate re	eport.)	
	,	
The vegetation is artif	icially planted and ma	anicured.
VEGETATION Use scientific names of plants.		
Absolute	Dominan Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30' Radius) % Cover	t Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata: 1 (B)
4		Percent of Dominant Species
<u> </u>	= Total Cover	
Sapling/Shrub stratum (Plot size: 5' Radius)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species x 1 =
3		FACW species $0 x 2 = 0$
<u> </u>		FAC species $0 \times 3 = 0$
⁵	= Total Cover	FACO species $100 \times 4 = 400$
Herb stratum (Plot size: 5' Radius)		Column totals 100 (A) 400 (B)
1 Festuca arundinacea 100	Y FACU	$\frac{100}{100} (x) = \frac{100}{100} (x)$ Prevalence Index = B/A = 4.00
2		
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
6		Prevalence index is ≤3.0*
		Morphogical adaptations* (provide
°		supporting data in Remarks or on a senarate sheet)
10		(explain): Adjacent to managed plant
100	= Total Cover	comm.
Woody vine stratum (Plot size: 30' Radius)		*Indicators of hydric soil and wetland hydrology must be
1		present, unless disturbed or problematic
2		Hydrophytic
0	= Total Cover	present? N
Remarks: (Include photo numbers here or on a separate sheet)		

Depth	(======	to the depth i	leeueu			maicat	or or confirm	the absence	e of indicators.)
	Matrix		Red	lox Feat	ures				-
(Inches)	Color (moist)	% Color (moist)	%	Type*	Loc**	Textu	ıre	Remarks
*Type: C = 0	Concentration, D = De	epletion, RM =	Reduce	d Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicator	s for Proble	matic Hydric Soils:
His	stisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coas	t Prairie Rec	lox (A16) (LRR K, L, R)
His	tic Epipedon (A2)	-	San	dy Redo	ox (S5)	()	Dark	Surface (S7) (LRR K, L)
Bla	ick Histic (A3)	-	Strip	pped Ma	trix (S6)		Iron-N	Manganese I	Masses (F12) (LRR K, L, R)
	drogen Sulfide (A4)	-		mv Mucł	kv Minera	al (F1)		Shallow Dar	k Surface (TF12)
	atified Lavers (A5)	-		my Glev	ed Matrix	(F2)	Other	(explain in i	remarks)
	m Muck (A10)	-	 	leted Ma	atriv (F3)	(12)			emanoy
	nleted Below Dark Su	rface (A11)	— Dep	ov Dark	Surface	(E6)			
	pieleu Below Dark Su					(FU) no (E7)	*1. 1		
	ndy Music Mineral (S	-) -	Dep				"Indica	tors of nyard	opnytic vegetation and weitand
	ndy Mucky Mineral (S	-1) -	Rea	ox Depr	essions (F8)	nyaro	logy must be	e present, unless disturbed or
^{5 c}	m Mucky Peat of Pea	it (53)							problematic
Restrictive	Layer (if observed):								
Туре:							Hydric	soil present	? N
Depth (inch	es):				-				
Bomorkov									
i ternarita.									
	0.0)/								
HYDROL	OGY								
Wetland Hy	drology Indicators:								
Primary Ind	icators (minimum of c								
Surface		one is required;	; check a	all that a	pply)		Se	condary Indi	cators (minimum of two required
	Water (A1)	one is required;	; check a	all that a Aquatic	<u>pply)</u> Fauna (B	13)	Se	condary Indi Surface S	cators (minimum of two required
High Wa	Water (A1) ater Table (A2)	one is required;	; check a	all that a Aquatic True Aqu	<u>pply)</u> Fauna (B uatic Plar	13) nts (B14)	<u>Se</u>	<u>condary Indi</u> Surface S Drainage	<u>cators (minimum of two required</u> Soil Cracks (B6) Patterns (B10)
High Wa	Water (A1) ater Table (A2) on (A3)	one is required.	; check a	all that a Aquatic True Aqu Hydroge	<u>pply)</u> Fauna (B uatic Plar n Sulfide	13) nts (B14) Odor (C1	<u>Se</u> 	<u>condary Indi</u> Surface S Drainage Dry-Seas	<u>cators (minimum of two required</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
High Water N	Water (A1) ater Table (A2) on (A3) /larks (B1)	one is required.	; check a	all that a Aquatic True Aqu Hydroge Oxidized	<u>pply)</u> Fauna (B uatic Plar n Sulfide I Rhizosp	13) hts (B14) Odor (C1 heres on	Se – I) – Living Roots –	<u>condary Indi</u> Surface S Drainage Dry-Seas Crayfish I	<u>cators (minimum of two required</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
High Wa Saturati Water M Sedime	Water (A1) ater Table (A2) on (A3) <i>J</i> arks (B1) nt Deposits (B2)	one is required	; check a 	all that a Aquatic True Aqu Hydroge Oxidized (C3)	<u>pply)</u> Fauna (B uatic Plar n Sulfide I Rhizosp	13) hts (B14) Odor (C1 heres on	Se - I) - Living Roots -	<u>condary Indi</u> Surface S Drainage Dry-Seas Crayfish I Saturation	<u>cators (minimum of two required</u> soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
High Wa Saturati Water M Sedime Drift De	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	one is required	<u>check a</u>	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc	<u>pply)</u> Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu	13) hts (B14) Odor (C1 heres on uced Iron	<u>Se</u>) – Living Roots – (C4) –	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c	<u>cators (minimum of two required</u> soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
High Wa Saturati Water M Sedime Drift De Algal Ma	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one is required	<u>; check a</u>	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I	<u>pply)</u> Fauna (B uatic Plar n Sulfide I Rhizosp e of Redu	13) hts (B14) Odor (C1 heres on uced Iron ction in T	Ser) Living Roots (C4) (C4) - illed Soils	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp	cators (minimum of two required soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is required	<u>; check a</u>	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6)	<u>pply)</u> Fauna (B uatic Plar In Sulfide I Rhizosp e of Redu	13) nts (B14) Odor (C1 heres on uced Iron uction in T	Ser) Living Roots (C4) illed Soils	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im	one is required	; check a	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu	<u>pply)</u> Fauna (B uatic Plar In Sulfide I Rhizosp e of Redu Iron Redu ck Surfac	13) nts (B14) Odor (C1 heres on uced Iron uction in T e (C7)	Ser I) – Living Roots – (C4) – ïilled Soils –	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S	one is required ⊔agery (B7) Surface (B8)	<u>; check a</u> 	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o	pply) Fauna (B uatic Plar In Sulfide I Rhizosp I Rhizosp I Rhizosp I Redu ron Redu ck Surfac or Well Da	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9)	Ser I) – Living Roots – (C4) – ïilled Soils –	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9)	one is required nagery (B7) Surface (B8)	<u>; check a</u>	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E	pply) Fauna (B uatic Plar en Sulfide I Rhizosp I Rhizosp e of Redu ron Redu ron Redu ck Surfac or Well Da	13) Odor (C1 heres on uced Iron uction in T æ (C7) ata (D9) Remarks	Ser I) – Living Roots – (C4) – ïlled Soils –)	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9)	ne is required agery (B7) Surface (B8)	<u>; check a</u>	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks	Ser I) – Living Roots – (C4) – illed Soils –)	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present?	ne is required nagery (B7) Surface (B8)		Aquatic I True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks	Ser I) – Living Roots – (C4) – illed Soils –)	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wat	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present?	agery (B7) Surface (B8)	<u>check a</u>	Aquatic Aquatic True Aqu Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge o Other (E	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches):	Ser I) – Living Roots – (C4) – illed Soils –)	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wal Water table	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y	agery (B7) Surface (B8)	<u>check a</u>	All that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches):	<u>Ser</u> 	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wal Water table Saturation p (includes ca	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y apillary fringe)	agery (B7) Surface (B8) 'es 'es	Check a	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X	pply) Fauna (B uatic Plar on Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches): nches):	<u>Ser</u> 	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y apillary fringe)	agery (B7) Surface (B8) 'es 'es	Check a	Aquatic Aquatic True Aquatic True Aquatic Hydroge Oxidized (C3) Presence Recent I (C6) Thin Muc Gauge o Other (E	pply) Fauna (B uatic Plar on Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches): nches):	<u>Ser</u> 1) Living Roots (C4) ``illed Soils)	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu	cators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca Describe re	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y present? Y apillary fringe) corded data (stream 6	nagery (B7) Surface (B8) Yes Yes Jauge, monitor	<u>check a</u>	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X X	pply) Fauna (B uatic Plar on Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da cxplain in Depth (i Depth (i	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches): nches):	Ser) Living Roots (C4) iilled Soils) aspections), if a	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu Ind hy	cators (minimum of two required soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca Describe re	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y present? Y apillary fringe) corded data (stream §	nagery (B7) Surface (B8) Yes Yes Jauge, monitor	<u>check a</u>	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X X x	pply) Fauna (B uatic Plar in Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i Depth (i	13) Odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches): nches):	Ser Ser Living Roots (C4) (C4) iilled Soils) spections), if a	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu Ind hy available:	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca Describe re	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y present? Y apillary fringe) corded data (stream g	nagery (B7) Surface (B8) Yes Yes Jauge, monitor	<u>check a</u>	Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X X , aerial p	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i Depth (i	13) odor (C1 heres on uced Iron uction in T e (C7) ata (D9) Remarks nches): nches): nches): revious ir	Ser Ser Living Roots (C4) (C4) iilled Soils) spections), if a	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu Ind hy available:	cators (minimum of two required soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca Describe re	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y present? Y present? Y present? Y present? Y present? Y	nagery (B7) Surface (B8) 'es 'es gauge, monitor	<u>check a</u>	Aquatic Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mur Gauge o Other (E X X X X , aerial p	pply) Fauna (B uatic Plar in Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da cxplain in Depth (i Depth (i Depth (i	13) odor (C1 heres on uced Iron uction in T æ (C7) ata (D9) Remarks nches): nches): nches): revious ir	Ser) Living Roots (C4) illed Soils) mspections), if a	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu Ind hy	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Sparsel Water-S Field Obse Surface wat Water table Saturation p (includes ca Describe re	Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Im y Vegetated Concave S Stained Leaves (B9) rvations: ter present? Y present? Y present? Y apillary fringe) corded data (stream g	nagery (B7) Surface (B8) Ves Yes gauge, monitor	<u>check a</u>	All that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge o Other (E X X X X , aerial p	pply) Fauna (B uatic Plar en Sulfide I Rhizosp e of Redu ron Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i Depth (i	13) Odor (C1 heres on uced Iron iction in T e (C7) ata (D9) Remarks nches): nches): nches): revious ir	Ser 	condary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c Geomorp FAC-Neu Ind hy available:	cators (minimum of two required coil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)

Project/Site TH 19 Marshall	City/County:	Marshall/Lyon	County Sampling	Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	n State	e: MN	I Sampling	Point: 2E
Investigator(s): Lewis, DeCesare		ection, Townshi	p, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loc	al relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°27'00.80"N	Long:	95°47'07.2	27"W Datum:	
Soil Map Unit Name 51: La Prairie Loam		IWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this ti	me of the year	? Y (If no, explain in rema	arks)
Are vegetation , soil , or hydrology	significa	ntly disturbed?	Are "norn	nal circumstances"
Are vegetation , soil , or hydrology	naturally	y problematic?		present? Yes
SUMMARY OF FINDINGS			(If needed, explai	n any answers in remarks.)
Hydrophytic vegetation present?				
Hydric soil present? Y	ls th	e sampled are	a within a wetland	? <u>Y</u>
Indicators of wetland hydrology present? Y	f yes	, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separa	ate report.)			
· · · · · · · · · · · · · · · · · · ·				
VEGETATION Use scientific names of plants				
Abso	lute Domina	n Indicator	Dominance Test	Worksheet
<u>Tree Stratum</u> (Plot size: 30' Radius) % Co	over t Specie	s Staus	Number of Domina	ant Species
1			that are OBL, FAC	W, or FAC:1(A)
2			Total Number of	f Dominant
3			Species Across	s all Strata: <u>2</u> (B)
4			Percent of Domina	Int Species
<u> </u>	= Total Co		that are OBL, FAC	N, OFFAC. <u>50.00%</u> (A/B)
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index	x Worksheet
1			Total % Cover of:	
2			OBL species	0 x 1 = 0
3			FACW species	65 x 2 = 130
4			FAC species	$0 \times 3 = 0$
5	- Total Ca		FACU species	$\frac{35}{0}$ x 4 = $\frac{140}{0}$
U Herb stratum (Plot size: 5' Radius)		bvei	Column totals	$\frac{0}{100}$ (A) $\frac{270}{8}$ (B)
1 Phalaric arundinacea	- v	FACW	Brevalence Index	$\frac{100}{-8/4}$ (1) $\frac{270}{270}$ (B)
2 Cirsium arvense 35	$\frac{1}{5}$ Y	FACU	Frevalence index	- B/A - <u>2.70</u>
3			Hydrophytic Veg	etation Indicators:
4			Rapid test for	hydrophytic vegetation
5			Dominance te	est is >50%
6			X Prevalence in	ıdex is ≤3.0*
7			Morphogical a	adaptations* (provide
8			supporting da	ita in Remarks or on a
10			(evolain): Adi	acent to managed plant
10	0 = Total Co		comm.	acent to managed plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric	soil and wetland hydrology must be
1			present, unle	ess disturbed or problematic
2			Hydrophytic	
0	= Total Co	over	vegetation	v
Descentes (la chuda school and a	- 4)		present	
Remarks: (Include photo numbers here or on a separate she	et)			

SOIL

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Re	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-12	7.5YR 4/1	65	7.5YR 5/5	35	D	PL/M	LOAM		ROCK HIT AT 12"
*Tvpe: C = 0	Concentration. D =	= Depleti	ion. RM = Reduc	ed Matrix	. MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining. M = Matrix
Hydric Sc	oil Indicators:				.,		Indicators	s for Proble	ematic Hydric Soils:
His	tisol (A1)		Sa	ndy Gleve	ed Matrix	(S4)	Coast	Prairie Re	dox (A16) (LRR K, L, R)
— Hist	tic Epipedon (A2)		XSa	ndy Redo	ox (S5)	()	Dark 3	Surface (S7	() (LRR K, L)
Bla	ck Histic (A3)		Str	ipped Ma	trix (S6)		Iron-M	langanese	Masses (F12) (LRR K, L, R)
Hyc	lrogen Sulfide (A4	L)	Lo	amy Mucl	ky Minera	al (F1)		Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5)	,	Loa	amy Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)		De	pleted Ma	atrix (F3)	. ,			
Dep	pleted Below Dark	Surface	e (A11) 🛛 Re	dox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	De	pleted Da	ark Surfa	ce (F7)	*Indicat	tors of hydr	ophytic vegetation and weltand
Sar	ndy Mucky Minera	l (S1)	Re	dox Depr	essions ((F8)	hydrol	ogy must b	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3	3)				-		problematic
Restrictive	Laver (if observe	ed):							
Type:							Hydric s	oil presen	t? Y
Depth (inche	es):				-		-	•	
Pomorkoj					-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	rs:							
Primarv Indi	cators (minimum	of one is	s required: check	all that a	(vlaa		Sec	condary Ind	icators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface 3	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	_	Drainage	Patterns (B10)
X Saturatio	on (A3)			- Hydroge	en Sulfide	Odor (C1	I) <u> </u>	Dry-Seas	son Water Table (C2)
X Water M	larks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			_	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	iction in T	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	osits (B5)			_(C6)				FAC-Neu	ıtral Test (D5)
Inundati	on Visible on Aeria	Imager	y (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	/ Vegetated Conca	ve Surfa	ce (B8)	Gauge	or Well Da	ata (D9)	`		
Water-S	tained Leaves (B9)		- Other (E	xplain in	Remarks)		
Field Obser	vations:	X			Day (1		0		
Surface wat	er present?	Yes			Depth (i	nches):	2	- I	licators of watland
Valer lable	present?	Yes			Depth (i	ncnes):	5		incators of wetland
(includes ca	nillary fringe)	165	<u> </u>		- Deptil (i	nches).		("	
Describe rea	porded data (atras	mague	e monitoring wa		hotos r		epections) if -	l Wailablar	
Describe rec		in gauge	e, monitoring we	ii, aeriai p	notos, pi	revious ir	ispections), il a	ivaliable.	
Remarks:									

Project/Site TH 19 Marshall C	City/County:	Marshall/Lyon	County Sampli	ng Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MN	I Samplir	ng Point:	2EU
Investigator(s): Lewis, DeCesare	5	Section, Townshi	ip, Range:	S4, T111N,	R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Со	ncave
Slope (%): Lat: 44°27'1.05"N	Long:	95%47'7.09	9"W Datum:		
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH,	R2UBG
Are climatic/hydrologic conditions of the site typical for this tim	ne of the yea	r? Y (If no, explain in re	marks)	
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "no	ormal circumstar	ices"
Are vegetation , soil , or hydrology	natural	y problematic?		pres	sent? No
SUMMARY OF FINDINGS			(If needed, exp	lain any answer	s in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls ti	he sampled are	a within a wetlan	d? N	l
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separat	te report.)				
The vegetation is a	artificially p	lanted and m	anicured.		
VEGETATION Use scientific names of plants					
		ant Indicator	Dominance Te	st Worksheet	
Tree Stratum (Plot size: 30' Radius) % Cov	er Specie	es Staus	Number of Domi	inant Species	
1			that are OBL, FA	CW, or FAC:	0 (A)
2			Total Numbe	r of Dominant	
3			Species Acro	oss all Strata:	2 (B)
4			Percent of Dom	nant Species	
<u> </u>			that are OBL, FA	CW, or FAC:	0.00% (A/B)
Sanling/Shrub strature (Plot size: 5' Padius)	= I otal C	over	Brovalonco In	day Warkshoot	
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	100 x 4 =	400
0	= Total C	over	UPL species	<u>0</u> x 5 =	0
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column totals	<u>100</u> (A)	400 (B)
1 Festuca arundinacea 60	<u> </u>	FACU	Prevalence Ind	ex = B/A =	4.00
2 Cirsium arvense 40	Y	FACU	Ludrophytic V	agatation India	atoro.
<u> </u>			Rapid test	for hydrophytic y	
5			Dominance	e test is >50%	ogotation
6			Prevalence	e index is ≤3.0*	
7			Morphogic	al adaptations* (provide
8			supporting	data in Remark	s or on a
9			separate s	neet)	
10			(explain): A	djacent to mana	aged plant
100 Woody vino stratum (Plot size: 20' Bodius)	= I otal C	over	comm.		
1			*Indicators of hyd	ric soil and wetland	hydrology must be
2			Hydrophy	tic	problematic
	= Total C	over	vegetation	I	
			present?	<u>N</u>	
Remarks: (Include photo numbers here or on a separate shee	et)		-		

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	e absence	e of indicators.)
Depth <u>Matrix</u> <u>Redox Features</u>									
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-7	7.5YR 4/1						LOAM		
7-20	10YR 5/4						CLAY LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators f	or Proble	matic Hydric Soils:
Hist	isol (A1)		Sar	ndy Gleye	ed Matrix	: (S4)	Coast P	Prairie Red	ox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Su	urface (S7)	(LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Ma	nganese N	/lasses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Sh	allow Dark	surface (TF12)
Stra	tified Layers (A5))	Loa	my Gley	ed Matrix	k (F2)	Other (e	explain in r	emarks)
2 cr	n Muck (A10)	. <i>.</i>		pleted Ma	atrix (F3)	(= a)			
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)		leted Da	ark Surra		*Indicator	rs of hydro	phytic vegetation and weltand
San	nay Mucky Minera	II (51) Doot (82	, <u> </u>	lox Depr	essions	(F8)	hydrolog	gy must be	present, unless disturbed or
	IT MUCKY Feat OF	real (55)			•		ł	biobiematic
Restrictive	Layer (if observe	ed):							a
Type:	<u>,</u>				-		Hydric so	il present	? <u>N</u>
Depth (Inche	es):				-				
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that a	oply)		<u>Seco</u>	ndary Indi	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	oil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	· · · · · · · · · · · · · · · · · · ·	Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C	I)	Dry-Seaso	on Water Table (C2)
Vvater IVI Sedimer	arks (B1) ht Deposite (B2)			(C3)	i Rnizosp	neres on	Living Roots	Crayfish E	Surrows (C8)
Drift Der	(B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted or	r Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	Geomorpl	nic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neut	ral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		-	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge of	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:				_				
Surface wate	er present?	Yes	No	X	Depth (i	nches):			
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Indi	cators of wetland
Saturation p	resent?	res		Χ	Depth (I	ncnes):		nyo	libiogy present? N
Dogorik	pind y mingo		monitorie	ooriel -	hotos -		anationa) # area		
Describe rec	corded data (strea	am gauge	e, monitoring wei	, aenai p	notos, pr	evious ir	ispections), il ava	allable.	
Remarks:									

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Project/Site TH 19 Marshall	Citv/	County: Ma	arshall/Lvon	County Sam	noling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transc	ortation	State:	MN	Sam	plina Point:	2F
Investigator(s): Lewis, DeCesare		Secti	on. Townshii	p. Range:	S4. T1	11N. R41W
Landform (hillslope, terrace, etc.):	lope	Local r	elief (concav	ve. convex. nor	ne):	Concave
Slope (%): Lat: 44°26'47.86	"N	Long:	95%47'22.29	9"W Dati	um:	
Soil Map Unit Name51: La Prairie Loam			NWI	Classification:	R2I	JBH, R2UBG
Are climatic/hydrologic conditions of the site typical for	or this time o	f the year?	Y (I	If no, explain in	remarks)	
Are vegetation , soil , or hydro	logy	significantly	disturbed?	Aro	"normal circu	metances"
Are vegetation , soil , or hydro	logy	naturally pro	blematic?	Ale	normal circu	present? Yes
SUMMARY OF FINDINGS	··· <u> </u>			(If needed, e	əxplain any a	nswers in remarks.)
Hydrophytic vegetation present? N						
Hydric soil present? Y		Is the sa	ampled area	a within a wet	land?	Ν
Indicators of wetland hydrology present? Y		lf yes, op	tional wetlar	nd site ID:		
Remarks: (Explain alternative procedures here or in a	separate re	eport.)				
	•	,				
VEGETATION Use scientific names of pla	nts.					
· · ·	Absolute	Dominant	Indicator	Dominance	Test Works	heet
<u>Tree Stratum</u> (Plot size: <u>30'</u> Radius)	% Cover	Species	Staus	Number of De	ominant Spec	ies
1 Fraxinus americana	60	Y	FACU	that are OBL,	FACW, or FA	AC: 1 (A)
2 Morus rubra	30	Y	FACU	Total Num	ber of Domina	ant
3				Species A	Across all Stra	ita: <u>3</u> (B)
4				Percent of De	ominant Speci	ies
⁵	90	- Total Cover		that are OBL,	FACW, OF FAC	ю. <u>33.33%</u> (А/В)
Sapling/Shrub stratum (Plot size: 5' Radius	00			Prevalence	Index Work	sheet
1				Total % Cov	/er of:	
2				OBL species	s <u>0</u> >	(1 = 0
3				FACW spec	ies 0 >	(2 = 0
4		· ·		FAC species	s <u>10</u> >	(3 = 30)
5		Total Causer		FACU speci	es <u>90</u> >	4 = 360
Herb stratum (Plot size: 5' Radius		= Total Cover		Column tota	s <u> </u>	(5 = 0)
1 Violo sororia	10	V	FAC	Provalanca	Indox = B/A	- <u>3 00</u>
2	10		TAC	Trevalence		
3		· ·		Hydrophyti	c Vegetatior	Indicators:
4		·		Rapid te	est for hydrop	hytic vegetation
5				Domina	nce test is >5	60%
6				Prevaler	nce index is ≤	≤3.0*
7				Morpho	gical adaptati	ons* (provide
8				supporti	ng data in Re	emarks or on a
10): Adiacont to	managed plant
	10	= Total Cover		comm.). Aujacent tu	manageu plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of	bydric soil and y	vetland hydrology must be
1				preser	nt, unless distur	bed or problematic
2				Hydrop	hytic	
	0	= Total Cover		vegetat	וסח ני? או	
Pomarka: (Include abote sumbers bars or a server	oto obcot)			P. 00011		
Ripranned slope	ale Sheel)					
i vipiapped siope						

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absenc	e of indicators.)
Depth	<u>Matrix</u>		Re	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-10	7.5YR 4/1						SANDY CLAY	LOAM	TOE OF STEEP SLOPE
*Turner C (Concentration D	Deplet	ian DM Dadua	ad Matrix			and Crains *	*Lesstier	- DI Dava Lining M Matrix
Hydric So	Joncentration, D =	= Deplet	ion, $RIVI = Reduct$	ed Matrix	, IVIS = IV	lasked 5	and Grains.	-Location	1: PL = Pore Lining, M = Matrix
Hist	hisol (A1)		Sa	ndv Gleve	ad Matrix	(\$4)	Coast Pi	rairie Rec	dox (A16) (I RR K I R)
Hist	tic Eninedon (A2)			ndy Bieye	$\frac{1}{2}$ (S5)	(34)	Dark Su	rface (S7	$(\mathbf{I} \mathbf{R} \mathbf{R} \mathbf{K} \mathbf{I})$
Blac	ck Histic (A3)		Stri	inned Ma	trix (S6)		Iron-Mar	ndanese	Masses (F12) (LRR K. L. R)
Hvd	Iroaen Sulfide (A4	4)	Loa	amv Mucl	kv Minera	al (F1)	Verv Sha	allow Dar	k Surface (TF12)
Stra	atified Layers (A5))	Loa	amy Gley	ed Matrix	(F2)	Other (e	xplain in	remarks)
2 cr	m Muck (A10)		De	pleted Ma	atrix (F3)	. ,		•	
Dep	leted Below Dark	Surface	e (A11) Re	dox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	De	pleted Da	ark Surfa	ce (F7)	*Indicators	s of hydro	ophytic vegetation and weltand
X San	ndy Mucky Minera	l (S1)	Re	dox Depr	essions	(F8)	hydrolog	y must be	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3	5)						problematic
Restrictive	Layer (if observe	ed):							
Туре:					_		Hydric soi	l present	t? <u>Y</u>
Depth (inche	es):				-				
	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that a	(vlaa		Secor	ndarv Indi	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	X	Drainage	Patterns (B10)
X Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1)	Dry-Seas	on Water Table (C2)
X Water M	arks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			<u> </u>	Saturatio	n Visible on Aerial Imagery (C9)
	DOSITS (B3)			Presenc	e of Real	uced Iron		Stunted c	or Stressed Plants (D1)
Iron Dep	(B4)			(C6)	IION Redu			FAC-Neu	itral Test (D5)
Inundatio	on Visible on Aeria	l Imager	y (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	X No		Depth (i	nches):	6	Ind	icators of wetland
Saturation p	resent? pillary fringo)	Yes	X No		Depth (i	nches):	6	ny	drology present? Y
	pillary ininge)		o monitoring wal		hotoo n		anactiona) if ava	ilahlar	
Describered		ani yauy	e, monitoring wer	i, aeriai p	notos, pi	evious ii	ispections), il ava	liable.	
Remarks:									

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Project/Site TH 19 Marshall City	//County: Marshall/Lyon	County Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MM	Sampling Point:	2FU
Investigator(s): Lewis, DeCesare	Section, Townsh	ip, Range: S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°27'0.26"N	Long: 95°47'8.5	1"W Datum:	
Soil Map Unit Name51: La Prairie Loam	NWI	Classification: R2U	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y	(If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circum	istances"
Are vegetation , soil , or hydrology	naturally problematic?		present? No
SUMMARY OF FINDINGS	-	(If needed, explain any ans	swers in remarks.)
Hydrophytic vegetation present? N			
Hydric soil present? N	Is the sampled are	a within a wetland?	Ν
Indicators of wetland hydrology present? N	If yes, optional wetla	and site ID:	
Remarks: (Explain alternative procedures here or in a separate	report.)		
	iopo,		
The vegetation is art	ificially planted and m	anicured.	
VEGETATION Use scientific names of plants			
	Dominant Indicator	Dominance Test Worksh	eet
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus	Number of Dominant Specie	s
1 Fraxinus americana 10	Y FACU	that are OBL, FACW, or FAC): 0 (A)
2 Morus rubra 10	Y FACU	Total Number of Dominar	nt
3		Species Across all Strata	a: <u>3</u> (B)
4		Percent of Dominant Specie	S
5		that are OBL, FACW, or FAC	: <u>0.00%</u> (A/B)
20	= I otal Cover	Brovalance Index Works	hoot
<u>Sapiing/Shrub stratun</u> (Plot size. <u>5 Radius</u>)		Total % Cover of	leet
2		OBL species 0 x	1 = 0
3		FACW species 0 x 2	2 = 0
4		FAC species 0 x	3 = 0
5		FACU species 100 x 4	4 = 400
0	= Total Cover	UPL species 0 x s	5 = 0
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)		Column totals 100 (A) <u>400</u> (B)
1 Festuca arundinacea 80	Y FACU	Prevalence Index = B/A =	4.00
2			
3		Hydrophytic Vegetation I	ndicators:
4		Dominance test is >50	
6		Prevalence index is ≤?	,0*
7		Morphogical adaptatio	ns* (provido
8		supporting data in Ren	narks or on a
9		separate sheet)	
10		(explain): Adjacent to r	nanaged plant
80	= Total Cover	comm.	
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1		*Indicators of hydric soil and we present, unless disturbe	etland hydrology must be
2		Hydrophytic	
0	= Total Cover	vegetation present? N	_
Remarks: (Include photo numbers here or on a separate sheet)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix	Redox Features					-		
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
+		.							
* I ype: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	., MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:		_				Indicators	s for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Rec	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	ox (S5)		Dark S	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-IV	langanese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicat	ors of hydro	ophytic vegetation and weltand
Sar	idy Mucky Minera	I (S1)	Rec	lox Depr	essions ((F8)	hydrol	ogy must be	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	oil present	t? N
Depth (inche	es):				•				
Pomorko:									
HYDROLO	DGY								
Wetland Hy	drology Indicate	vre:							
		/13. af ana ia	ne eu line du els e els s		a m h a)		0		· · · · · · · · · · · · · · · · · · ·
Primary Indi	cators (minimum	of one is	requirea; cneck a	all that ap	<u>opiy)</u> For a (D	10)	Sec	condary Ind	icators (minimum of two required)
Surface	Surface Water (A1) Aquatic Fauna (B1			13)		Surface S	Soil Cracks (B6)		
High Wa	True Aquatic Plants (B14)				Drainage	Patterns (B10)			
Saturatio	on (A3) Jorka (B1)	Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)				on water Table (C2)			
Sedimer							Dullows (Co) n Visible on Aerial Imageny (CQ)		
Drift Der	Drift Deposits (B3)						or Stressed Plants (D1)		
Algal Ma							bic Position (D2)		
Iron Dep	Tron Deposits (B5) (C6) EAC-Neutral Test (D5)								
Inundatio	on Visible on Aeria	I Imager	/ (B7)	Thin Mu	ck Surfac	e (C7)		_	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	. ,	Other (E	xplain in	Remarks)		
Field Obser	vations.	,		,			,		
Surface wat	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	X X	Depth (i	nches):		hv	drology present? N
(includes ca	pillary fringe)					/			
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									

Project/Site TH 19	Marshall		City/County	/: Mar	shall/Lyon County	Sampling) Date:	9/29/21	
Applicant/Owner:	Minnesota Depar	tment of Transportatic	on S	tate:	MN	Sampling	Point:	2G	
Investigator(s): Lewis, DeCesare				Section, Township, Range			S4, T111N, R41W		
Landform (hillslope	, terrace, etc.):	Hillslope	I	Local rel	ief (concave, conve	x, none):		Concave	
Slope (%):	Lat:	44°26'59.15"N	Long	j:	95°47'9.16"W	Datum:			
Soil Map Unit Name51: La Prairie Loam					NWI Classifica	ation: R2UBH, R2UB		BH, R2UBG	
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)									
Are vegetation	, soil	, or hydrology	signif	icantly d	listurbed?	Are "norr	nal circun	nstances"	
Are vegetation	, soil	, or hydrology	natur	ally prob	lematic?			present? Yes	
SUMMARY OF FINDINGS (If needed, explain any answers in remarks.							swers in remarks.)		
Hydrophytic ve	getation present?	Y							
Hydric soil pres	ls	Is the sampled area within a wetland?							
Indicators of wetland hydrology present? Y If y				If yes, optional wetland site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)									

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet					
<u>Tree Stratum</u> (Plot size: 30' Radius)	% Cover	Species	Staus	Number of Dominant Species					
1 Acer rubrum	60	Y	FAC	that are OBL, FACW, or FAC: 2 (A)					
2 Fraxinus americana	10	N	FACU	Total Number of Dominant					
3				Species Across all Strata: 3 (B)					
4				Percent of Dominant Species					
5				that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)					
	70	= Total Cover							
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet					
1				Total % Cover of:					
2				OBL species $0 x 1 = 0$					
3				FACW species $20 \times 2 = 40$					
4				FAC species $60 \times 3 = 180$					
5				FACU species $20 \times 4 = 80$					
	0	= Total Cover		UPL species $0 \times 5 = 0$					
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 300 (B)					
1 Phalaris arundinacea	20	Y	FACW	Prevalence Index = $B/A = 3.00$					
2 Morus rubra	10	Y	FACU						
3				Hydrophytic Vegetation Indicators:					
4				Rapid test for hydrophytic vegetation					
5				X Dominance test is >50%					
6				X Prevalence index is ≤3.0*					
7				Morphogical adaptations* (provide					
8				supporting data in Remarks or on a					
9				separate sheet)					
10				(explain): Adjacent to managed plant					
	30	= Total Cover		comm.					
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric soil and wetland hydrology must be					
1				present, unless disturbed or problematic					
2				Hydrophytic					
	0	= Total Cover		vegetation					
				present? Y					
Remarks: (Include photo numbers here or on a sepa	rate sheet)								
Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
--------------	-----------------------------------	---------------------	--------------------	-----------------	------------	-----------------------	-------------------	---------------	-------------------------------------
Depth	Matrix		Ree	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ire	Remarks
0-20	7.5YR 4/1						SANDY CLA	AY LOAM	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Probl	ematic Hydric Soils:
X Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coas	t Prairie Ree	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-N	Nanganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)	. <i>.</i>		pleted Ma	atrix (F3)	(50)			
Dep	bleted Below Dark	Surface	(A11) Red	lox Dark	Surface	(F6) (⊑ 7)			
	ck Dark Surface (A12)		leted Da	ark Surra	Ce (F7)	*Indica	tors of hydro	ophytic vegetation and weltand
	ndy Mucky Minera	II (51) Doot (82	, <u> </u>	lox Depr	essions ((67)	hydro	logy must b	e present, unless disturbed or
	II MUCKY Feat OF	real (55)						problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric	soil presen	t? <u>Y</u>
Depth (Inche	es):				-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that a	(vlac		Se	condary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1) —	Dry-Seas	son Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	OSIIS (B5) on Visible on Aeria	Imagen	(B7)	(C6) Thin Mu	ok Surfaa	(C7)	_	FAC-Net	itrai Test (D5)
Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge c	or Well Da	e (C7) ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xolain in	Remarks)		
Field Obser	vations:	,					/	1	
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	vdrology present? Y
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if a	available:	
Remarks:									

Project/Site TH 19 Marshall C	City/County:	Marshall/Lyor	County Sam	pling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Sta	ite: MN	N Samp	ling Point:	2GU
Investigator(s): Lewis, DeCesare		Section, Townsh	ip, Range:	S4, T111	N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	ocal relief (conca	ve, convex, non	e):	Concave
Slope (%): Lat: 44°26'59.15"N	Long:	95%47'9.43	3"W Datu	m:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UB	H, R2UBG
Are climatic/hydrologic conditions of the site typical for this tim	ne of the yea	nr? Y	(If no, explain in	remarks)	
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "	normal circums	stances"
Are vegetation , soil , or hydrology	natural	ly problematic?		۲ ۲	present? No
SUMMARY OF FINDINGS	_		(If needed, e	xplain any ans\	wers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls t	he sampled are	a within a wetla	and?	Ν
Indicators of wetland hydrology present? N	lf ye	es, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separat	e report)				
The vegetation is a	artificially p	planted and m	anicured.		
VEGETATION Use scientific names of plants					
	ito Domini	ant Indiantar	Dominance	Test Workshe	et
Tree Stratum (Plot size: 30' Radius) % Cov	er Specie	es Staus	Number of Do	minant Species	
1	·		that are OBL,	FACW, or FAC:	0 (A)
2			Total Numb	per of Dominant	
3			Species A	cross all Strata:	<u> </u>
4			Percent of Do	minant Species	
5			that are OBL, I	FACW, or FAC:	0.00% (A/B)
	= I otal C	Cover	Drevelance	n day Markab	
<u>Sapling/Shrub straturr</u> (Plot size: <u>5 Radius</u>)			Total % Cove	ndex worksni	eet
2			OBL species	, 0. x1	= 0
3			FACW specie	$es 0 x^2$	= 0
4			FAC species	0 x 3	= 0
5			FACU specie	s 100 x 4	= 400
0	= Total C	Cover	UPL species	<u>0</u> x 5	= 0
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column totals	s <u>100</u> (A)	400 (B)
1 Festuca arundinacea 100	Y	FACU	Prevalence II	ndex = B/A =	4.00
2					
3			Hydrophytic	Vegetation In	dicators:
5			Rapid les	ce test is \$50%	lic vegetation
6			Prevalen	ce index is ≤3.	0*
7			Morphog	ical adaptation	s* (provide
8			supportin	ig data in Rem	arks or on a
9			separate	sheet)	
10			(explain)	Adjacent to m	anaged plant
	= Total C	Cover	comm.		
<u>VVoody vine stratum</u> (Plot size: <u>30' Radius</u>)			*Indicators of h	ydric soil and wet	land hydrology must be
2			present Hvdroph	, uniess aisturbed ivtic	
	= Total C	Cover	vegetatio	on	
			present	<u>N</u>	_
Remarks: (Include photo numbers here or on a separate shee	et)		1		

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Rec	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-7	7.5YR 4/3						SANDY CLA	Y LOAM	
7-20	7.5YR 4/2						CLAY LOAM	1	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	s for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast	Prairie Ree	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-N	langanese	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very S	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicat	tors of hydr	ophytic vegetation and weltand
San	idy Mucky Minera	l (S1)	Rec	lox Depr	ressions	(F8)	hydrol	ogy must b	e present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	soil presen	t? N
Depth (inche	es):				-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary India	cators (minimum	of one is	required; check	all that a	pply)		Sec	condary Ind	icators (minimum of two required)
Surface	Water (A1)		·	Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	—	Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimen	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent	Iron Redu	iction in T	illed Soils	Geomorp	phic Position (D2)
Iron Dep	osits (B5)		(DZ)	(C6)	-l. 0	(07)	_	FAC-Neu	itral Test (D5)
Sparsolu	Vogotatod Conca	i imagery	/ (B/)			e (C7)			
Water-St	tained Leaves (B0			Other (E	volain in	ala (D9) Romarke)		
Field Obser)				ITEIIIai KS)		
Surface wat	valions: er present?	Vac	No	x	Denth /i	nchee).			
Water table	nresent?	105	No	<u> </u>	Depth (i	nchae).		Ind	licators of wetland
Saturation p	resent?	Yes	No	×	Depth (i	nches):		hv	drology present? N
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am daulo	e. monitorina well	, aerial n	hotos n	revious ir	spections) if a	vailable.	
		9449	,	,	, pi		, " u		
Remarks:									
I									

Project/Site TH 19 Marshall	City/	County: M	arshall/Lyon	County Sampling Date	e: 9/29/21
Applicant/Owner: Minnesota Department of Transp	ortation	State:	MN	Sampling Point	t: 2H
Investigator(s): Lewis, DeCesare		Secti	on, Townshi	p, Range: S4,	T111N, R41W
Landform (hillslope, terrace, etc.): Hillsl	lope	Local r	elief (concav	/e, convex, none):	Concave
Slope (%): Lat:44°26'58.46'	"N	Long:	95°47'9.48	"W Datum:	
Soil Map Unit Name 51: La Prairie Loam			NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for	r this time o	of the year?	Y (!	If no, explain in remarks)	
Are vegetation, soil, or hydrol	logy	significantly	disturbed?	Are "normal cir	rcumstances"
Are vegetation, soil, or hydrol	logy	naturally pro	oblematic?		present? Yes
SUMMARY OF FINDINGS				(If needed, explain any	/ answers in remarks.)
Hydrophytic vegetation present? N	-				
Hydric soil present? Y	-	Is the s	ampled area	a within a wetland?	<u>N</u>
Indicators of wetland hydrology present? Y		If yes, op	otional wetlar	nd site ID:	
Remarks: (Explain alternative procedures here or in a	a separate re	eport.)			
VEGETATION Use scientific names of pla	nts.				
	Absolute	Dominant	Indicator	Dominance Test Wor	rksheet
<u>Tree Stratum</u> (Plot size: 30' Radius)	% Cover	Species	Staus	Number of Dominant Sp	pecies
1 Fraxinus americana	60	Y	FACU	that are OBL, FACW, or	FAC: 0 (A)
2 Morus rubra	20	Y	FACU	Total Number of Dom	ninant Natata: 2 (B)
3				Species Across and	strata: <u>з</u> (в)
5				Percent of Dominant Sp that are OBL_FACW, or	Decies
· · · · · · · · · · · · · · · · · · ·	80	= Total Cover			1 AO. 0.0070 (702)
Sap <u>ling/Shrub straturr</u> (Plot size: 5' Radius))	- 10101		Prevalence Index Wo	orksheet
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		Total Covo		FACU species 100	x 4 = 400
Horb stratum (Plot size: 5' Radius)	<u> </u>	= 10tal Cover		Column totals 100	$x_{5} = 0$
<u> Tello sitaluiii</u> (Fiul size. <u>Jitauus</u>)	20	v	FACU	$\frac{1}{2} \frac{1}{2} \frac{1}$	
2 Partnenocissus vilacea	20	T	FACU	Prevalence muex = br	A = 4.00
3				Hvdrophytic Vegetat	ion Indicators:
4				Rapid test for hydr	rophytic vegetation
5				Dominance test is	>50%
6				Prevalence index i	is ≤3.0*
7				Morphogical adapt	tations* (provide
8				supporting data in	Remarks or on a
9				separate sheet)	
10	20	Total Cover		(explain): Adjacent	t to managed plant
Woody vine stratum (Plot size: 30' Radius)	<u></u>				
1				*Indicators of hydric soil ar present, unless dis	nd wetland hydrology must be sturbed or problematic
2				Hydrophytic	
- <u> </u>	0	= Total Cover		vegetation	
				present?	N
Remarks: (Include photo numbers here or on a separ	ate sheet)				

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	e absence	e of indicators.)
Depth	Matrix		Re	dox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	•	Remarks
0-21	7.5YR 4/1						SANDY CLAY	LOAM	
-								-	
*Turner C (Concentration D	Doplati	on DM Doduo	d Motrix		lookod S	and Craina	**L contion	DI Dara Lining M. Matrix
Type. C = C	Uncertifation, D	= Depieti	OII, RIVI = Reduce		., 1013 = 10	laskeu S	and Grains.	Location	I. PL = Pole Lining, M = Matrix
	hindicators:		Sor		od Motriv	(84)			
	lisoi (AT) tia Eninadan (A2)					(34)		urface (S7)	$(\mathbf{L} \mathbf{R} \mathbf{R}, \mathbf{L}, \mathbf{R})$
	lic Epipedon (A2)			nad Ma	(33)		Dark St		(LRR R, L)
	CK HISUC (AS)	1)		pped Mud	unx (SO)				k Surface (TE12)
	tified Lovers (AF)	+)	Loa		od Motrix	al (⊏1) ∠(⊏2)	Other (allow Dall	comarka)
	m Muck (A10))	L0a	any Gley	eu Mali	(Г2)			entarks)
2 U	IT MUCK (ATU)	Surface		Jeleu Ma	Surface	(E6)			
	rk Dark Surface ((Sunace (Δ12)				(10) ce (E7)	*!		- he die oor wederliese oor door die eerd
Sar	dy Mucky Minera	L (S1)		dov Denr		(F8)	"Indicato	rs of nyard	prosent unless disturbed or
5 cr	m Mucky Peat or	Peat (S3		иох Бері	63310113	(10)	Πγατοιοί	yy musi be	problematic
)			•			
Restrictive	Layer (if observe	ed):							
Type:	`				-		Hydric so	oil present	? <u>Y</u>
Depth (inche	es):				-				
HYDROLO	DGY								
Wetland Hv	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that a	nnlv)		Seco	ndary Indi	cators (minimum of two required)
Surface	Water (Δ1)		Tequired, check	Aquatic	<u>ppiy)</u> Fauna (B	13)	<u></u>	Surface S	cators (minimum or two required,
High Wa	iter Table (A2)			True Ag	uatic Plar	nts (B14)	X	Drainage	Patterns (B10)
Saturatio	on (A3)			Hvdroae	en Sulfide	Odor (C1	1)	Drv-Seas	on Water Table (C2)
X Water M	larks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish E	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			<u> </u>	Saturation	Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	r Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	Iron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neut	tral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	r (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:				<u> </u>				
Surface wat	er present?	Yes	No	<u> </u>	Depth (i	nches):			
Water table	present?	Yes	NO No	<u>X</u>	Depth (i	nches):		ina	drology procent?
Cincludes ca	nillary fringe)	res		~		nches).		iiy	arology present?
	plinary minge)						enertiene) if eu		
Describe rec	Jorded data (Střea	an gauge	e, monitoring well	, aenai p	niolos, pi	evious Ir	ispections), if ava	allable:	
Remarks:									

Project/Site TH 19 Marshall Ci	ty/County:	Marshall/Lyon	County Sa	ampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	State	: MN	l Sa	ampling Point:	2HU
Investigator(s): Lewis, DeCesare	Se	ection, Townshi	p, Range:	S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loca	al relief (concav	ve, convex, n	ione):	Concave
Slope (%): Lat: 44°26'58.57"N	Long:	95%47'9.66	5"W Da	atum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification	n: R2UE	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	e of the year?	У Y (lf no, explain	in remarks)	
Are vegetation X , soil , or hydrology	significar	ntly disturbed?	Ar	e "normal circum	istances"
Are vegetation , soil , or hydrology	naturally	problematic?			present? No
SUMMARY OF FINDINGS	_		(If needed	l, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	Is the	e sampled area	a within a w	etland?	Ν
Indicators of wetland hydrology present? N	If yes,	optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separate	report.)				
The vegetation is a	rtificially pla	anted and ma	anicured.		
VEGETATION Use scientific names of plants					
Absolute	e Dominar	t Indicator	Dominan	ce Test Workshe	eet
Tree Stratum (Plot size: 30' Radius) % Cove	r Species	Staus	Number of	Dominant Species	S
1			that are OB	L, FACW, or FAC	: 0 (A)
2			Total Nu	umber of Dominan	t
3			Specie	s Across all Strata	:: <u>1</u> (В)
4			Percent of	Dominant Species	S
5			that are OB	SL, FACW, or FAC	: <u>0.00%</u> (A/B)
Sanling/Shruh stratum (Plot size: 5' Radius)		vei	Prevalen	re Index Worksh) eet
1			Total % C	over of:	
2			OBL spec	ies 0 x1	= 0
3			FACW sp	ecies 0 x 2	2 = 0
4			FAC spec	ies 0 x 3	3 = 0
5			FACU spe	ecies <u>100</u> x 4	4 = 400
	= Total Co	ver	UPL spec	$\frac{1}{100}$ ies $\frac{1}{100}$	$\overline{b} = 0$
Herb stratum (Plot size: 5' Radius)			Column to	$\frac{100}{100}$ (A)) <u>400</u> (B)
1 Festuca arundinacea 100	Y	FACU	Prevalenc	e Index = B/A =	4.00
2			Hydrophy	tic Vegetation I	ndicators:
4			Rapid	test for hydroph	tic vegetation
5			Domir	nance test is >50°	%
6			Preva	lence index is ≤3	.0*
7			Morph	nogical adaptatior	ns* (provide
8			suppo	orting data in Rem	narks or on a
9			separ	ate sheet)	
10	- Total Ca		(expla	iin): Adjacent to n	nanaged plant
Woody vine stratum (Plot size: 30' Radius)	_ = 10(a) C0				
1			*Indicators	of hydric soil and we sent. unless disturbe	etland hydrology must be
2			Hydro	ophytic	
0	= Total Co	ver	veget	ation	
			prese	nt? N	
Remarks: (Include photo numbers here or on a separate sheet)				

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	n the absend	e of indicators.)
Depth	Matrix		Rec	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Tex	ture	Remarks
0-12	7.5YR 4/3								BEDROCK HIT AT 12"
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:					(a ()	Indicato	ors for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	idy Gleye	ed Matrix	(S4)		ist Prairie Red	dox (A16) (LRR K, L, R)
HIST Block	IC Epipedon (A2)		Sar	ay Read	IX (55)		Dari	-Mandanese) (LKK N, L) Masses (F12) (I RR K I R)
	rogen Sulfide (A)	I)		ppeu Mucl	(UIX (SO)) (F1)			rk Surface (TE12)
Stra	atified Lavers (A5)	r)	Loa	my Glev	ed Matrix	(F2)		er (explain in	remarks)
2 cr	n Muck (A10)		Der	leted Ma	atrix (F3)	(1 –)			loniano)
Dep	leted Below Dark	Surface	(A11) Red	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indic	ators of hvdr	ophytic vegetation and weltand
Sar	dy Mucky Minera	I (S1)	Rec	lox Depr	essions ((F8)	hydr	ology must b	e present, unless disturbed or
5 cr	m Mucky Peat or I	Peat (S3)				-		problematic
Restrictive	Laver (if observe	ed):							
Type:		,					Hydric	soil presen	t? N
Depth (inche	es):				-		•	•	
Remarks:					•				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		<u>S</u>	econdary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface \$	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1)	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Drift Der				(CS) Presenc	a of Radu	iced Iron	(C4)	Saturatio	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorr	ohic Position (D2)
Iron Dep	osits (B5)			(C6)	ion redu			FAC-Neu	itral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	<u>X</u>	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	NO	X	Depth (I	nches):		ny	drology present? N
Deseribe rea	pinary minye)	macure	monitoring	oorial -	hotos s		apoptiona) #	- available:	
Describe rec	Jorded data (Střea	un gauge	e, monitoring well	, aeriai p	noios, pr	evious Ir	ispections), li	available:	
Remarks:									

Project/Site TH 19	Marshall		City/C	County:	Marshall/L	yon County	Sampling Date	e:	1
Applicant/Owner:	Minnesota Depa	rtment of Transportat	ion	State	:	MN	Sampling Point	t: 21	
Investigator(s): Le	wis, DeCesare			Se	ection, Tow	nship, Range	: S4,	T111N, R41W	
Landform (hillslope	, terrace, etc.):	Hillslope		Loc	al relief (co	ncave, conve	x, none):	Concave	
Slope (%):	Lat:	44°26'57.42"N		Long:	95%47'	8.78"W	Datum:		
Soil Map Unit Nam	e51: La Prairie Lo	am			N	IWI Classifica	ition: F	₹2UBH, R2UBG	
Are climatic/hydrole	ogic conditions of t	the site typical for this	time of	the year?	? Y	(If no, exp	lain in remarks)		
Are vegetation	, soil	, or hydrology		significar	ntly disturbe	ed?	Are "normal ci	rcumstances"	
Are vegetation	, soil	, or hydrology		naturally	problemati	c?		present?	/es
SUMMARY OF	FINDINGS					(If nee	ded, explain any	/ answers in rem	arks.)
Hydrophytic ve	getation present?	Y							
Hydric soil pres	sent?	Y		Is the sampled area within a wetland? Y					
Indicators of w	etland hydrology p	resent? Y		If yes	, optional w	etland site ID	:		
Remarks: (Explain	alternative proced	ures here or in a sepa	arate rep	port.)					
	- Use scientific	names of plants.				Domin	anaa Taat War		
Troo Stratum	(Plot size: 3)		solute	Dominan	it Indicate	or Domin	ance lest wor	KSheet	
11			20461	Sheries		hat are	r of Dominant Sp OBL, FACW, or	FAC: 3	(A)
2 3						Tota Spe	l Number of Dom cies Across all S	ninant Strata: 3	(B)
4 5						Percen that are	t of Dominant Sp OBL, FACW, or	ecies FAC: 100.00%	- (A/B)
			0 =	Total Co	ver	_			-``
Sapling/Shrub st	ratum (Plot size:	5' Radius)				Preval	ence Index Wo	rksheet	
1	-					Total %	6 Cover of:		

5				that are OBL, FACW, or FAC: 100.00% (A/B)
	0	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)				Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 30 x 2 = 60
4				FAC species 70 x 3 = 210
5				FACU species 0 x 4 = 0
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)		_		Column totals 100 (A) 270 (B)
1 Panicum virgatum	50	Y	FAC	Prevalence Index = B/A = 2.70
2 Phalaris arundinacea	30	Y	FACW	
3 Plantago major	20	Y	FAC	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
_	100	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius)				*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separate	e sheet))		

Profile Des	cription: (Descri	ibe to th	e depth need	led to d	ocumen	t the	e indicat	or or confirm	n the absend	e of indicators.)
Depth	<u>Matrix</u>			Redox	Features					
(Inches)	Color (moist)	%	Color (mois	st) o	% Ту	pe*	Loc**	Tex	ture	Remarks
0-21	75YR 5/2							SANDY L	OAM	
*Type: C = 0	Concentration, D =	= Depleti	ion, RM = Red	luced M	atrix, MS	6 = M	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:		-					Indicate	ors for Probl	ematic Hydric Soils:
Hist	tisol (A1)			Sandy (Gleyed M	latrix	(S4)	Coa	ast Prairie Re	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)			Sandy F	Redox (S	5)		Dar	k Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)			Stripped	d Matrix ((S6)		Iror	n-Manganese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)		Loamy	Mucky M	inera	al (F1)	Ver	y Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))		Loamy	Gleyed N	latrix	: (F2)	Oth	er (explain in	remarks)
2 cr	m Muck (A10)			Deplete	d Matrix	(F3)				
Dep	leted Below Dark	Surface	e (A11)	Redox I	Dark Surf	face	(F6)			
Thio	ck Dark Surface (A12)		Deplete	d Dark S	urfac	ce (F7)	*Indie	cators of hydr	ophytic vegetation and weltand
X Sar	ndy Mucky Minera	l (S1)		Redox I	Depressio	ons ((F8)	hyd	rology must b	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3	5)							problematic
Restrictive	Layer (if observe	ed):								
Type:		-						Hydri	c soil presen	t? Y
Depth (inche	es):									
Remarks [.]										
HYDROLO	DGY									
Wetland Hy	drology Indicato	ors:								
Primary Indi	cators (minimum)	of one is	required: che	ck all th	at apply)			ç	Secondary Ind	licators (minimum of two required)
Surface	Water (A1)	0. 0.10 10		Aau	atic Faur	na (B1	13)	<u>-</u>	Surface	Soil Cracks (B6)
High Wa	iter Table (A2)		-	Tru	e Aquatic	Plan	its (B14)		X Drainage	Patterns (B10)
Saturatio	on (A3)		-	Hyc	Irogen Su	Ilfide	Odor (C1	1)	Dry-Seas	son Water Table (C2)
X Water M	larks (B1)		-	Oxi	dized Rhi	zospł	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Pre	sence of	Redu	iced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Rec	ent Iron F	Redu	ction in T	illed Soils	Geomor	phic Position (D2)
Iron Dep	osits (B5)		(D.T.)	(C6)				FAC-Neu	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)		n Muck Si	urtace	e (C7)			
Sparsely Wotor S	vegetated Conca	ve Suna	се (во)		ige or vve or (Evoloi	ell Da	ita (D9) Bomorko	\		
vvaler-S	tained Leaves (B9)	-	0	er (Explai	In In F	Remarks)		
Field Ubser	vations:	Vaa	NI	-		oth ()-				
Surface wat	er present?	Vec		<u> </u>		oth (ir	nches).	6	- Inc	licators of wotland
Saturation n	resent?	Yes			Der	oth (ir	nches):	6	- h	/drology present? Y
(includes ca	pillary fringe)	100	<u></u> N			Sur (ii	noneo).	0	,	
Describe rec	orded data (strea	m daud		vell ae	rial nhoto	s nr	evious in	spections) i	f available [.]	
Describered		in gaug	e, morntoring	Non, ao		, pr		100000010), 1	r available.	
Remarks:										

Project/Site TH 19 Marshall Cit	y/County: Marshall/Lyor	n County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MI	N Sampling Point: 2IU
Investigator(s): Lewis, DeCesare	Section, Townsh	nip, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ave, convex, none): Concave
Slope (%): Lat: 44°26'57.18"N	Long: 95%47'8.9	5"W Datum:
Soil Map Unit Name51: La Prairie Loam		I Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y	(If no, explain in remarks)
Are vegetation X, soil, or hydrology	significantly disturbed?	Are "pormal circumstances"
Are vegetation , soil , or hydrology	naturally problematic?	present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N		
Hydric soil present? N	Is the sampled are	ea within a wetland? N
Indicators of wetland hydrology present? N	If yes, optional wetla	and site ID:
Remarks: (Explain alternative procedures here or in a separate	report.)	
I ne vegetation is ar	uncially planted and m	
VEGETATION Use scientific names of plants.		
Absolute	e Dominant Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover 1	Species Staus	Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata:(B)
4		Percent of Dominant Species
<u> </u>	- Total Cover	
Sapling/Shrub stratum (Plot size: 5' Radius)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species 0 x 2 = 0
4		FAC species $0 \times 3 = 0$
5		FACU species $100 \times 4 = 400$
U U	= Total Cover	$\begin{array}{c} \text{UPL species} 0 \text{x 5} = 0 \\ \text{Column totals} 100 (\text{A}) 100 (\text{P}) \end{array}$
(Flot size. <u>5 Kaulus</u>)	V FACU	$\frac{100}{100}$
1 Pestuca arundinacea 100		Prevalence index = $B/A = 4.00$
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
6		Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9		(overlain) A discont to monograd plant
100	= Total Cover	comm.
Woody vine stratum (Plot size: 30' Radius)		*Indicators of hydric soil and wetland hydrology must be
1		present, unless disturbed or problematic
2	Tatal Osuar	Hydrophytic
0	= Total Cover	present? N
Remarks: (Include photo numbers here or on a separate sheet)		·

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the absen	ce of indicators.)
Depth	Matrix		Red	dox Featu	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	7.5 YR 4/1						SANDY CLAY LOAM	
11-20	7.5YR 4/3						LOAM	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Location	on: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for Prob	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast Prairie Re	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	x (S5)		Dark Surface (S	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Manganese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Loa	my Muck	ky Minera	al (F1)	Very Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (explain in	remarks)
2 cr	m Muck (A10)	. <i>.</i>		pleted Ma	atrix (F3)	(= a)		
	Dieted Below Dark		(A11)Rec	lox Dark	Surface	(F6)		
	ck Dark Surface (A12)	Dep	leted Da	irk Suria	Ce (F7)	*Indicators of hyd	rophytic vegetation and weltand
	n Mucky Minera	II (31) Doot (83			essions	(ГО)	nyarology must r	be present, unless disturbed or
	IT MUCKY I Eat OF	reat (00)					problemate
Restrictive	Layer (if observe	ed):						10 N
Type:							Hydric soil presei	nt? <u>N</u>
Depth (Inche	es):				•			
Remarks:								
HIDROLU								
wetland Hy	drology Indicato	ors:					.	
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Secondary Inc	dicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	Soil Cracks (B6)
High Wa	iter Table (A2)			I rue Aqu	uatic Plar	its (B14)		e Patterns (B10)
Saturation Water M	on (A3) Iarks (B1)			Ovidized	n Suillae I Phizoso	beres on	I) DIV-Sea	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)	пкпігозр	neres on	Saturati	on Visible on Aerial Imagery (C9)
Drift Dec	osits (B3)			Presenc	e of Redu	uced Iron	(C4) Stunted	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Geomor	phic Position (D2)
Iron Dep	osits (B5)			(C6)			FAC-Ne	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wat	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	X	Depth (i	nches):	In-	dicators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):	h	ydrology present? N
(includes ca	piliary minge)							
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	spections), if available:	
Remarks:								
rtomanto.								

Project/Site_TH 19 Marshall	City/County:	Marshall/Lyon Cour	ity Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transporta	ation Stat	e: MN	Sampling Point:	3A
Investigator(s): Lewis, DeCesare	S	ection, Township, Ra	nge: S4, T	111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	e Loc	cal relief (concave, co	nvex, none):	Concave
Slope (%): Lat: 44°26'46.69"N	Long:	95°47'19.39"W	Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI Class	ification: R2	UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for th	is time of the year	? Y (If no,	explain in remarks)	
Are vegetation, soil, or hydrology	significa	intly disturbed?	Are "normal circu	umstances"
Are vegetation, soil, or hydrology	naturally	/ problematic?		present? Yes
SUMMARY OF FINDINGS		(If	needed, explain any a	nswers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? Y	Is th	e sampled area with	in a wetland?	Y
Indicators of wetland hydrology present? Y	If yes	s, optional wetland site	e ID:	
VEGETATION Use scientific names of plants	osolute Domina	nt Indicator Do	minance Test Works	sheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) %	Cover Specie	s Staus Nur that	nber of Dominant Spec are OBL, FACW, or F/	cies AC: <u> </u>
2			Total Number of Domin	ant
3		_B	Species Across all Stra	ala: <u>2</u> (B)
5		Pei that	are OBL, FACW, or F	cies AC: 100.00% (A/B)
	0 = Total Co	over		(12)
<u>Sapling/Shrub straturr</u> (Plot size: <u>5' Radius</u>)		Pro To	evalence Index Work tal % Cover of:	sheet
2		OE	BL species 0	x 1 = 0
3		FA	CW species 100	x 2 = 200
4		FA	C species 0	x 3 = 0
5		FA	CU species 0	x 4 = 0
	0 = Total Co	over UF	L species 0	x 5 = 0
Herb stratum (Plot size: 5' Radius)		Co	lumn totals 100	(A) <u>200</u> (B)

Sapling/Shrub stratum (Plot size: 5 Radius)				Prevalence Ind	ex wo	rksneet		
1				Total % Cover o	f:			
2				OBL species	0	x 1 =	0	
3				FACW species	100	x 2 =	200	-
4				FAC species	0	x 3 =	0	-
5				FACU species	0	x 4 =	0	-
	0	= Total Cover		UPL species	0	x 5 =	0	-
Herb stratum (Plot size: 5' Radius)		_		Column totals	100	(A)	200	(B)
1 Equisetum hyemale	80	Y	FACW	Prevalence Inde	x = B/	A =	2.00	_
2 Phalaris arundinacea	20	Y	FACW					-
3				Hydrophytic Ve	egetati	on Indic	ators:	
4				Rapid test for	or hydr	ophytic v	egetatio	n
5				X Dominance	test is	>50%		
6				X Prevalence	index i	s ≤3.0*		
7				Morphogica	l adapt	ations* (provide	
8				supporting c	lata in	Remarks	s or on a	
9				separate sh	eet)			
10				(explain): Ad	ljacent	to mana	aged plar	nt
	100	= Total Cover		comm.			•	
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1				*Indicators of hydri present, un	c soil ar Iless dis	nd wetland turbed or p	hydrology problemat	/ must b
2				Hydrophyti	С			
	0	= Total Cover		vegetation				
				present?		Y		

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Rec	dox Featu	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-20	10YR 4/1						CLAY		
*Turney C (Concentration D	Damlati		al Matrix				**!	D Dave Lining M Matrix
Type: C = C	Uncentration, D =	= Depleti	on, $RW = Reduce$	ed Matrix	, IVIS = IV	lasked S	and Grains.	Location	1: PL = Pore Lining, M = Matrix
			Son		d Motrix	(64)	Coost		
	lisoi (AT) tie Enineden (AQ)		San	idy Gleye		(54)	Coasi	Surface (SZ	$(\mathbf{L}\mathbf{R}\mathbf{R},\mathbf{L},\mathbf{R})$
	al Listic (A2)		San	iay Reao	(55)				(LRR R, L)
	CK HISTIC (A3)	IN IN		pped ivia	trix (56)			Nanyanese i Shallaw Dar	(12) (LKK K, L, K)
	tified Levere (AF)	+)			cy Minera	аг (F1) (Г2)	Very 3	Shallow Dar	k Sufface (TFT2)
	atilied Layers (Ab)			my Gleye		(FZ)	Other	(explain in l	remarks)
2 Cr	II IVIUCK (ATU)	Curfood			Surface	(Ec)			
					Sunace	(FO) 00 (FZ)			
	dy Mucky Minoro	HIZ) I (Q1)					*Indical	tors of hydro	ophytic vegetation and weltand
	ndy Mucky Millera	1 (31) Doot (82			essions	(ГО)	nyaroi	ogy must be	e present, unless disturbed or
	II MUCKY Feat OF	-eat (33)			-			problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	soil present	? <u>Y</u>
Depth (inche	es):								
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Sec	condary Indi	cators (minimum of two required)
Surface	Water (A1)			Aquatic I	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aqu	uatic Plar	nts (B14)		X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) <u> </u>	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish E	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturation	n Visible on Aerial Imagery (C9)
X Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	r Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)			_	FAC-Neu	tral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	vegetated Conca	ve Surra	се (В8)	Gauge o	or vveli Da	ata (D9)	、 、		
vvater-S	tained Leaves (B9)		Other (E	xpiain in	Remarks)		
Field Obser	vations:	V			Denti "				
Surrace wat	er present?	Yes	No	<u> </u>	Depth (i	ncnes):			
vvater table	present?	Yes	No	<u> </u>	Depth (i	ncnes):		Ind	ICATORS OF WELLAND
Saturation p	nesent?	res	INO	~	Deptn (I	ncnes):		ny	
					l 4				
Describe red	corded data (strea	im gauge	e, monitoring well	, aerial p	notos, pr	revious ir	ispections), if a	ivallable:	
Remarks									
Noniaitta.									
1									

Project/Site TH 19 Marshall City/	County: Marshall/Lyon	County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point: 3AU
Investigator(s): Lewis, DeCesare	Section, Townshi	p, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concav	re, convex, none): Concave
Slope (%): Lat: 44°26'46.41"N	Long: 95%47'19.3	"W Datum:
Soil Map Unit Name51: La Prairie Loam	NWI	Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y (f no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circumstances"
Are vegetation , soil , or hydrology	naturally problematic?	present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? N	Is the sampled area	within a wetland? N
Indicators of wetland hydrology present? N	If yes, optional wetlar	nd site ID:
Remarks: (Explain alternative procedures here or in a separate r	eport)	
The vegetation is arti	ficially planted and ma	anicured.
VEGETATION Use scientific names of plants		
	Dominant Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 1 (A)
2		Total Number of Dominant
3		Species Across all Strata: 1 (B)
4		Percent of Dominant Species
5		that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)
Sanling/Shrub strature (Plot size: 5' Padius)	= I otal Cover	Brovalanco Index Workshoot
1		Total % Cover of:
2	· ·	OBL species $90 \times 1 = 90$
3	·	FACW species 10 x 2 = 20
4		FAC species 0 x 3 = 0
5		FACU species 0 x 4 = 0
0	= Total Cover	UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)		Column totals <u>100</u> (A) <u>110</u> (B)
1 Carex pedunculata 90	Y OBL	Prevalence Index = B/A = 1.10
2 Deschampsia caespitosa 10	N FACW	I hadron having Managadiana ka dia na
3	· ·	Hydrophytic vegetation indicators:
5	· ·	X Dominance test is >50%
6	· ·	X Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9		separate sheet)
10		(explain): Adjacent to managed plant
100	= I otal Cover	comm.
<u>vvoody vine stratum</u> (Piot size. <u>30 Radius</u>)		*Indicators of hydric soil and wetland hydrology must b
2	· ·	Hvdrophytic
	= Total Cover	vegetation
		present? Y
Remarks: (Include photo numbers here or on a separate sheet)		

SOIL

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	ce of indicators.)
Depth	Matrix		Red	dox Feat	ures				-
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Text	ure	Remarks
0-5	7.5YR 3/3								
5-15	7.5YR 4/2								
15-20	7.5YR 2.5/2								
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	a, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicato	rs for Probl	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coa	st Prairie Re	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-	Manganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	tified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Othe	er (explain in	remarks)
2 cr	n Muck (A10)	o (pleted Ma	atrix (F3)	(50)			
	eted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
	ok Dark Sunace (A I Z)		leteu Da			*Indica	ators of hydr	ophytic vegetation and weltand
5 cr	n Mucky Peat or	II (31) Poat (83		iox Debi	essions	(ГО)	nyara	blogy must b	e present, unless disturbed or
	IT MUCKY I Eat OF)			1			problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric	soil presen	it? <u>N</u>
Depth (Inche					-				
Remarks:									
	JG I drology Indicate								
		ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		<u>Se</u>	econdary Inc	licators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	-	Surface	Soil Cracks (B6)
High Wa	(A2)				uatic Plar	Odor(C)			Patterns (B10)
Water M	arks (B1)			Ovidized			Living Poots	Cravfish	Burrows (C8)
Sedimer	at Deposits (B2)			(C3)	лкпідозр	neres on		Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	Iron Redu	iction in T	illed Soils	Geomor	phic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	r (B7)	Thin Mu	ck Surfac	e (C7)	-		
Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	<u>X</u>	Depth (i	nches):		Inc	licators of wetland
Saturation p	resent?	Yes	NO	X	Depth (i	nches):		ny	/drology present? N
Uncludes ca					h e t e				
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	motos, pr	evious ir	ispections), if	available:	
Remarks:									

Project/Site TH 19	City/County:	Marshal	/Lyon County	Sampling Date:	9/29/2	21					
Applicant/Owner:	Minnesota Depar	tment of Transportation	on Sta	ate:	MN	Sampling Point:	3B				
Investigator(s): Le	wis, DeCesare			Section, To	wnship, Range	: S4, T11 ⁻	IN, R41W				
Landform (hillslope	e, terrace, etc.):	Hillslope	L	ocal relief (o	concave, conve	x, none):	Concave				
Slope (%):	Lat:	44≌6'46.77"N	Long:	95%	7'20.78"W	Datum:					
Soil Map Unit Nam	e51: La Prairie Loa	am			NWI Classifica	ation: R2UE	H, R2UBG	;			
Are climatic/hydrol	ogic conditions of t	he site typical for this	time of the yea	ar? Y	(If no, exp	lain in remarks)					
Are vegetation	, soil	, or hydrology	signific	cantly distur	bed?	Are "normal circum	stances"				
Are vegetation	, soil	, or hydrology	natura	lly problema	atic?		present?	Yes			
SUMMARY OF	FINDINGS				(If nee	ded, explain any ans	wers in ren	narks.)			
Hydrophytic ve	getation present?	Y									
Hydric soil pres	sent?	Y	ls	the sample	d area within a	a wetland?	Y				
Indicators of w	etland hydrology p	resent? Y	lf ye	If yes, optional wetland site ID:							
Remarks: (Explain	alternative proced	ures here or in a sepa	rate report.)								
VEGETATION	Use scientific	names of plants.									
		Abs	olute Domin	ant Indic	ator Domin	nance Test Workshe	et				
Tree Stratum	(Plot size: 30	'Radius)%C	over Speci	ies Sta	us Numbe	r of Dominant Species	3				
1					that are	OBL, FACW, or FAC	: 2	(A)			
2					Tota	al Number of Dominan	t				
3					Spe	ecies Across all Strata	: 2	(B)			

				Species Across all Strata: 2 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
	0	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius))	_		Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 10 x 1 = 10
3				FACW species $0 \times 2 = 0$
4				FAC species 90 x 3 = 270
5				FACU species $0 \times 4 = 0$
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius))	—		Column totals 100 (A) 280 (B)
1 Panicum capillare	50	Y	FAC	Prevalence Index = B/A = 2.80
2 Populus deltoides	40	Y	FAC	
3 Bidens cernua	10	N	OBL	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	100	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separ	ate sheet)			

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the ab	sence of indicators.)
Depth	Matrix		Red	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	7.5YR 5/2						SANDY LOAM	
6-21	GLEY1 6/1						SANDY CLAY LOA	M
021	OLL I I O, I						0,110102,1120,	
*Tvpe: C = 0	Concentration. D :	= Depleti	on. RM = Reduce	d Matrix	. MS = N	lasked S	and Grains. **Lo	cation: PL = Pore Lining. M = Matrix
Hvdric So	oil Indicators:	Dopiot	,	a manna	,		Indicators for P	roblematic Hydric Soils:
Hist	tisol (A1)		X Sar	dy Gleve	ed Matrix	(S4)	Coast Prairi	e Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	dy Redo	ox (S5)	()	Dark Surfac	e (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Mangar	nese Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shallov	v Dark Surface (TF12)
Stra	atified Layers (A5)	1	Loa	my Gley	ed Matrix	(F2)	Other (expla	in in remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)		
Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicators of	hydrophytic vegetation and weltand
Sar	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydrology m	ust be present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Type:							Hydric soil pr	esent? Y
Depth (inche	es):				-			
Remarks:					_			
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required: check a	all that a	(vlac		Secondar	v Indicators (minimum of two required)
Surface	Water (A1)			Aquatic	Eauna (B	13)	Sur	ace Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	X Dra	nage Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1) Dry	Season Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Cra	vfish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)	·		Sat	uration Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) Stu	nted or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Geo	morphic Position (D2)
Iron Dep	osits (B5)			(C6)			FAC	C-Neutral Test (D5)
	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)	N	
water-S	tained Leaves (B9)	<u>X</u>	Other (E	xplain in	Remarks)	
Field Obser	vations:	V	K I _	v	Denth "	not est		
Surrace wat	er present?	Yes	NO No	X	Depth (I	ncnes):		Indicators of wotland
Valer table	present?	Yes			Depth (i	nches):		huicators of wetland
(includes ca	nillary fringe)	165		~		nches).		
Describe rec	porded data (atrac	magua		aprial	hotos pr		enectione) if availab	0.
Describe 160	Solueu uala (Sliea	an yauge	, monitoring well	, aeriai p	notos, pr	evious If	ispections), il availab	Б.
Remarks:								
NO WAT	ER TABLE PF	RESEN	T IN BORE, BL	JT SLO	SHING	NOISE	WHEN PULLING	UP THE SAMPLE.
			,	-	_		-	

Project/Site TH 19 Marshall	City/County:	Marshall/Lyon	County Samp	ling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportatio	n Sta	te: MN	Samp	ling Point:	3BU
Investigator(s): Lewis, DeCesare	5	Section, Townshi	p, Range:	S4, T111	N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	/e, convex, none	e): (Concave
Slope (%): Lat: 44°26'46.45"N	Long:	95%47'20.9	0"W Datur	n:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UBI	H, R2UBG
Are climatic/hydrologic conditions of the site typical for this t	ime of the yea	r? Y (If no, explain in i	remarks)	
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "r	ormal circums	tances"
Are vegetation , soil , or hydrology	naturall	y problematic?	7.10	p	resent? No
SUMMARY OF FINDINGS			(If needed, ex	plain any answ	vers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls ti	he sampled area	a within a wetla	nd?	Ν
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separ	ate report.)				
The vegetation is	artificially p	lanted and ma	anicured.		
VEGETATION Use scientific names of plants					
	lute Domina	ant Indicator	Dominance	Fest Worksher	et
Tree Stratum (Plot size: 30' Radius) % Co	over Specie	es Staus	Number of Dor	minant Species	
1	·		that are OBL, F	ACW, or FAC:	0 (A)
2		_	Total Numb	er of Dominant	
3		_	Species Ac	cross all Strata:	1 (B)
4			Percent of Dor	ninant Species	
	<u></u>		that are OBL, F	·ACW, or FAC:	0.00% (A/B)
Sopling/Shrub strature (Plot size: 5' Padius)		over	Brovalance l	nday Warkshi	ant .
1			Total % Cove	r of	el
2			OBL species	0 x1	= 0
3			FACW specie	es 0 x 2	= 0
4		_	FAC species	0 x 3	= 0
5			FACU specie	s 100 x 4	= 400
0	= Total C	over	UPL species	0 x 5 :	=
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column totals	; <u>100</u> (A)	<u>400</u> (B)
1 Festuca arundinacea 10	0 Y	FACU	Prevalence Ir	dex = B/A =	4.00
2			Hydrophytic	Vagatation In	diastore
4			Rapid tes	t for hydrophyt	ic vegetation
5			Dominan	ce test is >50%	b
6			Prevalence	ce index is ≤3.()*
7			Morphogi	cal adaptations	s* (provide
8			supportin	g data in Rema	arks or on a
9			separate	sheet)	
10	0 = Total C	over	(explain): comm.	Adjacent to ma	anaged plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of by	whic soil and wet	and hydrology must be
1			present	, unless disturbed	or problematic
2			Hydroph	ytic	
C	= Total C	over	vegetatio	n v N	
Descentes (lackeds also in the internet)	4)		present?		
Remarks: (Include photo numbers here or on a separate she	eet)				

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the at	osence of indicators.)
Depth	Matrix		Rec	lox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	7.5YR 4/2						CLAY	
11-20	7.5YR 4/1						CLAY	
							-	
*Type: C = C	Concentration, D :	= Depleti	on, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains. **Lo	ocation: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for F	Problematic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coast Prair	ie Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	ox (S5)		Dark Surfac	ce (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Manga	nese Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shallo	w Dark Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (expla	ain in remarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicators of	f hydrophytic vegetation and weltand
San	idy Mucky Minera	l (S1)	、Rec	lox Depr	essions ((F8)	hydrology m	nust be present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					-		Hydric soil pr	resent? N
Depth (inche	es):				-			
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Su	rface Soil Cracks (B6)
High Wa	iter Table (A2)			True Aqu	uatic Plar	nts (B14)	Dra	ainage Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1) Dry	y-Season Water Table (C2)
Water M	arks (B1)			Oxidized	I Rhizosp	heres on	Living Roots Cra	ayfish Burrows (C8)
Sedimer	t Deposits (B2)			(C3)				turation Visible on Aerial Imagery (C9)
	ousius (B3)			Presenc	ron Redu	uction in T		amorphic Position (D2)
	(B4)			(C6)	Ion Redu		FA	C-Neutral Test (D5)
Inundatio	on Visible on Aeria	l Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)	. ,	Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hydrology present? N
(includes ca	pillary fringe)							
Describe rec	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if availab	ble:
Domerica								
Remarks:								

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Project/Site TH 19 Marshall		City/County:	Marshall/Lyon	County Sampling	g Date:	9/29/21
Applicant/Owner: Minnesota D	epartment of Transportation	n State	: MN	Sampling	g Point:	3C
Investigator(s): Lewis, DeCesare	9	Se	ction, Townshi	p, Range:	S4, T111N, F	R41W
Landform (hillslope, terrace, etc.)	: Hillslope	Loca	al relief (concav	/e, convex, none):	Con	cave
Slope (%): Lat:	44°26'47.45"N	Long:	95°47'22.7	0"W Datum:		
Soil Map Unit Name 51: La Prairie	e Loam		NWI	Classification:	R2UBH, R	2UBG
Are climatic/hydrologic conditions	s of the site typical for this ti	ime of the year?	Y (lf no, explain in rem	narks)	
Are vegetation, soil	, or hydrology	significan	tly disturbed?	Are "nori	mal circumstan	ces"
Are vegetation , soil	naturally	problematic?		prese	ent? Yes	
SUMMARY OF FINDINGS				(If needed, expla	ain any answers	in remarks.)
Hydrophytic vegetation prese	ent? Y					
Hydric soil present?	Y	Is the	sampled area	a within a wetland	? Y	
Indicators of wetland hydrolo	gy present? Y	If yes,	optional wetla	nd site ID:		
VEGETATION Use scien	tific names of plants.					
	Absc	olute Dominan	t Indicator	Dominance Tes	t Worksheet	
<u>Tree Stratum</u> (Plot size: 1	30' Radius) % Co	over Species	Staus	Number of Domin that are OBL, FAC	ant Species CW, or FAC:	2 (A)
23				Total Number of Species Acros	of Dominant ss all Strata:	2 (B)
4				Percent of Domin	ant Species	
5				that are OBL, FAC	W, or FAC: 10	00.00% (A/B)
	<u> </u>) = Total Cov	ver			
Sapling/Shrub stratum (Plot si	ze: 5' Radius)			Prevalence Inde	ex Worksheet	
2		·			1. 10 v1-	40
3				FACW species	$\frac{+0}{60} \times 2 =$	120
<u> </u>				FAC species	<u> </u>	

1				Total % Cover of:
2				OBL species $40 \times 1 = 40$
3				FACW species 60 x 2 = 120
4				FAC species 0 x 3 = 0
5				FACU species 0 x 4 = 0
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)		_		Column totals 100 (A) 160 (B)
1 Phalaris arundinacea	50	Y	FACW	Prevalence Index = $B/A = 1.60$
2 Bidens cernua	40	Y	OBL	
3 Persicaria maculosa	10	N	FACW	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	100	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1		_		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y

3C

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	e absenc	e of indicators.)
Depth	Matrix		Rec	lox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	•	Remarks
									UNSAFE TO OBTAIN SAMPL
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:					(a 1)	Indicators	for Proble	ematic Hydric Soils:
Hist	tisol (A1)		X San	dy Gleye	ed Matrix	(S4)	Coast F	Prairie Rec	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark Su	urface (S7	$(\mathbf{LRR} \mathbf{K}, \mathbf{L})$
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Ma	inganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very Sh	nallow Dai	rk Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Other (e	explain in	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	Dep	leted Da	irk Surfa	ce (F7)	*Indicato	rs of hydro	ophytic vegetation and weltand
San	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydrolog	gy must b	e present, unless disturbed or
5 cr	m Mucky Peat or I	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Type:		-					Hydric so	il presen	t? Y
Depth (inche	es):						-	-	
Demerlie									
Determin	lation was mad		comparing sim	nar san	ipie poi	ints mad	ue in WL-3, as	s well as	vegetation and hydrology.
	JGY								
	drology Indicate	ve:							
		ns:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Seco	ndary Ind	icators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
Hign Wa	iter Table (A2)			I rue Aqu	Jatic Plan	its $(B14)$	× <u>×</u>		Patterns (B10)
Saturatio	on (A3) Iorlia (B4)			Hydroge	n Suitide		l) Livia a Dalata	Dry-Seas	Son Water Table (C2)
	arks (BT)			Oxidized	Rnizosp	neres on	Living Roots		n Visible on Aprial Imagony (CQ)
Drift Der	(B2)			Presenc	e of Redu	iced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorr	blic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)		-	
Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge o	r Well Da	ata (D9)			
Water-S	tained Leaves (B9)	· · ·	Other (E	xplain in	Remarks)		
Field Obser	vations:	,		,	•		,	1	
Surface wate	er present?	Yes	No	х	Depth (i	nches).			
Water table	present?	Yes	No	X	Depth (i	nches)		Ind	licators of wetland
Saturation n	resent?	Yes	No	X	Depth (i	nches):		hv	vdrology present? Y
(includes ca	pillary fringe)							,	
Describe rec	orded data (stres	m naure		aerial n	hotos pr	evious ir	spections) if av	ailable:	
Describered		an yauyt	, mormoring well	, aonai p	10103, pi				
Remarks:									
LOCATE			OCK WALL						

Project/Site TH 19 Marshall	City/Cou	nty: Ma	rshall/Lyon (County Samplin	ng Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	on	State:	MN	Samplin	g Point:	3CU
Investigator(s): Lewis, DeCesare		Sectio	on, Township	, Range:	S4, T111N,	, R41W
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (concave	e, convex, none):	Сс	oncave
Slope (%): Lat: 44°26'47.31"N	Lo	ng:	9547'22.80	"W Datum:		
Soil Map Unit Name51: La Prairie Loam			NWI C	lassification:	R2UBH,	R2UBG
Are climatic/hydrologic conditions of the site typical for this	time of the	year?	Y (If	no, explain in re	marks)	
Are vegetation X , soil , or hydrology	sig	nificantly	disturbed?	Are "no	rmal circumsta	inces"
Are vegetation , soil , or hydrology	nat	urally pro	blematic?		pre	esent? No
SUMMARY OF FINDINGS				(If needed, expl	ain any answe	rs in remarks.)
Hydrophytic vegetation present? N						
Hydric soil present? N		Is the sa	mpled area	within a wetland	1\$t	N
Indicators of wetland hydrology present? N		lf yes, opt	tional wetlan	d site ID:		
Remarks: (Explain alternative procedures here or in a sepa	arate report	.)				
		,				
The vegetation is	s artificia	lly plante	ed and ma	nicured.		
VEGETATION Use scientific names of plants						
	olute Do	minant	Indicator	Dominance Te	st Worksheet	
Tree Stratum (Plot size: 30' Radius) % C	Cover Sp	pecies	Staus	Number of Domi	nant Species	
1				that are OBL, FA	CW, or FAC:	1 (A)
2				Total Number	of Dominant	
3				Species Acro	ss all Strata:	2 (B)
4 <u></u>				Percent of Domi	nant Species	
5				that are OBL, FA	CW, or FAC:	50.00% (A/B)
Sanling/Shrub stratum (Plot size: 5' Radius)	0 = 10	lai Cover	-	Prevalence Inc	ex Workshee	t
1				Total % Cover	of:	
2				OBL species	30 x 1 =	30
3				FACW species	0 x 2 =	0
4				FAC species	0 x 3 =	0
5				FACU species	70 x 4 =	280
	0 = To	tal Cover		UPL species	$0 \times 5 =$	<u>0</u>
Herb stratum (Plot size: 5 Radius)					100 (A)	<u>310</u> (B)
1 Festuca arundinacea	<u>/0</u>	Y	FACU	Prevalence Ind	ex = B/A =	3.10
2 Lytinum sancana 3	50	<u> </u>		Hydrophytic V	egetation Indi	cators:
4				Rapid test f	or hydrophytic	vegetation
5				Dominance	test is >50%	
6				Prevalence	index is ≤3.0*	
7				Morphogica	al adaptations*	(provide
8				supporting	data in Remarl	ks or on a
9				separate sh	ieet)	
10	<u>00</u> – Tei			(explain): A	djacent to mar	naged plant
Woody vine stratum (Plot size: 30' Radius)	<u> </u>					
1				*Indicators of hydr present. u	ic soil and wetlan nless disturbed o	id hydrology must be r problematic
2				Hydrophyt	ic	
	0 = To	tal Cover		vegetation		
				present?	<u>N</u>	
Remarks: (Include photo numbers here or on a separate sh	neet)					

Profile Dese	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirn	n the absend	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				•
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Tex	ture	Remarks
0-12	7.5YR 4/4						SANDY CL	AY LOAM	
12-20	7.5YR 3/3						CLAY LOA	M	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicato	ors for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coa	st Prairie Re	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Darl	k Surface (S7	(IRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron	-Manganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A2	4)	Loa	my Mucł	ky Minera	al (⊢1)	Very	/ Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Othe	er (explain in	remarks)
	n Muck (ATU)	Surface		leted IVia	Surface	(E6)			
Dep	sk Dark Surface (50112CE			Sunace	(FO) CO (E7)	*1	stans of built	
San	dy Mucky Minera	L (S1)		lov Denr	Ark Sulla Assions	(F8)	^Indic bydr	ators of hydr	ophytic vegetation and weltand
5 cr	n Mucky Peat or I	Peat (S3)	ion Depi	63310113	(10)	nyui	ology must b	problematic
			/			1			P. 02.0
Restrictive	Layer (if observe	ed):					ما برام ا		
Type: Donth (incho	<i>vc)</i> :				-		Hydric	son presen	t? <u>N</u>
Deptil (inche					-				
	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum)	of one is	required: check :	all that ar	oply)		S	econdary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Eauna (B	13)	<u> </u>	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) -	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	OSIIS (B5) on Visible on Aeria	Imagen	(B7)	(C6) Thin Mu	ok Surfac	(C7)	•	FAC-Net	itrai Test (D5)
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	e (C7) ata (D9)			
Water-S	tained Leaves (B9)		Other (F	xolain in	Remarks)		
Field Obser	vations:	,					,		
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	vdrology present? N
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if	available:	
Remarks [.]									

Project/Site TH 19	Marshall		City/Cou	unty: N	/larshall/Lyon	County	Sampling	Date:	9/29/21
Applicant/Owner:	Minnesota D	epartment of Transportati	on	State:	MN		Sampling	Point:	3D
Investigator(s): Le	wis, DeCesare			Sec	tion, Townshi	p, Range:		S4, T11	1N, R41W
Landform (hillslope	e, terrace, etc.)	Hillslope		Local	relief (concav	ve, conve	k, none):		Concave
Slope (%):	Lat:	44°26'48.81"N	L	ong:	95°47'25.94	4"W	Datum:		
Soil Map Unit Nam	e51: La Prairie	e Loam			NWI	Classifica	tion:	R2U	BH, R2UBG
Are climatic/hydrole	ogic conditions	of the site typical for this	time of th	e year?	Y (lf no, expl	ain in rem	arks)	
Are vegetation	, soil	, or hydrology	si	gnificantl	ly disturbed?		Are "norn	nal circum	stances"
Are vegetation	, soil	, or hydrology	na	aturally p	roblematic?				present? Yes
SUMMARY OF	FINDINGS					(If need	ded, explai	in any ans	wers in remarks.)
Hydrophytic ve	getation prese	nt? Y							
Hydric soil pres	sent?	Y		Is the	sampled area	a within a	wetland?	?	Y
Indicators of w	etland hydrolog	gy present? Y		lf yes, c	optional wetlar	nd site ID:			
Remarks: (Explain	alternative pro	cedures here or in a sepa	arate repo	rt.)					
		·		,					
VEGETATION ·	Use scient	ific names of plants.							
		Abs	olute D	ominant	Indicator	Domin	ance Test	t Worksh	eet
Tree Stratum	(Plot size:	30' Radius) % 0	Cover S	species	Staus	Number	of Domina	ant Specie	5

1 Fraxinus americana	30	Y	FACU	that are OBL, FACW, or FAC: 2 (A)
23	- <u> </u>			Total Number of Dominant Species Across all Strata: <u>3</u> (B)
45				Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
Sapling/Shrub strature (Plot size: 5' Padius	<u></u>			Brovalanca Index Workshoot
1				Total % Cover of:
2				OBL species $0 \times 1 = 0$
3				FACW species $70 \times 2 = 140$
4				FAC species $0 \times 3 = 0$
5				FACU species 30 x 4 = 120
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)	_		Column totals 100 (A) 260 (B)
1 Phalaris arundinacea	50	Y	FACW	Prevalence Index = $B/A = 2.60$
2 Urtica dioica	20	Y	FACW	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
Marshaving starture (District) 200 Dedius	<u>, 70</u>	= I otal Cover		comm.
1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
Remarks: (Include photo numbers here or on a sepa	arate sheet)			

Profile Desc	cription: (Descri	ibe to th	e depth ne	eded	to docu	ment the	e indicat	or or confirr	n the absenc	e of indicators.)
Depth	Matrix		-	Red	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (mo	oist)	%	Type*	Loc**	Tex	ture	Remarks
0-6	7.5YR 5/1							SANDY LO	DAM	
6-20	GLEY 1 6/1							SANDY LO	DAM	
*Type: C = C	concentration, D =	= Depleti	on, RM = R	educe	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:							Indicate	ors for Proble	ematic Hydric Soils:
Hist	isol (A1)		Х	Sar	dy Gleye	ed Matrix	: (S4)	Coa	ast Prairie Red	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)			Sar	ndy Redo	ox (S5)		Dar	k Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)			Stri	pped Ma	trix (S6)		Iron	-Manganese	Masses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	ł)		Loa	my Mucł	ky Minera	al (F1)	Ver	y Shallow Dai	rk Surface (TF12)
Stra	tified Layers (A5)			Loa	my Gley	ed Matrix	(F2)	Oth	er (explain in	remarks)
2 cr	n Muck (A10)			Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11)	_Rec	lox Dark	Surface	(F6)			
	k Dark Sufface (A12)		-Dep	pleted Da	ark Surfa	ce (⊢7)	*India	cators of hydro	ophytic vegetation and weltand
San	dy Mucky Minera	I (S1) Deet (C2	、	_Rec	lox Depr	essions ((F8)	hydi	rology must b	e present, unless disturbed or
5 Cr	n Mucky Peat of I	Peat (53)							problematic
Restrictive	Layer (if observe	ed):								
Туре:						-		Hydrid	c soil presen	t? <u>Y</u>
Depth (inche	es):					-				
Remarks:										
HYDROLO	JGY									
Wetland Hy	drology Indicato	ors:								
Primary India	cators (minimum	of one is	required; c	neck a	all that ap	oply)		<u>S</u>	Secondary Ind	icators (minimum of two required)
X Surface	Water (A1)				Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)				True Aq	uatic Plar	nts (B14)		X Drainage	Patterns (B10)
X Saturatio	on (A3)				Hydroge	n Sulfide	Odor (C1	l)	Dry-Seas	son Water Table (C2)
X Water M	arks (B1) t Doposite (B2)				Oxidized	Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Drift Den	in Depusits (D2)				Presenc	a of Radi	iced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)				Recent I	ron Redu	iction in T	illed Soils	Geomorr	blic Position (D2)
Iron Dep	osits (B5)				(C6)	ion redu			FAC-Neu	Itral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)		Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)		Gauge o	or Well Da	ata (D9)			
X Water-St	ained Leaves (B9)			Other (E	xplain in	Remarks)		
Field Obser	vations:									
Surface wate	er present?	Yes	Х	No		Depth (i	nches):	0	.	
Water table	present?	Yes	X	No		Depth (i	nches):	0	Ind	licators of wetland
Saturation p	resent?	Yes	<u>X</u>	No		Depth (i	nches):	0	hy	drology present? Y
(includes ca	billary minge)									
Describe rec	orded data (strea	im gaug	e, monitorin	g well	, aerial p	notos, pr	revious ir	ispections), i	r available:	
Remarks:										

Project/Site TH 19 Marshall City	y/County: Marshall/Lyon County Sampling Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	State: MN Sampling Point: 3DU
Investigator(s): Lewis, DeCesare	Section, Township, Range: S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex, none): Concave
Slope (%): Lat: 44°26'48.59"N	Long: 9547'26.08"W Datum:
Soil Map Unit Name51: La Prairie Loam	NWI Classification: R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year? Y (If no, explain in remarks)
Are vegetation X, soil, or hydrology	significantly disturbed?
Are vegetation , soil , or hydrology	naturally problematic? present? No
SUMMARY OF FINDINGS	(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y	
Hydric soil present? N	Is the sampled area within a wetland? N
Indicators of wetland hydrology present? N	If yes, optional wetland site ID:
Remarks: (Evolain alternative procedures here or in a separate	report)
The vegetation is art	tificially planted and manicured.
VEGETATION Lico scientific names of plants	
VEGETATION Use scientific names of plants.	Dominance Test Workshoot
Tree Stratum (Plot size: 30' Radius) % Cover	Species Staus Number of Dominant Species
1 Juglans nigra 40	Y FACU 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
5	that are OBL, FACW, or FAC: 50.00% (A/B)
40	_= Total Cover
Sapling/Shrub stratur (Plot size: 5' Radius)	Prevalence Index Worksheet
Physocarpus opulitolius 60	
3	$= \qquad \qquad$
4	$= \frac{1}{1} = $
5	FACU species 40 x 4 = 160
60	= Total Cover UPL species 0 x 5 = 0
Herb stratum (Plot size: 5' Radius)	Column totals 100 (A) 280 (B)
1	Prevalence Index = B/A = 2.80
2	
3	Hydrophytic Vegetation Indicators:
4	Rapid test for hydrophytic vegetation
5	
7	
8	Morphogical adaptations* (provide supporting data in Remarks or on a
9	separate sheet)
10	(explain): Adjacent to managed plant
0	= Total Cover comm.
Woody vine stratum (Plot size: 30' Radius)	*Indicators of hydric soil and wetland hydrology must be
1	present, unless disturbed or problematic
2	Hydrophytic
0	= Total Cover present? Y
Remarke: (Include photo numbers here or on a separate shoot)	• • • •
וויטרומואס. נוווטועטב אווטנט וועווושבוס וובוב טו טוו מ ספאמומנפ לופפנ)	

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm tl	he absence of	indicators.)
Depth	Matrix		Red	dox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	e	Remarks
0-12	7.5YR 4/3						LOAMY SAN	D	
12-16	7.5YR 4/2						CLAY LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location: Pl	L = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Problema	tic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Redox	(A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark S	urface (S7) (L	RR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Ma	anganese Mas	ses (F12) (LRR K, L, R)
Hyc	lrogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	hallow Dark Si	urface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (explain in rem	arks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (⊦7)	*Indicate	ors of hydrophy	tic vegetation and weltand
Sar	idy Mucky Minera	I (S1) De et 700	、	lox Depr	essions ((F8)	hydrold	egy must be pre	esent, unless disturbed or
5 Cr	n Mucky Peat or	Peat (53)					prot	biematic
Restrictive	Layer (if observe	ed):							
Туре:					-		Hydric so	oil present?	N
Depth (inche	es):				-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Sec	ondary Indicate	ors (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface Soil (Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage Pat	terns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I)	Dry-Season V	Water Table (C2)
Water M	arks (B1)			Oxidized	I Rhizosp	heres on	Living Roots	_Crayfish Burr	ows (C8)
Sedimer	it Deposits (B2)			(C3)			(CA)	Saturation Vis	sible on Aerial Imagery (C9)
	t or Cruct (B4)			Presenc	ron Redu	uction in T			Position (D2)
Iron Den	in of Crust (B4)			(C6)	Ion Redu			EAC-Neutral	Test (D5)
Inundatio	on Visible on Aeria	l Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	. ,	Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wat	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicat	ors of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hydro	logy present? N
(includes ca	pillary fringe)								
Describe red	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if av	vailable:	
Remarks:									

I

WETLAND DETER	MINATIC	ON DATA	FORM - Mi	dwest Reg	gion		
Project/Site TH 19 Marshall	City/0	County: M	arshall/Lyon	County Sa	mpling Date:	9/29/21	
Applicant/Owner: Minnesota Department of Transpor	tation	State:	MN	Sar	mpling Point:	3E	
Investigator(s): Lewis, DeCesare		Sect	ion, Townshi ı	o, Range:	S4, T111	N, R41W	
Landform (hillslope, terrace, etc.): Hillslop	be	Local r	relief (concav	re, convex, no	one): (Concave	
Slope (%): Lat:44°26'48.81"N		Long:	95%47'24.96	6"W Da	itum:		
Soil Map Unit Name 51: La Prairie Loam			NWI	Classification	: R2UBI	H, R2UBG	
Are climatic/hydrologic conditions of the site typical for t	this time of	the year?	Y (I	f no, explain	in remarks)		
Are vegetation, soil, or hydrolog	ду	significantly	/ disturbed?	Are	e "normal circums	tances"	
Are vegetation, soil, or hydrolog	ду	naturally pr	oblematic?		p	resent? Ye	S
SUMMARY OF FINDINGS				(If needed,	, explain any ansv	vers in remar	ks.)
Hydrophytic vegetation present? Y							
Hydric soil present? Y		Is the s	ampled area	within a we	tland?	Y	
Indicators of wetland hydrology present? Y		lf yes, op	otional wetlar	nd site ID:			
Remarks: (Explain alternative procedures here or in a s	eparate re	port.)					
	oparatorio	p 0)					
VEGETATION Use scientific names of plant	c						
	Abaaluta	Dominant	Indicator	Dominanc	e Test Workshe		
Tree Stratum (Plot size: 30' Radius)	% Cover	Species	Staus	Number of [Dominant Species		
1 Fraxinus pennsylvanica	10	Y	FACW	that are OBL	L, FACW, or FAC:	2	(A)
2				Total Nu	mber of Dominant		、 /
3				Species	Across all Strata:	2	(B)
4				Percent of I	Dominant Species		
5				that are OBI	L, FACW, or FAC:	100.00%	(A/B)
	10 =	Total Cove	r				
Sapling/Shrub stratur (Plot size: 5' Radius)				Prevalence	e Index Workshe	et	
				Total % Co	over of:	0	
					$\frac{100}{2}$	= 0	
			·	FAC specie	$\frac{100}{2}$	= 200	
				FACU specie	$\frac{1}{10000000000000000000000000000000000$	= 0	
	0 =	Total Cove	r	UPL specie	es 0 x 5	= 0	
Herb stratum (Plot size: 5' Radius)				Column tot	tals 100 (A)	200	(B)
1 Phalaris arundinacea	90	Y	FACW	Prevalence	= Index = B/A =	2.00	. ,
2							
3				Hydrophy	tic Vegetation In	dicators:	
4				Rapid	test for hydrophyt	ic vegetation	
5				X Domina	ance test is >50%	, D	
6				X Prevale	ence index is ≤3.0)*	
7				Morpho	ogical adaptations	s* (provide	
8				suppor	rting data in Rema	arks or on a	
9				separa	ite sneet)		
10				(explai	n): Adjacent to m	anaged plant	

90 = Total Cover comm. Woody vine stratum (Plot size: 30' Radius) *Indicators of hydric soil and wetland hydrology must be 1 Hydrophytic 2 vegetation 0 = Total Cover present? Remarks: (Include photo numbers here or on a separate sheet)

present, unless disturbed or problematic

Y

(explain): Adjacent to managed plant

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absence	of indicators.)
Depth	Matrix		Red	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	е	Remarks
0-14	7.5YR 4/3						CLAY LOAM		
14-21	7.5YR 3/2						CLAY LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location:	PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Proble	matic Hydric Soils:
X Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Rede	ox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark S	Surface (S7)	(LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-M	anganese N	lasses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dark	Surface (TF12)
Stra	tified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in re	emarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thio	k Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicate	ors of hydro	phytic vegetation and weltand
San	dy Mucky Minera	I (S1)	Rec	lox Depr	essions ((F8)	hydrolo	ogy must be	present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3	5)					p	problematic
Restrictive	Layer (if observe	ed):							
Туре:					-		Hydric s	oil present	? <u>Y</u>
Depth (inche	es):				-				
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that ar	oply)		Sec	ondary Indic	cators (minimum of two required)
Surface	Water (A1)			Aquatic	Eauna (B	13)		Surface So	oil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	X	Drainage I	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seaso	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish B	urrows (C8)
Sedimer	t Deposits (B2)			(C3)				Saturation	Visible on Aerial Imagery (C9)
X Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) X	Stunted or	Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	_Geomorph	nic Position (D2)
Iron Dep	OSIts (B5) Na Visible on Aoria	Imagan	((P7)	(C6) Thin Mu	ok Surfoo			FAC-Neut	ral Test (D5)
Sparsely	Vegetated Conca	ve Surfa	(B7)	Gauge c	or Woll Da	e (C7)			
Water-S	tained Leaves (B9			Other (F	xolain in	Remarks)		
Field Obser	vations:	,		00. (=	, and the second se		/		
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Indi	cators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hyd	Irology present? Y
(includes ca	pillary fringe)				· ·	-			
Describe rec	orded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	spections), if a	vailable:	
Domortica									
Remarks:									

Project/Site TH 19 Marshall	City/County	/: Marshall/L	yon County	Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportati	on S	state:	MN	Sampling Point:	3EU
Investigator(s): Lewis, DeCesare		Section, Tow	nship, Range:	S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope		Local relief (co	ncave, convex	k, none):	Concave
Slope (%): Lat: 44°26'48.98"N	Long	g: 95°47'2	24.83"W	Datum:	
Soil Map Unit Name 51: La Prairie Loam		Ν	WI Classificat	tion: R2U	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this	time of the ye	ear? Y	(If no, expl	ain in remarks)	
Are vegetation X , soil , or hydrology	signit	ficantly disturbe	ed?	Are "normal circun	nstances"
Are vegetation , soil , or hydrology	natur	ally problemati	c?		present? No
SUMMARY OF FINDINGS			(If need	ded, explain any an	swers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls	the sampled	area within a	wetland?	Ν
Indicators of wetland hydrology present? N	lf	yes, optional w	etland site ID:		
Remarks: (Explain alternative procedures here or in a sena	arate report)				
internarios. (Explain alternative procedures here of in a sepa					
The vegetation i	is artificially	planted and	d manicured	l.	
VEGETATION Use scientific names of plants.			Domin	anaa Taat Warkah	aat
Abs Tree Stratum (Plot size: 30' Radius) % (Solute Dom	inant Indicat	or Domin	ance rest worksn	ieet
1			that are	OBL. FACW. or FA	es C: 0 (A)
2			Total	Number of Domina	nt
3			Spe	cies Across all Strat	a: 1 (B)
4			Percent	of Dominant Specie	es
5			that are	OBL, FACW, or FAC	C: 0.00% (A/B)
	0 = Total	Cover			
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevale	ence Index Works	heet
1			Total %	Cover of:	
2					1 = 0
3			- FACW	species $0 x$	2 = 0 3 = 0
5			- FACU S	species $\frac{0}{100}$ x	4 = 400
	0 = Total	Cover	UPL sp	pecies 0 x	5 = 0
Herb stratum (Plot size: 5' Radius)			Columr	n totals 100 (A	A) 400 (B)
1 Festuca arundinacea	90 N	r FACL	J Prevale	ence Index = B/A =	4.00
2 Trifolium repens	10 1	N FACL	J		
3			Hydrop	ohytic Vegetation	Indicators:
4			Ra	pid test for hydroph	ytic vegetation
5			Do	minance test is >50)%
6			Pre	evalence index is ≤	3.0*
7			Mo	rphogical adaptatio	ns* (provide
8			sup	oporting data in Rer	narks or on a
9 10				valaie Sileer	managed plant
	00 = Total	Cover	cor	nm.	manayeu plant
Woody vine stratum (Plot size: 30' Radius)			*Indiants	ara of buddio ocil ond w	
1			indicato	present, unless disturb	ed or problematic
2			Hy	drophytic	
	0 = Total	Cover	veç	getation	
			pre	esent? N	_
Remarks: (Include photo numbers here or on a separate sl	heet)				

SOIL

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of	indicators.)
Depth	Matrix		Red	dox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-5	7.5YR 4/2						SANDY LOAM		
5-17	7.5YR 3/2						LOAM		
17-21	7.5YR 4/1						SANDY CLAY I	OAM	
*Tvpe: C = 0	Concentration. D =	= Deplet	on. RM = Reduce	ed Matrix	. MS = N	lasked S	and Grains. **	Location: PL	_ = Pore Lining, M = Matrix
Hvdric Sc	oil Indicators:	2 00.01			.,		Indicators fo	r Problemat	tic Hvdric Soils:
Hist	tisol (A1)		Sar	dv Gleve	ed Matrix	(S4)	Coast Pra	airie Redox ((A16) (LRR K. L. R)
Hist	tic Epipedon (A2)		Sar	dv Redo	ox (S5)	(01)	Dark Surf	face (S7) (LI	RR K. L)
Bla	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Man	ganese Mas	ses (F12) (LRR K, L, R)
Hvo	Iroaen Sulfide (A4	1)	Loa	mv Mucl	kv Minera	al (F1)	Verv Sha	່ llow Dark Sເ	urface (TF12)
Stra	atified Lavers (A5))	Loa	mv Glev	ed Matrix	k (F2)	Other (ex	plain in rema	arks)
2 cr	m Muck (A10)	,	Der	pleted Ma	atrix (F3)	- (/)
Der	leted Below Dark	Surface	e (A11) Red	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Der	leted Da	ark Surfa	(* -) ce (F7)	*Indicators	of hydrophy	tic vegetation and weltand
Sar	dv Muckv Minera	l (S1)	Rec	lox Depr	essions	(F8)	hvdrology	must be pre	esent, unless disturbed or
5 cr	n Muckv Peat or I	Peat (S3				(nyarology	prob	plematic
		1) -	,			1		1	
Restrictive	Layer (If observe	ea):							N
Type: Danth (in sha					-		Hydric soli	present?	N
Depth (Inche	es):				-				
Remarks:									
	drology Indicato	vre:							
Drimony Indi		of one is	required: check	all that a	nnhu)		Secon	don / Indiaata	ore (minimum of two required
Primary Indi		or one is	required; check a	<u>all that a</u>	<u>ppiy)</u> Faura (D	40)	Second	dary indicato	ors (minimum of two required
Surface	vvater (A1)				Fauna (B	13) to (P14)		Surface Soll C	JIACKS (BO)
Saturatio	$(\Delta 3)$			Hydroge	ualic Fiai on Sulfide	Odor (C1) — [Jru-Season V	Vater Table (C2)
Water M	arks (B1)			Ovidized	Rhizoen		Living Roots (Cravfish Burr	$\frac{1}{2} \cos(CR)$
Sedimer	nt Deposits (B2)			(C3)	1111203p			Saturation Vis	sible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted or Str	ressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	uction in T	illed Soils	Geomorphic F	Position (D2)
Iron Dep	osits (B5)			(C6)			—F	AC-Neutral	Test (D5)
Inundati	on Visible on Aeria	I Imager	y (B7)	Thin Mu	ck Surfac	ce (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wat	er present?	Yes	No	Х	Depth (i	inches):			
Water table	present?	Yes	No	Х	Depth (i	inches):		Indicate	ors of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	inches):		hydrol	logy present? N
(includes ca	pillary fringe)								
Describe red	corded data (strea	am gaug	e, monitoring well	, aerial p	hotos, pr	revious ir	spections), if avail	able:	
Domorkov									
NEAR L	GHT POLE								

Proiect/Site TH 19 Marshall	Citv/County: M	arshall/Lvon Co	untv Sampling Date: 9/2	29/21
Applicant/Owner: Minnesota Department of Transportation	on State:	MN	Sampling Point:	3F
Investigator(s): Lewis, DeCesare	Secti	on. Township. I	Range: S4. T111N. R41	W
Landform (hillslope, terrace, etc.): Hillslope	Local r	elief (concave.	convex. none): Concay	/e
Slope (%): Lat: 4426'47.86"N	Long:	95°47'22.29"V	/ Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI Cla	ssification: R2UBH_R2L	JBG
Are climatic/hydrologic conditions of the site typical for this	time of the year?	Y (lf n	o, explain in remarks)	
Are vegetation soil or hydrology	significantly	disturbed?		. 11
Are vegetation soil or hydrology	naturally pro	oblematic?	Are normal circumstances	?Yes
SUMMARY OF FINDINGS			If needed, explain any answers in	remarks.)
Hydrophytic vegetation present? Y				,
Hvdric soil present?	Is the s	ampled area w	ithin a wetland?	
Indicators of wetland hydrology present? Y	lf ves. or	tional wetland	site ID:	_
Remarks. (Explain alternative procedures here of in a sepa	arate report.)			
VEGETATION Use scientific names of plants.			Deminente T e et Mienkente et	
Abs Tree Stratum (Plot size: 30' Radius) % (colute Dominant	Indicator Staus		
1	over opecies	the states of th	number of Dominant Species	(A)
2		["	Total Number of Dominant	
3			Species Across all Strata: 1	(B)
4			Percent of Dominant Species	
5		tł	hat are OBL, FACW, or FAC: 100.0	00% (A/B)
	0 = Total Cover			
<u>Sapling/Shrub stratum</u> (Plot size: <u>5' Radius</u>)			Prevalence Index Worksheet	
1			lotal % Cover of:	0
2		I `	$\frac{100}{2} \times 1 = \frac{100}{2} \times $	200
4			FAC species $0 \times 3 =$	0
5		i	FACU species $0 \times 4 =$	0
	0 = Total Cover		JPL species 0 x 5 =	0
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A)	200 (B)
1 Phalaris arundinacea 1	00 Y	FACW	Prevalence Index = $B/A = 2.0$	00
2				
3			Hydrophytic Vegetation Indicato	ors:
4		.	Rapid test for hydrophytic vege	etation
5		-	X Dominance test is >50%	
6		-	X Prevalence index is $\leq 3.0^{\circ}$	
8			Morphogical adaptations* (prov	vide
9			supporting data in Remarks of separate sheet)	ona
10		-	(explain): Adjacent to managed	d plant
1	00 = Total Cover		comm.	
Woody vine stratum (Plot size: 30' Radius)		-	*Indicators of hydric soil and wetland hvd	rology must be
1			present, unless disturbed or prob	lematic
2			Hydrophytic	
	0 = Total Cover		present? Y	
Pomorko: (Includo photo numbero horo er en e comorte ab	anot)		·····	

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

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth Matrix Redox Features											
(Inches)	Color (moist)	%	Color (moi	st) %	6 Type*	Loc**	Textur	е	Remarks		
			· · ·						Unable to obtain sample		
									safely		
									Salely.		
						_					
*Type: C = 0	Concentration, D =	= Depleti	on, RM = Re	duced Ma	atrix, MS = I	Masked S	and Grains.	**Location:	PL = Pore Lining, M = Matrix		
Hydric So	il Indicators:						Indicators	for Problem	natic Hydric Soils:		
Hist	tisol (A1)		Х	Sandy G	leyed Matri	x (S4)	Coast	Prairie Redo	x (A16) (LRR K, L, R)		
Hist	tic Epipedon (A2)			Sandy R	edox (S5)	()	Dark S	Surface (S7)	(LRR K, L)		
Bla	ck Histic (A3)			Stripped	Matrix (S6)		Iron-M	langanese M	asses (F12) (LRR K, L, R)		
Hvo	drogen Sulfide (A4	4)		Loamy N	lucky Miner	ral (F1)	Verv S	Shallow Dark	Surface (TF12)		
Stra	atified Lavers (A5))		Loamy (leved Matri	ix (F2)	Other	(explain in re	marks)		
2 cr	m Muck (A10)	·		Depleter	Matrix (F3)		(0)(p)(a)) 1110			
	leted Below Dark	Surface	(A11)	Redox C	ark Surface	, - (F6)					
	ck Dark Surface (Δ12)			Dark Surfa	ace (F7)	*ladiaat	ana af budnan			
Sar	dy Mucky Minera	L (S1)		Redox C		(F8)	huicate	ors of nyarop	nytic vegetation and weitand		
5 cr	m Mucky Peat or	n (31) Doot (83	·	INCOUN L	epressions	(10)	Tiyurut	Jgy must be p	oblematic		
	II MUCKY I Eat OF	i eat (00)					þi	obiematic		
Restrictive	Layer (if observe	ed):									
Туре:							Hydric s	oil present?	<u>Y</u>		
Depth (inche	es):										
Remarks:											
Dotormir	nation board of	a aimila	r opil opmo		2 with a	imilary	actation and	budrology			
Determin	lation based of	i simia	i soli samp		3, with s		egetation and	nyurology.			
HIDROLU	JGT										
Wetland Hy	drology Indicato	ors:									
Primary Indi	cators (minimum	of one is	required; ch	eck all the	at apply)		<u>Sec</u>	ondary Indica	ators (minimum of two required)		
Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6)											
High Water Table (A2) True Aquatic Plants (B14) X Drainage Patterns (B10)											
X Saturation	X Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)							n Water Table (C2)			
X Water M	X Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8)										
Sedimer	Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9)										
Drift Dep	oosits (B3)			Pres	ence of Rec	educed Iron (C4) Stunted or Stressed Plants (D1)					
Algal Ma	at or Crust (B4)			Rec	ent Iron Red	eduction in Tilled Soils Geomorphic Position (D2)					
Iron Dep	Iron Deposits (B5) (C6) FAC-Neutral Test (D5)										
Inundatio	Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)										
Sparsely	Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9)										
Water-S	Water-Stained Leaves (B9) Other (Explain in Remarks)										
Field Obser	vations:										
Surface wat	er present?	Yes	Ν	o >	C Depth	(inches):					
Water table	present?	Yes	XN	o	Depth	(inches):	9	Indic	ators of wetland		
Saturation p	resent?	Yes	XN	0	Depth	(inches):	9	hydi	ology present? Y		
(includes capillary fringe)											
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:											
Remarks:											

Project/Site TH 19 Marshall Cit	y/County:	Marshall/Lyon	n County	Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MN	۷ S	Sampling Point:	3FU
Investigator(s): Lewis, DeCesare	Section, Townsh	on, Township, Range: S4, T111N, R41W			
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex,	none):	Concave
Slope (%): Lat: 44°26'47.90"N	Long:	95°47'22.1	6"W [Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classificatio	on: R2UI	3H, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the yea	r? Y ((If no, explai	in in remarks)	
Are vegetation X , soil , or hydrology	significa	antly disturbed?	A	Are "normal circum	istances"
Are vegetation , soil , or hydrology	naturall	y problematic?			present? No
SUMMARY OF FINDINGS	_		(If neede	d, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls ti	ne sampled are	a within a v	wetland?	N
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	and site ID:		
Remarks: (Explain alternative procedures here or in a separate	report)				
	report.)				
The vegetation is ar	tificially p	lanted and m	anicured.		
VECETATION Line acientific names of plants					
VEGETATION Use scientific names of plants.	Densis		Domina	nco Tost Worksh	oot
ADSOlute Tree Stratum (Plot size: 30' Radius) % Cove	e Domina r Specie	ant indicator	Number of	of Dominant Spacia	
1			that are O	BL, FACW, or FAC	s :: 0 (A)
2			Total N	Number of Dominar	nt ()
3			Speci	es Across all Strata	a: 1 (B)
4			Percent c	of Dominant Specie	s
5			that are O	BL, FACW, or FAC	: <u>0.00%</u> (A/B)
	= Total C	over		<u> </u>	
Sapling/Shrub stratum (Plot size: 5' Radius)				1ce Index Worksh	neet
2			OBL spe		1 - 0
3	_		FACW s	$\frac{1}{10000000000000000000000000000000000$	r = 0
4	_		FAC spe	cies 0 x 3	3 = 0
5	_		FACU sp	pecies 100 x 4	4 = 400
0	= Total C	over	UPL spe	cies 0 x 5	5 = 0
Herb stratum (Plot size: 5' Radius)	_		Column	totals 100 (A) <u>400</u> (B)
1 Festuca arundinacea 100	Y	FACU	Prevalen	ice Index = B/A =	4.00
2					
3			Hydroph	ytic Vegetation I	ndicators:
4			Rapi	d test for hydrophy	vtic vegetation
5			Dom	inance test is >50	% □ 0*
7	_				* /
8	_		IVIOrp	onogical adaptation	ns" (provide narks or on a
9			sepa	arate sheet)	
10			(exp	lain): Adjacent to r	nanaged plant
100	= Total C	over	com	m.	
Woody vine stratum (Plot size: 30' Radius)			*Indicators	s of hydric soil and we	etland hydrology must be
1			pr	esent, unless disturbe	ed or problematic
2			Hyd	rophytic	
0	= I otal C	over	pres	sent? N	
Remarks: (Include photo numbers here or on a separate sheet)	1				_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Depth <u>Matrix</u> <u>Redox Features</u>						·			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks	
0-20	7.5YR 4/6						CLAY LOAN	M		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix	
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:	
Hist	tisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coas	st Prairie Ree	dox (A16) (LRR K, L, R)	
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)	Dark Surface (S7) (LRR K, L)				
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)	
Hyc	Irogen Sulfide (A4	ł)	Loa	my Mucł	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)	
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Othe	r (explain in	remarks)	
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)					
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)				
Thio	ck Dark Surface (A12)	Dep	leted Da	rk Surfa	ce (F7)	*Indica	ators of hydr	ophytic vegetation and weltand	
Sar	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydro	ology must b	e present, unless disturbed or	
5 cr	m Mucky Peat or	Peat (S3)						problematic	
Restrictive	Layer (if observe	ed):								
Type:							Hydric	soil presen	t? N	
Depth (inche	es):				•					
Remarks:					-					
HYDROLO	DGY									
Wetland Hy	drology Indicato	ors:								
Primary Indi	cators (minimum	of one is	required: check a	all that ar	(vlac		Se	condary Ind	icators (minimum of two require	
Surface	Water (A1)			Aquatic I	Eauna (B	13)	<u></u>	Surface 9	Soil Cracks (B6)	
High Water Table (A2)					uatic Plar	nts (B14)	-	Drainage	Patterns (B10)	
Saturatio	Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)						son Water Table (C2)			
Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8)						Burrows (C8)				
Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery							n Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)							or Stressed Plants (D1)			
Algal Ma	Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2)							phic Position (D2)		
Iron Dep	Iron Deposits (B5) (C6) FAC-Neutral Test (D5)									
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)	_			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wat	er present?	Yes	No	X	Depth (i	nches):				
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	licators of wetland	
Saturation p	resent?	res	NO	X	Depth (I	ncnes):		ny	arology present? N	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks:										

Proiect/Site TH 19 Marshall	City/	County: Ma	arshall/Lyon	County Sampling Date: 9/29/21				
Applicant/Owner: Minnesota Department of Transp	Sampling Point: 3G							
Investigator(s): Lewis, DeCesare		Section, Township, Range: S4. T111N. R41W						
Landform (hillslope, terrace, etc.): Hillsl	ope	Local re	elief (concav	/e, convex, none): Concave				
Slope (%): Lat: 44°26'47.15"	N	Long:	95%47'20.4	9"W Datum:				
Soil Map Unit Name51: La Prairie Loam			NWI	Classification: R2UBH, R2UBG				
Are climatic/hydrologic conditions of the site typical fo	r this time of	f the year?	Y (If no, explain in remarks)				
Are vegetation, soil, or hydrol	ogy	significantly disturbed? Are "normal circumstances"						
Are vegetation, soil, or hydrol	ogy	naturally pro	blematic?	present? Yes				
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)						
Hydrophytic vegetation present?								
Hydric soil present? Y	-	Is the sampled area within a wetland?						
Indicators of wetland hydrology present? Y	-	If yes, optional wetland site ID:						
VEGETATION Use scientific names of plants.								
	Absolute	Dominant	Indicator	Dominance Test Worksheet				
T <u>ree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)				
23				Total Number of Dominant Species Across all Strata: 1 (B)				
4				Percent of Dominant Species				
5				that are OBL, FACW, or FAC: 100.00% (A/B)				
	0 =	= Total Cover						
Sapling/Shrub straturr (Plot size: 5 Kaulus)				Total % Cover of:				
2		·		OBL species $0 \times 1 = 0$				
3		·		FACW species $100 \times 2 = 200$				
4				FAC species $0 \times 3 = 0$				
5				FACU species 0 x 4 = 0				
	0 =	= Total Cover		UPL species $0 \times 5 = 0$				
Herb stratum (Plot size: <u>5' Radius</u>)	100		E 1011/	Column totals 100 (A) 200 (B)				
1 Phalaris arundinacea 2	100	Y	FACW	Prevalence Index = B/A = 2.00				
3				Hydrophytic Vegetation Indicators:				
4		·		Rapid test for hydrophytic vegetation				
6				X Prevalence index is $\leq 3.0^*$				
7		·		Morphogical adaptations* (provide				
9		·		supporting data in Remarks or on a separate sheet)				
10				(explain): Adjacent to managed plant				
	100	= Total Cover		comm.				
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic				
2				Hydrophytic				
	0	= Total Cover		vegetation				
Remarks: (Include photo numbers here or on a separa	ate sheet)							
Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicate	or or confirm the a	bsence of indicators.)
--	---------------------	-----------	--------------------	------------	--------------------------	------------------	------------------------	---
Depth	Matrix		Red	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-15	7.5YR 5/1						SANDY LOAM	
15-21	7.5YR 2.5/1						SANDY CLAY LO	AM
10 21	7.011(2.0/1						0/1101 02/11 20	
Profile Description: Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Mattix Restaves (Inches) Color (moist) % Type* Loc** Texture Remarks 0-15 7.5YR 2.5/1 Image: Color (moist) % Type* Loc** Texture Remarks 15-21 7.5YR 2.5/1 Image: Color (moist) % SANDY LOAM Image: Color (moist) % 15-21 7.5YR 2.5/1 Image: Color (moist) % Color (moist) % Color (moist) % 15-21 7.5YR 2.5/1 Image: Color (moist) % Color (moist) % Color (moist) % 15-21 7.5YR 2.5/1 Image: Color (moist) % Color (moist) % Image: Color (moist) % Image: Color (moist) % Image: Color (moist) M Image: Color (moist) M Image: Color (moist) M Image: Color (moist) M Image: Color (moist) Image: Color (moist) <td< td=""></td<>								
*Type: C - C	Concentration D -	– Denleti	on RM - Reduce	d Matrix	MS – M	laskod S	and Grains **! (L Decation: PL – Pore Lining, M – Matrix
Hydric So	il Indicators:	- Depieti			, 1010 – 10		Indicators for	Problematic Hydric Soils:
Hist			Sar	ndv Gleve	d Matrix	(S4)	Coast Prair	ie Redox (A16) (I RR K, I , R)
Hist	ic Eninedon (A2)		Oar	dy Redo	v (S5)	(04)	Dark Surfa	ce (S7) (I RR K I)
Blac	rk Histic (A3)		Stri	nned Ma	triv (S6)		Iron-Manga	inese Masses (F12) (LRR K. L. R)
	Irogen Sulfide (A4	1)	Loa	my Muck	(V Minera	al (F1)	Very Shallo	w Dark Surface (TE12)
Stra	atified Lavers (A5)	•)	Loa	my Glev	ed Matrix	(F2)	Other (expl	ain in remarks)
2 cr	n Muck (A10)		Der	pleted Ma	atrix (E3)	(12)		
	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)		
	ck Dark Surface (A12)	Der	pleted Da	rk Surfa	(F7)	*Indicators o	f hydrophytic vogotation and woltand
X San	dv Mucky Minera	l (S1)	Bec	lox Depr	essions ((F8)	hydrology n	nust be present unless disturbed or
5 cr	n Muckv Peat or I	Peat (S3)	.on 2 op.		()	nyarology n	problematic
			,					•
Tupo	Layer (If observe	ea):					Hydria cail p	rocont2 V
Type. Donth (incho	<i>vc)</i> :				-		Hydric soli p	
Deptil (inche					•			
HYDROLO	DGY							
Wetland Hy	drology Indicate	nrs:						
Drimony India	atoro (minimum	of one is	roquired: abook	all that a			Seconda	ruladiostoro (minimum of two roquiro
Surface		or one is	required, check a		<u>opiy)</u> Founo (B	12)	<u>Seconda</u>	rface Soil Crocks (R6)
Surface	tor Table (A1)				Fauna (B	13) stc (B14)		nace Soli Clacks (B0)
Saturatio	$(\Delta 3)$			Hydroge	n Sulfida	Odor (C1		-Season Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizoso	heres on	Living Roots Cr	avfish Burrows (C8)
Sedimen	t Deposits (B2)			(C3)	11112000		Sa	turation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) X Stu	inted or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Ge	omorphic Position (D2)
Iron Dep	osits (B5)			(C6)			FA	C-Neutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	r (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfac	ce (B8)	Gauge o	or Well Da	ata (D9)		
X Water-St	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	X	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		nydrology present? Y
(includes ca	piliary minge)		·. ·					
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious in	spections), if availab	ble:
Remarks:								

Project/Site TH 19 Marshall C	ity/County:	Marshall/Lyo	n County Samplin	ig Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Sta	ate: M	N Samplin	g Point:	3GU
Investigator(s): Lewis, DeCesare		Section, Townsł	nip, Range:	S4, T111N	, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lc	ocal relief (conca	ave, convex, none):	C	oncave
Slope (%): Lat: 4426'47.40"N	Long:	95°47'20.	55"W Datum:		
Soil Map Unit Name51: La Prairie Loam		NW	I Classification:	R2UBH	, R2UBG
Are climatic/hydrologic conditions of the site typical for this tim	e of the yea	ar? Y	(If no, explain in rer	narks)	
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "noi	mal circumsta	ances"
Are vegetation , soil , or hydrology	natural	ly problematic?		pre	esent? No
SUMMARY OF FINDINGS	—		(If needed, expl	ain any answe	ers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls t	he sampled are	ea within a wetland	!?	N
Indicators of wetland hydrology present? N	lf ye	es, optional wetla	and site ID:		
Remarks: (Explain alternative procedures here or in a separat	e report)				
	0 100011.)				
The vegetation is a	artificially p	planted and m	nanicured.		
VEGETATION Use scientific names of plants					
	te Domini	ant Indicator	Dominance Te	st Worksheef	
Tree Stratum (Plot size: 30' Radius) % Cov	er Specie	es Staus	Number of Domin	ant Species	
1	·		that are OBL, FA	CW, or FAC:	0 (A)
2			Total Number	of Dominant	
3			Species Acro	ss all Strata:	1 (B)
4			Percent of Domin	nant Species	
5			that are OBL, FA	CW, or FAC:	0.00% (A/B)
0	= I otal C	Cover	Dravalance Ind	ay Warkshar	4
<u>Sapling/Shrub straturr</u> (Plot size: <u>5 Radius</u>)			Total % Cover of	ex worksnee	ŧ
2			OBL species	0 x 1 =	0
3			FACW species	$\frac{0}{0} x^2 =$	0
4			FAC species	10 x 3 =	30
5			FACU species	90 x 4 =	360
0	= Total C	Cover	UPL species	0 x 5 =	0
<u>Herb stratum</u> (Plot size: 5' Radius)			Column totals	100 (A)	<u> 390 </u> (B)
1 Festuca arundinacea 90	Y	FACU	Prevalence Inde	ex = B/A =	3.90
2 Polygonum aviculare 10	<u>N</u>	FAC			
3			Hydrophytic Ve	er budrophutic	Icators:
5			Dominance	test is >50%	vegetation
6			Prevalence	index is ≤3.0*	
7			Morphogica	l adaptations*	(provide
8			supporting of	data in Remar	ks or on a
9			separate sh	eet)	
10			(explain): A	djacent to mar	naged plant
	= Total C	Cover	comm.		
1			*Indicators of hydri present, ur	c soil and wetlar less disturbed o	nd hydrology must be or problematic
2			Hydrophyti	С	
0	= Total C	Cover	present?	N	
Remarks: (Include photo numbers here or on a separate shee	t)				
	-,				

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absenc	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	re	Remarks
0-14	7.5YR 2.5/1						CLAY		
14-21	7.5YR 3/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Rec	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark S	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-M	langanese	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicate	ors of hydro	ophytic vegetation and weltand
San	idy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydrolo	ogy must be	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric s	oil present	t? N
Depth (inche	es):				-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary India	cators (minimum	of one is	required: check a	all that a	(vlac		Sec	ondarv Ind	icators (minimum of two required)
Surface	Water (A1)	01 0110 10	in quine al anoant	Aquatic	 Fauna (B	13)	000	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C)	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimen	t Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted c	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	tral Test (D5)
	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
vvater-Si	tained Leaves (B9)		Other (E	xplain in	Remarks)	-	
Field Obser	vations:	V	NI -	V	Degth (n ala c = \;			
Surrace wate	er present?	Yes		X	Depth (I	ncnes):		ا- مرا	iontoro of wotland
Soturation p	present?	Yes			Depth (i	ncnes):		ina by	drology prosent?
(includes car	nillary fringe)	165	NO	^		nunes).		iiy	
Describe rec	plinding minige)	maqua	monitoring well	ooriol n	hotos pr		anastions) if a	vailabla:	
Describe rec		in gauge	e, monitoring weil	, aenai p	notos, pr	evious ir	ispections), if av	valiable.	
Remarks:									

I

WETLAND DETE	RMINATIO	ON DATA F	Form - Mi	dwest F	Region				
Project/Site TH 19 Marshall	City/0	County: Ma	arshall/Lyon	County	Sampling Date:	9/29/21			
Applicant/Owner: Minnesota Department of Transport	ortation	State:	MN		Sampling Point:	3H			
Investigator(s): Lewis, DeCesare		Secti	on, Townshij	o, Range:	S4, T11	I1N, R41W			
Landform (hillslope, terrace, etc.): Hillsl	оре	Local r	elief (concav	e, convex	, none):	Concave			
Slope (%): Lat: 44°26'47.03"	N	Long:	95%17'19.75	5"W	Datum:				
Soil Map Unit Name51: La Prairie Loam			NWI	Classificat	ion: R2U	BH, R2UBG			
Are climatic/hydrologic conditions of the site typical for	r this time of	f the year?	Y (I	f no, expla	ain in remarks)				
Are vegetation, soil, or hydrol	ogy	significantly	disturbed?		Are "normal circun	nstances"			
Are vegetation, soil, or hydrole	ogy	naturally pro	oblematic?			present? Ye	es		
SUMMARY OF FINDINGS				(If need	ed, explain any an	swers in rema	rks.)		
Hydrophytic vegetation present? Y									
Hydric soil present? Y		Is the sa	ampled area	within a	wetland?	Y			
Indicators of wetland hydrology present? Y		If yes, optional wetland site ID:							
Remarks: (Explain alternative procedures here or in a	separate re	port.)							
VEGETATION Use scientific names of plan	nts.			-					
	Absolute	Dominant	Indicator	Domina	ance Test Worksh	leet			
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>)	% Cover	Species	Staus	Number	of Dominant Specie	es d	()		
1				that are (OBL, FACVV, or FAC	J: 1	(A)		
2				Total	Number of Dominal	nt a: 1	(B)		
4				Doroont	of Dominant Spacia	u	(D)		
5				that are (OBL, FACW, or FAC	75 C: 100.00%	(A/B)		
	0 =	= Total Cover					. ,		
Sapling/Shrub stratum (Plot size: 5' Radius)				Prevale	ence Index Works	heet			
1				Total %	Cover of:				
2				OBL sp	ecies 0 x	1 = 0			
3				FACW	species <u>90</u> x	2 = 180			
4				FAC sp	ecies <u>10 x</u>	3 = 30			
5		- Total Covor			$\frac{1}{2}$	4 = 0			
Herb stratum (Plot size: 5' Radius)				Column	totals 100 (A	$\frac{3}{210}$	(B)		
1 Phragmites australis	90	V	FACW	Prevale	$\frac{1}{1}$	2 10	(=)		
2 Apocvnum cannabinum	10	 N	FAC	Tievale		2.10			
3				Hydrop	hytic Vegetation	Indicators:			
4				Rap	pid test for hydroph	vtic vegetatior	n		
5				X Dor	minance test is >50)%			
6				X Pre	valence index is ≤	3.0*			
7				Mor	rphogical adaptatio	ons* (provide			
8				sup	porting data in Rer	marks or on a			
9				sep	arate sheet)				
10	100	Total Caura	<u></u>	(exp	plain): Adjacent to	managed plan	t		
Woody vine stratum (Plot size: 30' Radius)	100 =	= i otal Cover							
$\frac{1}{10000}$ (FIULSIZE. 30 RAUNS)				*Indicato	irs of hydric soil and w	etland hydrology	must he		

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

0

= Total Cover

1

2

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

Y

Hydrophytic

vegetation

present?

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of in	ndicators.)
Depth	Matrix		Ree	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-18	7.5YR 6/2						CLAY		
18-22	7 5YR 5/2						CLAY		
10 22	1.011(0/2						00/11		
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Mature Redox. Features Texture Remarks 0-18 7.5YR 5/2 Image: Color (moist) % Type* Loc** Texture Remarks 18-22 7.5YR 5/2 Image: Color (moist) % Type* Loc** CLAY Image: Color (moist) 18-22 7.5YR 5/2 Image: Color (moist) % Type* Loc** CLAY Image: Color (moist) 19-22 7.5YR 5/2 Image: Color (moist) Color (moist) Color (moist) Image: Color (Color									
*Type: C = C	Concontration D.	- Doploti	on PM - Poduc	d Matrix		laskod S	and Grains **	Location: PL	- Poro Lining, M - Matrix
Hydric So	il Indicators:	= Depieti			, 1013 = 10	laskeu S	Indicators for	r Problematic	
Y Hist	isol (A1)		Sar	dy Glave	ad Matrix	(\$4)	Coast Pra	airie Redox (A	
	isol (AT) is Eninodon (A2)				50 Mailin v (95)	. (34)	Dark Surf		$\mathbf{P} \mathbf{K} \mathbf{I}$
	High High (A2)			npod Mo	riv (SS)			ace (Or) (ERI	es (F12) (IRR K I R)
	rogen Sulfide (A)	I)		ppeu Mucl	(UIX (SO)	al (E1)	Very Shal	llow Dark Surf	iace (TE12)
Stra	atified Lavers (A5)	,	Loa		od Matrix	(E2)		nlain in remar	ke)
	n Muck (A10)		L08	aleted Ma	otriv (E3)	((Z)		piain in ternai	K3)
	leted Below Dark	Surface	(A11) Re(lov Dark	Surface	(E6)			
	rk Dark Surface (Δ12)			ark Surfa	(F7)	*la dia ata ra		
San	dy Mucky Minera	L (S1)	Ber	dox Denr	essions ((F8)	hydrology	or nyarophytic	ent unless disturbed or
5 cr	n Mucky Peat or	Peat (S3			00010110	(10)	nyurology	proble	ent, uness disturbed of
			/			T		p. 60.6	
Restrictive	Layer (if observe	ed):					11		N .
Type:					-		Hydric soli	present?	Y
Depth (Inche					-				
)GY								
Wetland Hy	drology Indicate	vre.							
Drimory Indi		ns. of one is	roquirod, obook	oll that a	anh ()		Coord	dow (lodiootow	
Primary mul		or one is	required, check		<u>opiy)</u> Feure (P	10)	Second	Dary Indicators	s (minimum of two required)
	tor Table (A2)				Fauna (B uotio Plor	13) stc (B14)		Viriace Soll Cra	acks (B6)
	(A3)			Hydroge	ualic Fiai	Odor (C1			$\frac{115}{2} (D10)$
Water M	arks (B1)			Ovidized	l Rhizosn		Living Roots	ravfish Burrow	(C8)
Sedimen	t Deposits (B2)			(C3)	11112030			Saturation Visib	ble on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) S	Stunted or Stre	ssed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils G	Geomorphic Po	sition (D2)
Iron Dep	osits (B5)			(C6)			—F	AC-Neutral Te	est (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
X Water-St	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicator	rs of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hydrolo	gy present? Y
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if availa	able:	
Domorkov									
ivenialks.									

Project/Site TH 19 Marshall Cit	y/County:	Marshall/Lyon	County	Sampling Date:	9/29/21
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	1 5	Sampling Point:	3HU
Investigator(s): Lewis, DeCesare	s	ection, Townshi	ip, Range:	S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (conca	ve, convex,	, none):	Concave
Slope (%): Lat: 44°26'47.28"N	Long:	95%47'19.7	3"W	Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classificati	on: R2U	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year	·? Y (If no, expla	in in remarks)	
Are vegetation X , soil , or hydrology	significa	antly disturbed?		Are "normal circum	nstances"
Are vegetation , soil , or hydrology	naturally	y problematic?			present? No
SUMMARY OF FINDINGS	-		(If neede	ed, explain any ans	swers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	ls th	e sampled area	a within a	wetland?	Ν
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separate	report)				
	report.)				
The vegetation is ar	tificially p	lanted and m	anicured.		
VECETATION Line acientific names of plants					
VEGETATION Use scientific names of plants.	Densia		Domina	nco Tost Worksh	oot
ADSOIUTE Tree Stratum (Plot size: 30' Radius) % Cover	Domina	nt indicator	Number		
1			that are C	OBL, FACW, or FAC	C: 0 (A)
2			Total I	Number of Dominar	nt
3	_		Spec	ies Across all Strata	a: <u>1</u> (B)
4			Percent	of Dominant Specie	es
5			that are C	OBL, FACW, or FAC	C: 0.00% (A/B)
	= Total Co	over	<u> </u>		
Sapling/Shrub stratur (Plot size: 5' Radius)				nce Index Works	heet
2			OBL spe		1 – 0
3			FACW s	species $0 \times 10^{\circ}$	2 = 0
4			FAC spe	ecies 0 x	3 = 0
5			FACU s	pecies 100 x	4 = 400
0	= Total Co	over	UPL spe	ecies 0 x	5 = 0
Herb stratum (Plot size: 5' Radius)	_		Column	totals 100 (A	A) 400 (B)
1 Festuca arundinacea 100	Y	FACU	Prevaler	nce Index = B/A =	4.00
2					
3			Hydrop	hytic Vegetation	Indicators:
4			Rap	id test for hydroph	ytic vegetation
5			Don	valonco indox is <3	1% 2
7					
8			IVIOT	pnogical adaptatio	ns" (provide narks or on a
9			sepa	arate sheet)	
10			(exp	plain): Adjacent to i	managed plant
100	= Total Co	over	com	ım.	
Woody vine stratum (Plot size: 30' Radius)			*Indicator	rs of hydric soil and we	etland hydrology must be
1			рі	resent, unless disturbe	ed or problematic
2			Hyd	iropnytic etation	
0	= Total Co	over	pres	sent? N	
Remarks: (Include photo numbers here or on a separate sheet)					

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Rec	lox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ıre	Remarks
0-22	7.5YR 5/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coas	t Prairie Ree	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark	Surface (S7	") (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-N	Manganese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	l)	Loa	my Mucł	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Other	r (explain in	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
	bleted Below Dark	Surface	(A11)Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)		leted Da	irk Surra		*Indica	tors of hydr	ophytic vegetation and weltand
	ndy Mucky Minera	1 (51) Doot (52		lox Depr	essions ((67)	hydro	logy must b	e present, unless disturbed or
	II MUCKY Feat OF	-eat (33)						problematic
Restrictive	Layer (if observe	ed):							
Type:							Hydric	soil presen	t? <u>N</u>
Depth (inche	es):				-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum)	of one is	required: check a	all that an	(vlac		Se	condarv Ind	icators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aqu	uatic Plar	nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) —	Dry-Seas	son Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			=	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	bosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in 1	illed Soils		bhic Position (D2)
Inundatio	on Visible on Aeria	l Imager	(B7)	(CO) Thin Mu	ck Surfac	e (C7)	—	FAC-Net	
Sparsely	Vegetated Conca	ve Surfa	(B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:			`		-			
Surface wat	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	vdrology present? N
(includes ca	pillary fringe)								
Describe red	corded data (strea	im gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if a	available:	
Remarke									
itematiks.									

	WET	LAND DETER	RMINATI	ON DATA	FORM - M	dwest	Region	
Project/Site TH 19	Marshall		City/	County: N	Marshall/Lyon	County	Sampling Date:	9/29/21
Applicant/Owner:	Minnesota Depart	ment of Transpo	ortation	State:	MN		Sampling Point:	31
Investigator(s): Le	wis, DeCesare			Sec	tion, Townshi:	p, Range:	S4, T1	11N, R41W
Landform (hillslope	e, terrace, etc.):	Hillslo	эре	Local	relief (concav	e, conve	x, none):	Concave
Slope (%):	Lat:	44°26'46.96"	N	Long:	95°47'18.7	1"W	Datum:	
Soil Map Unit Nam	ne51: La Prairie Loa	.m			NWI	Classifica	tion: R2L	IBH, R2UBG
Are climatic/hydrol	logic conditions of th	ne site typical for	this time o	f the year?	Y (f no, expl	ain in remarks)	
Are vegetation	, soil	, or hydrold	ogy	significantl	ly disturbed?		Are "normal circu	mstances"
Are vegetation	, soil	, or hydrold	ogy	naturally p	roblematic?			present? Yes
SUMMARY OF	FINDINGS		r			(If need	ded, explain any ar	swers in remarks.)
Hydrophytic ve	egetation present?	Y	.					
Hydric soil pre	sent?	Y	.	Is the s	sampled area	a within a	wetland?	Y
Indicators of w	etland hydrology pro	esent? Y		If yes, c	optional wetlar	nd site ID:		
Remarks: (Explain	alternative procedu	ires here or in a	separate re	eport.)				
			-	•				
VEGETATION	Use scientific I	names of plar	nts.					
			Absolute	Dominant	Indicator	Domin	ance Test Works	neet
Tree Stratum	(Plot size: 30'	Radius)	% Cover	Species	Staus	Number	r of Dominant Speci	es
1						that are	OBL, FACW, or FA	C: 1 (A)
2						Tota	Number of Domina	int
3					·	Spe	cies Across all Strat	ta: <u>1</u> (B)
4						Percent	t of Dominant Speci	es
ə				- Total Cove	or	แลเลษ	UBL, FAGVV, ULI A	C: 100.00% (AVD)
Sapling/Shrub st	tratum (Plot size:	5' Radius			71	Preval	ence Index Works	sheet
1		,				Total %	6 Cover of:	
2						OBL sp	pecies 0 x	1 = 0
3						FACW	species 90 x	2 = 180
4					· · · · · · · · · · · · · · · · · · ·	FAC sp	pecies 10 x	3 = 30
5						FACU	species <u>0</u> x	4 = 0
			0	= Total Cove	ər	UPL sp	becies 0 x	5 = 0 (D)
Herb stratum	(Plot size:	5' Radius)				Colum	n totals 100 (A	A) <u>210</u> (B)
1 Phragmites	australis		90	Y	FACW	Prevale	ence Index = B/A =	2.10
2 Apocynum c	annabinum		10	N	FAC	Ludro		In diastara
3						Ra	phytic vegetation	Indicators:
5							minance test is >5	1910 vegetation 1%
6						X Pre	evalence index is ≤	3.0*
7							urphonical adaptatio	one* (nrovide
8						su	oporting data in Re	marks or on a
9						se	parate sheet)	
10						(ex	plain): Adjacent to	managed plant
			100	= Total Cove	эr	CO	mm.	
Woody vine stra	tum (Plot size:	30' Radius)				*Indicate	ors of hydric soil and w	vetland hydrology must be
1						L.,	present, unless disturt	bed or problematic
2				- Total Cove		ve	detation	
			U	= 10(2) 0006	31		······	

= Total Cover

present?

Y

0

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

SOIL

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absenc	e of indicators.)
Depth	Matrix		Rec	dox Featu	ures				-
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-6	7.5YR 6/1		· · · ·				CLAY LOAM		
6-15	7.5YR 5/2						CLAY	-	
15 10	7.511C 5/2							VIOANA	
15-19	7.51R 5/2						SANDY CLA		
19-21	GLEY 7/N						LOAMY SAN	1D	
*Typo: C = C	Concontration D.	– Doploti	on PM – Poduce	d Matrix	MS – M	laskod S	and Grains	**Location	PL – Poro Lining M – Matrix
Hydric So	il Indicators:	- Depieti			, 1013 = 10	laskeu S	Indicators		matic Hydric Soils:
Y Hist	tisol (A1)		San		d Matrix	(\$4)	Coast	Prairie Rec	d_{0X} (A16) (I RR K I R)
	tis Eninedon (A2)			dy Redo	v (95)	(04)	Dark 9	Surface (S7	
Blac	rk Histic (Δ3)		Strij	nned Ma	rix (S6)		Iron-M	langanese	Masses (F12) (LRR K. L. R)
	Irogen Sulfide (A4	1)	X Loa	my Muck	w Minera	al (F1)	Verv S	Shallow Dar	k Surface (TE12)
Stra	atified Lavers (A5)	·/		my Glevi	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10))	Der	leted Ma	atrix (F3)	((<i>L</i>)			ionano)
Der	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	Dec	leted Da	rk Surfa	(e =) ce (F7)	*Indicat	ors of hydro	onhytic vegetation and weltand
San	dy Mucky Minera	, l (S1)	Rec	lox Depr	essions ((F8)	hvdrol	oav must be	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)			· · ·		- 3)	problematic
Postrictivo	l avor (if obsorv	od).	, 						-
Type		eu).					Hydric s	oil present	•2 V
Depth (inche	<u>is)</u> .						Tryancis		
Boptil (mone									
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Sec	condary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aqu	uatic Plar	nts (B14)	·· · · · · · · · · · · · · · · · · · ·	C Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I)	Dry-Seas	on Water Table (C2)
Vater IVI	arks (B1)			Oxidized	Rnizosp	neres on	Living Roots	Crayfish I	Burrows (C8)
Drift Der	(B3)			Presenc	e of Redu	iced Iron	(C4)	Stunted c	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	tral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		_	
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	r Well Da	ata (D9)			
X Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	drology present? Y
(includes ca	pillary tringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if a	vailable:	
Remarks:									
ON SLO	PE NEAR RIV	ER							

Project/Site TH 19 Marshall Cit	y/County:	Marshall/Lyon	County Sampling	Date: 9/29/21
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	Sampling	Point: 3IU
Investigator(s): Lewis, DeCesare	s	ection, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'47.19"N	Long:	95°47'18.8	3"W Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year	? Y (If no, explain in rema	arks)
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "norm	nal circumstances"
Are vegetation , soil , or hydrology	naturally	y problematic?		present? No
SUMMARY OF FINDINGS			(If needed, explai	n any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? Y	ls th	e sampled are	a within a wetland?	, N
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate	report.)			
The vegetation is ar	tificially p	lanted and m	anicured.	
VEGETATION Use scientific names of plants.				
Absolute	e Domina	nt Indicator	Dominance Test	Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover 1	r Specie	s Staus	Number of Domina that are OBL, FAC	nt Species W, or FAC: 0 (A)
2			Total Number of	f Dominant
4			Porcent of Domina	
5			that are OBL, FAC	W, or FAC: 0.00% (A/B)
0	= Total Co	over		、 ,
Sapling/Shrub stratum (Plot size: 5' Radius)	_		Prevalence Index	x Worksheet
1			Total % Cover of:	
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	$0 \times 3 = 0$
<u> </u>	= Total Co	over	LIPL species	$\frac{100}{0}$ x 5 = 0
Herb stratum (Plot size: 5' Radius)			Column totals	$\frac{100}{100}$ (A) $\frac{100}{400}$ (B)
1 Festuca arundinacea 100	Y	FACU	Prevalence Index	= B/A = 4.00
2				
3			Hydrophytic Veg	jetation Indicators:
4			Rapid test for	hydrophytic vegetation
5			Dominance te	est is >50%
6			Prevalence in	idex is ≤3.0*
/			Morphogical a	adaptations* (provide
0 0			supporting da	ita in Remarks or on a
10			(explain): Adi	acent to managed plant
100	= Total Co	over	comm.	abont to managed plant
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)	_		*Indicators of hydric	soil and wetland hydrology must be
2			Hydrophytic	
0	= Total Co	over	vegetation	
			present?	<u>N</u>
Remarks: (Include photo numbers here or on a separate sheet)				

SOIL

Open Matrix Bedaz Features Toxturo Remarks 0-4 7.5YR 2.52 Image: Color (mole) % Type' Lec* Toxturo Remarks 0-4 7.5YR 2.52 Image: Color (mole) % Type' Lec* Toxturo Remarks 0-16 7.5YR 52 Image: Color (mole) % Type' SANDY CLAY Image: Color (mole)	Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the a	bsence of indicators.)	
(Incles) Color (moist) % Color (moist) % Type Loc* Texture Remarks 0-4 7.5YR 52 1 1 CLXY	Depth	Matrix		Red	dox Featu	ures				
04 7.5YR 5/2	(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Rema	arks
4-8 7.5YR 5/2 SANDY CLAY 8-16 7.5YR 5/2 SANDY CLAY LOAM 7.5YR 6/4 SANDY CLAY LOAM Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Histol (A1) Sandy Glayd Matrix (S4) Coarst Praits Retexix (A16) (LRR K, L, R) Back Hasic (A3) Simpeot Matrix (S2) Oarst Parits Retexix (A16) (LRR K, L, R) Thyticit 20 (A17) Sandy Redox (S5) Dark Surface (S7) (LRR K, L, R) Dark Surface (A17) Depleted Matrix (F2) Oarst Parits Retexix (A16) (LRR K, L, R) Type: D and K (A10) Depleted Matrix (F2) Oarst Parits Retex (A16) (LRR K, L, R) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic Type: Type: Hydric soil present? Y_ Dark Mucky Mineral (S1) Redox Dark Surface (A11) Stantace (S1) Stantace (S1) Stantace (A10) Depleted Matrix (S2) Coard Cracks (B10) Stantace (S1) Stantace (A11) Aquata Farana (B13) <	0-4	7.5YR 2.5/2						CLAY		
B-16 7.SYR 84 Image: Clay Clay LOAM Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix "Histics (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R) Back Hasts (A3) Startype Matrix (S6) Coast Prairie Redox (A16) (LRR K, L, R) Depleted Matrix (S6) Coast Prairie Redox (A17) Coast Prairie Redox (S1) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Other (septain in remarks) Book Hack VM Interol (S1) Depleted Dark Surface (F7) "Indicators of hydrophytic vapation and weitand hydrology must be present, unless disturbed or problematic Thick Dark Surface (A12) Depleted Dark Surface (F7) "Indicators (Indicators (Indicators (Indicators (Indicators (Indicators Indicators Indicators Indicators Indicators Indicators Indicators Indicators (Indicators (Indicato	4-8	7.5YR 5/2						SANDY CLAY		
Drive 1.51 K. Cut	8-16	7.5VP.6/4								
Image: Secondary Indicators: Image: Secondary Indicators (F12) Image: Secondary Indicators (F12)	0-10	7.511(0/4						SANDI CEATEC		
Type: C = Concentration, D = Depletion, RM = Reduced Mark:, MS = Masked Sand Grains. ***********************************		Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) h Matrix Color (molei) Y Type* Loc** Texture Remarks 7.5YR 52 Image: Color (molei) Y Type* Loc** Texture Remarks 3 7.5YR 52 Image: Color (molei) Y SANDY CLAY Image: Color (molei) SANDY CLAY 3 7.5YR 6/4 Image: Color (molei) SANDY CLAY LOAM Image: Color (molei) Image: Color (molei)								
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6) High Water Table (A2) True Aquatic Plants (B14) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8) Sediment Deposits (B2) (C3) Saturation (Xisble on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Inon Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Sufface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Carlote capillary fringe) Depth (inches): Indicators of wetland hydrology pres	HYDROLO	DGY								
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Surface Water (A1) Aquatic Fauna (B13) Surface Soil Cracks (B6) High Water Table (A2) True Aquatic Plants (B14) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8) Sediment Deposits (B2) (C3) Saturation (C4) Magal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Other (Explain in Remarks) Indicators of wetland hydrology present? Field Observations: Surface spillary fringe) No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Mater table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): N N Desc	Primary Indi	cators (minimum	of one is	required; check a	all that ap	oply)		Seconda	ary Indicators (minimum	of two required)
High Water Table (A2) True Aquatic Plants (B14) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8) Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Other (Explain in Remarks) Indicators of wetland hydrology present? Saturation present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Cincludes capillary fringe) No X Depth (inches): Indicators of wetland hydrology present? N	Surface	Water (A1)			Aquatic I	Fauna (B	13)	Su	Irface Soil Cracks (B6)	
Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8) Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? Saturation present? Yes No X No X Depth (inches): Indicators of wetland hydrology present? Includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	High Wa	ter Table (A2)			True Aqu	uatic Plar	nts (B14)	Dr	ainage Patterns (B10)	
Water Marks (B1) Oxidized Rhizospheres on Living Roots Crayfish Burrows (C8) Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stutration Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes Sutration present? Yes No X Saturation present? Yes No X Mater table present? Yes No X Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) Dr	y-Season Water Table (C	2)
Sediment Deposits (B2) (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Other (Explain in Remarks) Indicators of wetland Saturation present? Yes No X Depth (inches): Water table present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): No No Cincludes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Cr	ayfish Burrows (C8)	
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Other (Explain in Remarks) Indicators of wetland Field Observations: Surface water present? Yes No Sutration present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): No No Saturation present? Yes No X Depth (inches): No No Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	Sedimer	t Deposits (B2)			(C3)			Sa	turation Visible on Aerial	Imagery (C9)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Geomorphic Position (D2) Iron Deposits (B5) (C6) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Water table present? Yes No X Saturation present? Yes No X Mode capillary fringe) Depth (inches): Indicators of wetland hydrology present? Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) Sti	unted or Stressed Plants	(D1)
Inon Deposits (B5) (C6) PAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes Sufface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks:	Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in 1	illed SoilsGe	C Neutral Test (DE)	
Initiation visible of Aeria Integery (D7) Initiation (Original Concernsion of Aeria Integery (D7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes Surface water present? Yes No X Water table present? Yes No X Saturation present? Yes No X Cincludes capillary fringe) Indicators of wetland hydrology present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Iron Dep	OSIIS (B5) on Visible on Aeria	Imagen	(B7)	(CO) Thin Mu	ek Surfae	(C7)	F <i>P</i>	C-Neutral Test (D5)	
Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? No Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge o	r Well Da	e (C7) ata (D9)			
Field Observations: Surface water present? Yes No X Depth (inches): Indicators of wetland hydrology present? Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) Depth (inches), previous inspections), if available: Remarks:	Water-S	tained Leaves (B9			Other (F	xolain in	Remarks)		
Surface water present? Yes No X Depth (inches): Indicators of wetland Water table present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland Saturation present? Yes No X Depth (inches): Indicators of wetland (includes capillary fringe) No X Depth (inches): Indicators of wetland Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Field Obser	vations:	/		0	лр юл і і і		/		
Water table present? Yes No X Depth (inches): Indicators of wetland hydrology present? N Saturation present? Yes No X Depth (inches): Indicators of wetland hydrology present? N (includes capillary fringe) No X Depth (inches): Indicators of wetland hydrology present? N Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Saturation present? Yes No X Depth (inches): hydrology present? N (includes capillary fringe) Depth (inches):	Water table	present?	Yes	No		Depth (i	nches):		Indicators of wetlar	nd
(includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Saturation p	resent?	Yes	No	X	Depth (i	nches):		hydrology present	? N
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	(includes ca	pillary fringe)				<u> </u>	- /			
Remarks:	Describe rec	corded data (strea	am gauge	e, monitorina well	, aerial p	hotos. pr	evious ir	spections), if availa	ble:	
Remarks:			5		· · · P	, P.				
Remarks:										
	Remarks:									

Project/Site TH 19	Marshall		City/0	County:	Marshall/Ly	on County	Sampling Date:	9/30/2	!1	
Applicant/Owner:	Minnesota Depart	ment of Transportation	on	State:		MN	Sampling Point:	4A		
Investigator(s): Le	wis, DeCesare			Sec	ction, Towr	nship, Range	S4, T	111N, R41W		
Landform (hillslope	e, terrace, etc.):	Hillslope		Loca	l relief (cor	icave, conve	x, none):	Concave		
Slope (%):	Lat:	44°26'39.10"N		Long:	95°47'3	6.87"W	Datum:			
Soil Map Unit Nam	e51: La Prairie Loa	m			V	WI Classifica	tion: R2	UBH, R2UBG		
Are climatic/hydrol	ogic conditions of th	ne site typical for this	time of	the year?	Y	(If no, expl	ain in remarks)			
Are vegetation	, soil	, or hydrology		significant	tly disturbe	d?	Are "normal circu	umstances"		
Are vegetation	, soil	, or hydrology		naturally p	problematic	?		present?	Yes	
SUMMARY OF	FINDINGS	_				(If need	ded, explain any a	inswers in rem	narks.)	
Hydrophytic ve	getation present?	Y								
Hydric soil pres	sent?		Is the	sampled a	area within a	wetland?	Y			
Indicators of w	etland hydrology pr		If yes,	optional we	etland site ID	:				
Remarks: (Explain	alternative procedu	ires here or in a sepa	irate re	port.)						
VEGETATION	Use scientific	names of plants.								
		Abs	olute	Dominant	Indicato	or Domin	ance Test Works	sheet		
Tree Stratum	(Plot size: 30'	Radius) % C	over	Species	Staus	Number	of Dominant Spec	vies	(•)	
1 Acer negund	lo	t	30	Y	FAC	that are	OBL, FACW, or FA	AC: 2	_(A)	
3	2 3					Tota	l Number of Domin cies Across all Stra	ant ata: <u> 3 </u>	(B)	
4 5	4 5					Percent that are	t of Dominant Spec OBL, FACW, or F	;ies AC: 66.67%	(A/B)	
			- 06	= Total Cov	er	-			_`´	
Capling/Chruch at	(Distains)					Drevel	an aa luuday Mark	ak a at		

4				Percent of Domin	ant Sp	ecies	26 670/	(
5	60	= Total Cover			5VV, OI	I AC	00.07 /0	(A/D)
Sapling/Shrub stratum (Plot size: 5' Radius)				Prevalence Ind	ex Wo	rksheet		
1				Total % Cover o	f:			
2				OBL species	0	x 1 =	0	
3				FACW species	10	x 2 =	20	-
4				FAC species	60	x 3 =	180	-
5				FACU species	20	x 4 =	80	-
	0	= Total Cover		UPL species	0	x 5 =	0	-
Herb stratum (Plot size: 5' Radius)				Column totals	90	(A)	280	(B)
1 Aralia nudicaulis	20	Y	FACU	Prevalence Inde	x = B/A	+ =	3.11	-
2 Frangula alnus	10	Y	FACW					-
3				Hydrophytic Ve	getati	on India	cators:	
4				Rapid test for	or hydro	ophytic	vegetatio	n
5				X Dominance	test is :	>50%		
6				Prevalence	index is	s ≤3.0*		
7				Morphogical	adapt	ations* (provide	
8				supporting d	lata in l	Remark	s or on a	
9				separate sh	eet)			
10				(explain): Ac	ljacent	to mana	aged plar	nt
	30	= Total Cover		comm.			0 1	
Woody vine stratum (Plot size: 30' Radius) 1		_		*Indicators of hydri present, un	c soil an less dis	d wetland turbed or	d hydrology problemati	must be
2				Hydrophyti	с			
	0	= Total Cover		vegetation				

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Depth <u>Matrix</u> <u>Redox Features</u> (Inches) Color (moist) % Type*								•
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
0-18	7.5YR 4/1						CLAY LOAM	N	
								ĺ	
				l	1				
					┨────┤				
				 	┨────┤				
				 					
				───	 				
				 					
				<u> </u>					
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	d Matrix	., MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:		-				Indicator	s for Proble	ematic Hydric Soils:
X Hist	isol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coas	t Prairie Rec	dox (A16) (LRR K, L, R)
HIST	ic Epipedon (A2)		Sar	dy Redo)X (S5)		Dark	Surface (Sr	
	CK HISTIC (A3)	1		ppea ivia	trix (So)	-! /[]4)			Wasses(F Z)(LKK K,L,K)
Stra	tified Lovers (A5)	+) \	Loa	my Glev	Ay Minera and Matrix	di(⊏i) /(⊏?)		SlidiiUw Dai r (ovolgin in	romarks)
2 cr	n Muck (A10)	1	Der	Illy Giey.	eu mans etriv (F3)	((Г∠)			Tellians
Der	pleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Der	pleted Da	ark Surfa	(F7)	*Indica	ators of hydro	ophytic vegetation and weltand
San	dy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydro	loav must be	e present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)	-					problematic
Restrictive	Laver (if observe	ed):				1			
Type:	- 4 - 1 - 1				İ		Hydric	soil present	t? Y
Depth (inche	es):				-		-	•	
Pomarks [.]									
HYDROLO	OGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators <u>(minimum</u>	of o <u>ne is</u>	required; check a	all t <u>hat a</u> r	<u>(y</u> lqq		Se	condary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	_	Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	on Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimen	It Deposits (B2)			(C3)	- of Dodu	ined Iron	(CA) -	Saturation	n Visible on Aerial Imagery (C9)
	OSIIS (B3) tor Cruet (B4)			Presenu	e of Redu	JCea Iron In T	(C4) illod Soile		of Stressed Plants (D1)
Iron Dep	nosits (B5)			(C6)	TON Neuu			FAC-Neu	itral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)	-		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	· · ·	Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	Χ	Depth (I	nches):		hy	drology present? Y
	pillary minger				·	in the last	(i	"	
Describe rec	orded data (strea	im gauge	 monitoring weil 	, aeriai p	hotos, pr	revious ir	ispections), it a	available:	
Remarks:									

Project/Site TH 19 Marshall	City/County:	Marshall/Lyon	County Sampling	g Date: 9/30/21
Applicant/Owner: Minnesota Department of Transportation	n Sta	te: MN	Sampling	Point: 4AU
Investigator(s): Lewis, DeCesare		Section, Townshi	p, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	/e, convex, none):	Concave
Slope (%): Lat: 44°26'39.08"N	Long:	95%47'36.5	5"W Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this ti	me of the yea	r? Y (If no, explain in rem	arks)
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "norr	nal circumstances"
Are vegetation , soil , or hydrology	natural	y problematic?		present? No
SUMMARY OF FINDINGS			(If needed, expla	in any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	ls t	he sampled area	a within a wetland	? N
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	nd site ID:	
 Remarks: (Explain alternative procedures here or in a separ	ate report.)			
The vegetation is	artificially p	lanted and ma	anicured.	
VEGETATION Use scientific names of plants				
	lute Domina	ant Indicator	Dominance Tes	t Worksheet
Tree Stratum (Plot size: 30' Radius) % Co	over Specie	es Staus	Number of Domina	ant Species
1			that are OBL, FAC	W, or FAC: 0 (A)
2		_	Total Number of	of Dominant
3			Species Acros	s all Strata: 1 (B)
4			Percent of Domina	ant Species
5			that are OBL, FAC	W, or FAC: 0.00% (A/B)
Sanling/Shruh strature (Plot size: 5' Radius)	= 10tal C	over	Prevalence Inde	w Worksheet
1			Total % Cover of	A WORKSHEEL
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	0 x 3 = 0
5			FACU species	100 x 4 = 400
	= Total C	over	UPL species	$0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals	<u>100</u> (A) <u>400</u> (B)
1 Festuca arundinacea 10	0 Y	FACU	Prevalence Index	k = B/A = 4.00
2			Hydrophytic Vo	actation Indicators:
4			Rapid test fo	r hydrophytic vegetation
5			Dominance t	est is >50%
6			Prevalence in	ndex is ≤3.0*
7			Morphogical	adaptations* (provide
8			supporting da	ata in Remarks or on a
9			separate she	et)
10	0 - Total C		(explain): Adj	jacent to managed plant
Woody vine stratum (Plot size: 30' Radius)		0,01		
1			present, unl	ess disturbed or problematic
2			Hydrophytic	;
0	= Total C	over	vegetation	
			present?	<u>N</u>
Remarks: (Include photo numbers here or on a separate she	eet)			

Profile Dese	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	ce of indicators.)
Depth	Depth <u>Matrix</u> <u>Redox Features</u>								*
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
0-20	7.5YR 3/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Probl	ematic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	(S4)	Coas	t Prairie Re	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	dy Redo	x (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Othe	r (explain in	remarks)
2 cr	m Muck (A10)			leted Ma	atrix (F3)	(==)			
Dep	leted Below Dark	Surface	(A11)Rec	lox Dark	Surface	(⊢6)			
	ck Dark Surface (A12)		leted Da	irk Surfa		*Indica	ators of hydr	ophytic vegetation and weltand
San	idy Mucky Minera	II (51) Deet (52		lox Depr	essions ((F8)	hydro	logy must b	e present, unless disturbed or
	II MUCKY Feat OF	real (33)						problematic
Restrictive	Layer (if observe	ed):							
Type:	`				-		Hydric	soil presen	it? <u>N</u>
Depth (inche	es):								
	OGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check :	all that ar	vlac		Se	condary Ind	licators (minimum of two required)
Surface	Water (A1)			Aquatic I	Eauna (B	13)	<u></u>	Surface	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aa	uatic Plar	its (B14)	-	Drainage	e Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1) –	Dry-Seas	son Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			_	Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	Geomor	phic Position (D2)
Iron Dep	osits (B5) on Visible on Asria	Imogon	(P7)	(C6) This Mu	al Curfa a	a (C7)	_	FAC-Neu	utral Test (D5)
Sparsely	Vegetated Conca	we Surfa	(D7)		or Well De	e(C7)			
Water-S	tained Leaves (R9			Other (F	volain in	ala (D9) Remarks)		
Field Obser	vations:	/					/		
Surface wate	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	X	Depth (i	nches):		Inc	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	/drology present? N
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if a	available:	
Remarks:									
i tomanto.									

Project/Site TH 19	Marshall		City/Count	ty: M	larshall/Lyon	County	Sampling I	Date:	9/30/21	
Applicant/Owner:	Minnesota Depart	tment of Transportatio	n	State:	MN		Sampling P	Point:	4B	
Investigator(s): Le	wis, DeCesare			Sect	ion, Township	o, Range:		S4, T111N,	R41W	
Landform (hillslope	e, terrace, etc.):	Hillslope		Local	relief (concav	e, conve	x, none):	Co	ncave	
Slope (%):	Lat:	44°26'38.45"N	Lon	ıg:	95°47'36.63	3"W	Datum:			
Soil Map Unit Nam	e51: La Prairie Loa	ım			NWI C	Classifica	tion:	R2UBH,	R2UBG	
Are climatic/hydrole	ogic conditions of th	ne site typical for this t	ime of the y	year?	Y (I	f no, expl	ain in remar	·ks)		
Are vegetation	, soil	, or hydrology	sign	ificantly	/ disturbed?		Are "norma	al circumsta	nces"	
Are vegetation	, soil	, or hydrology	natu	irally pr	oblematic?			pre	sent? Y	'es
SUMMARY OF	FINDINGS					(If need	ded, explain	any answe	rs in rema	arks.)
Hydrophytic ve	getation present?	Y								
Hydric soil pres	sent?	Y	1	s the s	ampled area	within a	wetland?	<u> </u>	(
Indicators of w	etland hydrology pr	esent? Y	If	yes, o	ptional wetlan	nd site ID:	:		_	
Remarks: (Explain	alternative procedu	ures here or in a separ	ate report.))						
VEGETATION -	Use scientific	names of plants.								
		Abso	olute Don	ninant	Indicator	Domin	ance Test V	Norksheet		
Tree Stratum	(Plot size: 30'	Radius) % Co	over Spe	ecies	Staus	Number	r of Dominan	t Species		
1 Acer neguna	lo	6	0	Y	FAC	that are	OBL, FACW	, or FAC:	2	(A)
2						Tota	I Number of I	Dominant		

2				Total Number of Dominant
3				Species Across all Strata: 3 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 66.67% (A/B)
	60	= Total Cover		
<u>Sapling/Shrub stratum</u> (Plot size: 5' Radius)				Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 0 x 2 = 0
4				FAC species 80 x 3 = 240
5				FACU species 20 x 4 = 80
	0	= Total Cover		UPL species 0 x 5 = 0
<u>Herb stratum</u> (Plot size: 5' Radius)				Column totals 100 (A) 320 (B)
1 Fraxinus americana	20	Y	FACU	Prevalence Index = $B/A = 3.20$
2 Rhamnus cathartica	20	Y	FAC	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8	_			supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	40	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30'</u> Radius)				*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separ	ate sheet)		

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	e absence	of indicators.)
Depth	Depth <u>Matrix</u> <u>Redox Features</u> (Inches) Color (moist) % Color (moist) % Type								•
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-20	7.5YR 5/2						SANDY LOAM		
-	_			1	1		-		
				1	1				
				┨────	───				
I			ļ						
		ĺ				1			
*Type: C = (Concentration, D =	= Depleti	on. RM = Reduce	ed Matrix	. MS = N	lasked S	and Grains. *	**Location:	PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:				.,		Indicators f	or Probler	natic Hydric Soils:
X Hist	tisol (A1)		Sar	ndv Gleye	ed Matrix	(S4)	Coast P	rairie Redo	ox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redc	ox (S5)	、 ,	Dark Su	rface (S7)	(LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Mar	nganese M	lasses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	1)	Loa	amy Mucl	ky Minera	al (F1)	Very Sh	allow Dark	Surface (TF12)
Stra	atified Layers (A5)))	Loa	amy Gley	ed Matrix	k (F2)	Other (e	xplain in re	emarks)
2 cr	m Muck (A10)		Dep	pleted Ma	atrix (F3)			-	
Dep	oleted Below Dark	Surface	; (A11) Red	dox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicator	s of hydrop	phytic vegetation and weltand
San	ndy Mucky Minera	l (S1)	Rec	dox Depr	ressions	(F8)	hydrolog	y must be	present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)					р	roblematic
Restrictive	Layer (if observe	ed):							
Туре:	-	-					Hydric soi	il present?	у ү
Depth (inche	es):				-				
Remarks:									
HYDROLU	JGY								
Wetland Hy	drology Indicato	ors:							
Primary India	cators (minimum	of one is	required; check a	all that a	pply)		<u>Secor</u>	ndary Indic	ators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	(13)		Surface So	bil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	<u>X</u>	Drainage F	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1)	Dry-Seaso	n Water Table (C2)
Water wi	arks (B1)			Oxidized	1 Rhizosp	heres on	Living Roots	Craylish B	Ulfows (Co)
V Drift Der	It Deposits (DZ)			Dresenc	o of Redu	used Iron	(CA)	Saluration Stunted or	Strosed Plante (D1)
Algal Ma	at or Crust (B4)			Recent l	Iron Redu	uction in T	illed Soils	Geomorph	ic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neutr	al Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	ce (C7)			u oc. (= -)
Sparsely	/ Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:			-					
Surface wate	er present?	Yes	No	Х	Depth (i	inches):			
Water table	present?	Yes	No	Х	Depth (i	inches):		Indic	cators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	inches):		hyd	rology present? Y
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	ə, monitoring well	l, aerial p	hotos, pr	revious ir	nspections), if ava	ilable:	
Demorkov									
Remarks.									

Project/Site TH 19 Marshall C	City/County:	Marshall/Lyon	County Sampli	ng Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MN	N Samplir	ng Point:	4BU
Investigator(s): Lewis, DeCesare	5	Section, Townsh	ip, Range:	S4, T111N,	R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Со	ncave
Slope (%): Lat: 44°26'38.36"N	Long:	95%47'36.4	4"W Datum:		
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UBH,	R2UBG
Are climatic/hydrologic conditions of the site typical for this tim	ne of the yea	r? Y ((If no, explain in re	marks)	
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "no	rmal circumstar	nces"
Are vegetation , soil , or hydrology	natural	ly problematic?		pres	sent? No
SUMMARY OF FINDINGS			(If needed, exp	lain any answer	s in remarks.)
Hydrophytic vegetation present? Y					
Hydric soil present? N	ls ti	he sampled are	a within a wetlan	d? <u>N</u>	
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separa	te report.)				
The vegetation is artificially	removed.	Directly adjac	cent to parking l	ot.	
VEGETATION Use scientific names of plants.					
Absolu	ute Domina	ant Indicator	Dominance Te	st Worksheet	
Tree Stratum (Plot size: 30' Radius) % Cov	ver Specie	es Staus	Number of Domi	nant Species	
1 Celtis occidentalis 40	Y	FAC	that are OBL, FA	CW, or FAC:	2 (A)
2			Total Number	of Dominant	2 (D)
3			Species Acid		<u>з</u> (В)
5			that are OBL. FA	CW. or FAC: (66.67% (A/B)
40	= Total C	over	,		()
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Inc	lex Worksheet	
1			Total % Cover	of:	
2			OBL species	0 x 1 =	0
3			FACW species	<u>0</u> x 2 =	0
4			FAC species	$80 \times 3 =$	240
	= Total C	over		$20 \times 4 =$	0
Herb stratum (Plot size: 5' Radius)			Column totals	100 (A)	320 (B)
1 Rhamnus cathartica 40	Y	FAC	Prevalence Ind	ex = B/A =	3.20
2 Festuca arundinacea 20	<u> </u>	FACU			0.20
3			Hydrophytic V	egetation Indic	cators:
4			Rapid test f	or hydrophytic	vegetation
5			X Dominance	test is >50%	
6			Prevalence	index is ≤3.0*	
/			Morphogica	al adaptations* (provide
o			supporting	data in Remark	s or on a
10			(explain): A	diacent to man	aged plant
60	= Total C	over	comm.		aged plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of byd	ric soil and wetland	t hydrology must be
1			present, u	nless disturbed or	problematic
2			Hydrophyt	ic	
0	= Total C	over	present?	Y	
Remarks: (Include photo numbers here or on a separate shee	et)		1		

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the a	absence of in	dicators.)
Depth	Matrix		Red	dox Feat	ures				,
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-19	7.5YR 5/1						SANDY CLAY L	DAM	
								-	
*Type: C = (Concentration, D =	= Depleti	on. RM = Reduce	ed Matrix	MS = M	lasked S	and Grains. **I	ocation: PL =	Pore Lining, M = Matrix
Hvdric Sc	pil Indicators:	2 00.00	,		,		Indicators for	Problematic	Hvdric Soils:
His	tisol (A1)		Sar	dv Gleve	ed Matrix	(S4)	Coast Pra	irie Redox (A1	6) (LRR K. L. R)
His	tic Epipedon (A2)		Sar	dv Redo	x (S5)	(0.)	Dark Surfa	ace (S7) (LRR	K. L)
Bla	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Mang	anese Masses	s (F12) (LRR K, L, R)
	drogen Sulfide (A4	L)	Loa	mv Mucł	kv Minera	al (F1)	Verv Shall	, low Dark Surfa	ice (TF12)
Stra	atified Lavers (A5)	,	Loa	mv Glev	ed Matrix	x (F2)	Other (exc	plain in remark	s)
2 ci	m Muck (A10)		Dep	pleted Ma	atrix (F3)	- ()			-,
Der	oleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Der	leted Da	ark Surfa	(* -) ce (F7)	*Indicators	of hydrophytic	vegetation and weltand
Sar	ndv Muckv Minera	, (S1)	Rec	lox Depr	essions ((F8)	hvdrology	must be prese	nt. unless disturbed or
5 ci	m Mucky Peat or	Peat (S3)	1		(-)	, ai ei e gy	probler	natic
		, ,	,			r —		•	
	Layer (II Observe	eu).					Hydric soil (aracant?	N
Type. Denth (inch	oc).				-		riyunc son j		
Deptil (ment					-				
HYDROLO	OGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that a	oply)		Second	lary Indicators	(minimum of two required
Surface	Water (A1)		•	Aquatic	Fauna (B	(13)	S	urface Soil Cra	cks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	D	rainage Patterr	ns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1)D	ry-Season Wat	er Table (C2)
Water N	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots C	rayfish Burrows	s (C8)
Sedimer	nt Deposits (B2)			(C3)			S	aturation Visible	e on Aerial Imagery (C9)
Drift Dep	posits (B3)			Presenc	e of Redu	uced Iron	(C4) S	tunted or Stress	sed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	uction in T	illed Soils G	eomorphic Pos	ition (D2)
Iron Dep	posits (B5)			(C6)		(0-)	F.	AC-Neutral Tes	it (D5)
Inundati	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	ce (C7)			
Sparsely	y Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)	、		
water-S	stained Leaves (B9)		Other (E	xplain in	Remarks	<i>.</i>)		
Field Obsei	rvations:	Var	K I _	v	Denth "	noh es):			
Surrace wat	er present?	Yes	NO	<u>X</u>	Depth (i	incnes):			ofwatland
vvaler table	present?	res		X	Deptn (I	inches):	I	hydrolog	v present?
(includes ca	nesent:	162		^		nun es).	[nyurolog	
Dogoriho ro	ordod doto (atra	macus	monitoring	oorial -	hotos s		apportions) if availa	able:	
Describe rec	corded data (strea	im gauge	e, monitoring well	, aenai p	notos, pr	revious ir	ispections), il availa	adie:	
Remarks:									

Project/Site TH 19	Marshall		City/Cou	County: Marshall/Lyon Cou		County Sampling Date:		J Date:	9/30/2	21
Applicant/Owner:	Minnesota Depar	tment of Transportatic	n	State:	MN		Sampling Point: 40		4C	
Investigator(s): Le	wis, DeCesare			Section, Township, Range: S4, T111N, F						
Landform (hillslope	e, terrace, etc.):	Hillslope		Local	relief (concav	/e, conve>	k, none):	Co	oncave	
Slope (%):	Lat:	44°26'37.96"N	Lc	Long: 95°47'36.64"W			Datum:			
Soil Map Unit Nam	ie51: La Prairie Loa	am			NWI (Classifica	tion:	ion: R2UBH, R2UBG		
Are climatic/hydrole	ogic conditions of t	ne site typical for this t	time of the	e year?	Y (I	lf no, expl	ain in rem	arks)	_	
Are vegetation	, soil	, or hydrology	siç	ynificantl	y disturbed?		Are "norn	nal circumsta	ances"	
Are vegetation	, soil	, or hydrology	na	iturally p	roblematic?			pre	esent?	Yes
SUMMARY OF	FINDINGS					(If need	ded, explai	in any answe	rs in rem	narks.)
Hydrophytic ve	getation present?	Y								
Hydric soil pres	sent?	Y		Is the f	sampled area	a within a	wetland?	?	Y	
Indicators of w	etland hydrology pr	esent? Y		If yes, optional wetland site ID:						
Remarks: (Explain	alternative proced	ures here or in a sepa	rate repor	t.)		-				
* -			·	,						
VEGETATION	Use scientific	names of plants.								
		 Absr	olute Dr	ominant	Indicator	Domin	ance Tes	t Worksheet	:	
<u>Tree Stratum</u> 1	(Plot size: 30'	Radius) % Co	over S	pecies	Staus	Number	of Domina	ant Species	2	(A)

I						
2						Total Number of Dominant
3						Species Across all Strata: 3 (B)
4						Percent of Dominant Species
5						that are OBL, FACW, or FAC: 66.67% (A/B)
		_	0	= Total Cover		
Sapling/Shrub stratun	(Plot size:	5' Radius)				Prevalence Index Worksheet
1						Total % Cover of:
2						OBL species 0 x 1 = 0
3						FACW species 0 x 2 = 0
4						FAC species 60 x 3 = 180
5						FACU species 40 x 4 =160
		_	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum	(Plot size:	5' Radius)				Column totals 100 (A) 340 (B)
1 Celtis occidentalis	S		40	Y	FAC	Prevalence Index = $B/A = 3.40$
2 Juglans nigra			40	Y	FACU	
3 Rhamnus cathart	ica		20	Y	FAC	Hydrophytic Vegetation Indicators:
4						Rapid test for hydrophytic vegetation
5						X Dominance test is >50%
6						Prevalence index is ≤3.0*
7						Morphogical adaptations* (provide
8						supporting data in Remarks or on a
9						separate sheet)
10						(explain): Adjacent to managed plant
			100	= Total Cover		comm.
Woody vine stratum	(Plot size:	30' Radius)				*Indicators of hydric soil and wetland hydrology must be
1						present, unless disturbed or problematic
2						Hydrophytic
			0	= Total Cover		vegetation
						present? Y
Remarks: (Include phot	o numbers he	re or on a separat	e sheet)			

4C

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the absen	ce of indicators.)
Depth	Matrix		Red	dox Featu	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	7.5YR 4/2						CLAY LOAM	
6-20	7.5YR 4/1						LOAM	
0 20								
*Turner C	Concentration D	Danlati		d Matrix			Lond Croins **Least	L Deve Lining M. Matrix
Type. C = C	Uncertifation, D	= Depieti	OH, RIVI = Reduce		, IVIS = IV	laskeu S	Indicators for Brob	In PL = Pore Lining, M = Matrix
Hydric So	bil indicators:		Car		ad Matrix	(04)	Coost Drainia D	
	lisoi (AT) his Eningdan (AQ)		Sar			(54)		$\frac{1}{100} (LRR R, L, R)$
HIST	al Listic (A2)		Sar	idy Redo	1X (35)			$M_{2} = 0 $
	CK HISTIC (A3)	•		pped ivia	trix (56)			$\frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{1}{2} \right) \left(\frac{1}{2} \right)$
	irogen Suilide (A2	+)			cy Minera	al (F1) (F0)	Very Shallow Da	ark Surface (TFT2)
Stra	atified Layers (A5))	Loa	my Gleye	ed Matrix	(F2)	Other (explain in	i remarks)
2 cr	n Muck (A10)	0			atrix (F3)	(50)		
	Dieted Below Dark		(A11) Rec	iox Dark	Surface	(F6)		
	ck Dark Surface (A12)		leted Da	ark Suria		*Indicators of hyd	rophytic vegetation and weltand
San	idy Mucky Minera	II (51) Deet (62		lox Depr	essions ((F8)	hydrology must l	be present, unless disturbed or
5 Cr	n Mucky Peat or	Peat (53)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					-		Hydric soil prese	nt? Y
Depth (inche	es):				-			
HYDROLO	DGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required: check	all that ar	only)		Secondary In	dicators (minimum of two required
<u>Surface</u>	Water (Δ 1)				Eauna (B	13)	<u>Surface</u>	Soil Cracks (B6)
High Wa	iter Table (A2)			True Ag	uatic Plan	nts (B14)	X Drainag	e Patterns (B10)
Saturatio	on (A3)			Hvdroae	n Sulfide	Odor (C1	1) Drv-Sea	ason Water Table (C2)
X Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots Cravfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Saturati	on Visible on Aerial Imagery (C9)
X Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) Stunted	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Geomo	rphic Position (D2)
Iron Dep	osits (B5)			(C6)			FAC-Ne	eutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	r (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):	In	dicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):	h	ydrology present? Y
(includes ca	pillary fringe)							
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if available:	
Remarks:								

Project/Site TH 19 Marshall City	//County:	Marshall/Lyor	n County Samplin	g Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MI	N Sampling	g Point:	4CU
Investigator(s): Lewis, DeCesare		Section, Townsh	nip, Range:	S4, T111N,	R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ave, convex, none):	Co	oncave
Slope (%): Lat: 44°26'37.75"N	Long:	95°47'36.4	45"W Datum:		
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH,	R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the yea	r? Y	(If no, explain in ren	narks)	
Are vegetation X , soil , or hydrology	signific	antly disturbed?	Are "nor	mal circumsta	nces"
Are vegetation , soil , or hydrology	- natural	ly problematic?		pre	sent? No
SUMMARY OF FINDINGS	-		(If needed, expla	ain any answe	rs in remarks.)
Hydrophytic vegetation present? N	1				
Hydric soil present? N	ls ti	he sampled are	a within a wetland	I? N	N
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	and site ID:		
Pomarke: (Explain alternative precedures here or in a separate	roport)	•			
Itemarks. (Explain alternative procedures here of in a separate	epon.)				
The vegetation is art	ificially p	planted and m	nanicured.		
VEGETATION Use scientific names of plants.			Deminence Ter		
Absolute Tree Stratum (Plot size: 30' Padius) % Cover	Domina	ant Indicator	Dominance Tes	st worksneet	
1	Opecie	55 01803	that are OBL, FAC	CW, or FAC:	1 (A)
2			Total Number	of Dominant	
3			Species Acro	ss all Strata:	2 (B)
4			Percent of Domin	ant Species	
5	Total C		that are OBL, FAU	SVV, or FAC:	50.00% (A/B)
Sanling/Shrub stratum (Plot size: 5' Padius)	= 10tal C	over	Prevalence Ind	ov Workshoo	+
1			Total % Cover of	of:	•
2			OBL species	0 x 1 =	0
3			FACW species	0 x 2 =	0
4	-		FAC species	50 x 3 =	150
5			FACU species	50 x 4 =	200
0	= Total C	over	UPL species	0 x 5 =	0
Herb stratum (Plot size: 5' Radius)			Column totals	100 (A)	<u>350</u> (B)
1 Polygonum aviculare 50	Y	FAC	Prevalence Inde	x = B/A =	3.50
2 Taraxacum officinale 40	- <u>Y</u>	FACU			
3 Festuca arundinacea 10	N	FACU	Hydrophytic Ve	getation Indi	cators:
4				tost is >50%	vegetation
6			Prevalence	index is $<3.0^{\circ}$	
7			Marshariaa		(a ray ida
8			supporting	adaptations"	(provide (s or on a
9			separate sh	eet)	
10			(explain): Ad	djacent to man	aged plant
100	= Total C	over	comm.		
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)	-		*Indicators of hydri	c soil and wetlan	d hydrology must be
			present, ur Hydrophyti	ness disturbed or	propiernatic
<u>د</u>	- Total C	over	vegetation	•	
0			present?	Ν	
Remarks: (Include photo numbers here or on a separate sheet)			1		

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Rec	dox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-13	7.5YR 5/3						CLAY LOAN	1	
6-21	7.5YR 4/2		1				LOAM		
• -									
			l						
			l	 					
		l							
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Probl	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	t Prairie Re	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)	• `	Stri	pped Ma	trix (S6)	• /= 4 \		/langanese	Masses (F12) (LKK K, L, K)
Hyu Stro	Irogen Sulfide (A4	+)			Ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
3ua 2 cr	atified Layers (Ab)	1		My Gieye	ed Manz	((⊢∠)		(explain in	remarks)
2 01	Neted Relow Dark	Surface		Neteu Ivia		(F6)			
	k Dark Surface (A12)	Der	pleted Da	ark Surfa	(F7)	*Indica	tors of hydr	onhutic vocatation and weltand
San	dv Mucky Minera	l (S1)		lox Depr	essions ((F8)	hvdro	loav must b	e present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3)			(• -)		log,	problematic
Restrictive	l aver (if observe	od).							
Tvpe:		<i>.</i>					Hvdric s	soil presen	t?N
Depth (inche	es):				•				
Domarke:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that ar	(ylqc		Se	condarv Ind	licators (minimum of two required)
Surface	Water (A1)	<u>v</u>		Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	, nts (B14)		Drainage	e Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algai Ivia	It OF UFUSI (D4)			Kecent i	ron Keau	iction in 1	illea Soiis	EAC-Nei	DNIC Position ($D2$)
Inundatio	on Visible on Aeria	I Imager	/ (B7)		ck Surfac	e (C7)	_		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:						·		
Surface wate	er present?	Yes	No	x	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	/drology present? N
(includes ca	pillary fringe)			<u> </u>					
Describe rec	corded data (strea	im gauge	a, monitoring well	, aerial p	hotos, pr	evious ir	ispections), if a	available:	
Remarks:									

Project/Site TH 19	Marshall		City/C	ounty: I	Marshall/Lyc	on County	Sampling Dat	e: 9/30)/21
Applicant/Owner:	Minnesota Depa	rtment of Transportation	on	State:	N	1N	Sampling Poir	nt: 4	D
Investigator(s): Le	wis, DeCesare			Sec	ction, Towns	hip, Range	S4	, T111N, R41V	V
Landform (hillslope	e, terrace, etc.):	Hillslope		Local	l relief (conc	ave, conve	k, none):	Concave)
Slope (%):	Lat:	44°26'36.81"N		Long:	95°47'40	.76"W	Datum:		
Soil Map Unit Nam	ie51: La Prairie Lo	am			NW	/I Classifica	tion:	R2UBH, R2UE	BG
Are climatic/hydrol	ogic conditions of	the site typical for this	time of	the year?	Y	(If no, expl	ain in remarks)	
Are vegetation	, soil	, or hydrology		significant	ly disturbed	?	Are "normal c	ircumstances"	
Are vegetation	, soil	, or hydrology		naturally p	problematic?	,		present?	Yes
SUMMARY OF	FINDINGS					(If need	ded, explain an	iy answers in re	emarks.)
Hydrophytic ve	getation present?	Y							
Hydric soil pre	sent?	Y		Is the	sampled ar	ea within a	wetland?	Y	
Indicators of w	etland hydrology p	present? Y		If yes, o	optional wet	land site ID			
Remarks: (Explain	alternative procee	Jures here or in a sepa	rate rep	ort.)					
VEGETATION	Use scientific	names of plants.							
		Abs	olute	Dominant	Indicator	Domin	ance Test Wo	orksheet	
Tree Stratum	(Plot size: 30	<u>)' Radius</u>) % C	Cover	Species	Staus	Number	of Dominant S	pecies	(4)
1						that are	OBL, FACW, O	rFAC: 3	(A)
3						_ Tota Spe	l Number of Do	minant Strata: 3	(B)
4					•	- Dercent	of Dominant S		(Ľ)
5						that are	OBL, FACW, o	r FAC: 100.00	0% (A/B)
			0 =	Total Cov	er	-			`

	0	= Total Cover		vegetation present? Y
2				Hydrophytic
1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Marchanics strature (Distained 20) Device	<u>100</u>	= Total Cover		comm.
10				(explain): Adjacent to managed plant
9				separate sheet)
8				Morphogical adaptations* (provide supporting data in Remarks or on a
67				$\frac{X}{2}$ Prevalence index is $\leq 3.0^{\circ}$
5				X Dominance test is >50%
4		:		Rapid test for hydrophytic vegetation
3 Laportea canadensis	20	Y	FACW	Hydrophytic Vegetation Indicators:
2 Boehmeria cylindrica	30	Y	OBL	
1 Rhamnus cathartica	, 50	Y	FAC	Prevalence Index = $B/A = 2.20$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 220 (B)
5		- Total Cover		FACU species $0 \times 4 = 0$
4				FAC species $50 \times 3 = 150$
3				FACW species $20 \times 2 = 40$
2				OBL species <u>30</u> x 1 = <u>30</u>
1				Total % Cover of:
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
	0	= Total Cover		、
5				that are OBL, FACW, or FAC: 100,00% (A/B)
4				Percent of Dominant Species

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
0-8	7.5YR 5/2						LOAM		
8.21	7.5VP 4/2							М	
0-21	7.51K 4/2						SILTTLOA	IVI	
+ T 0 0									
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:					(a 1)	Indicator	s for Proble	ematic Hydric Soils:
X Hist	isol (A1)		Sar	idy Gleye	ed Matrix	(S4)		t Prairie Re	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	idy Redo	x (S5)		Dark	Surface (S/	() (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-r	vianganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	1)	Loa	my Mucł	ky Minera	al (⊢1)	Very	Shallow Dai	rk Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	r (explain in	remarks)
2 cr	n Muck (A10)	o (atrix (F3)	(50)			
	Dieted Below Dark		(A11) Rec	IOX Dark	Surface	(F6)			
	ck Dark Surface (A12)	Dep	leted Da	irk Suria		*Indica	ators of hydr	ophytic vegetation and weltand
San 	nay Mucky Minera	II (51) Deet (82	, <u> </u>	lox Depr	essions ((67)	hydro	logy must b	e present, unless disturbed or
^{5 Cl}	IT MUCKY Peat OF	Peal (55)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric	soil presen	t? <u>Y</u>
Depth (inche	es):								
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check a	all that a	(ylac		Se	condarv Ind	licators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	-	X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			—	Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	phic Position (D2)
Iron Dep	osits (B5)			(C6)			_	FAC-Neu	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
X Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:	X		N/	D- " "				
Surface wate	er present?	Yes	No	<u> </u>	Depth (i	nches):			liantana of wattanat
vvater table	present?	Yes	No	<u>X</u>	Depth (i	nches):		Ind	
Gaturation p	nillary frings)	res		~	Depth (I	nches):		ny	
					hata - i		an a fig = - \ 'f		
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	notos, pr	evious ir	ispections), if a	avallable:	
Remarks:									
. tomanto.									

Project/Site TH 19 Marshall Ci	ity/County:	Marshall/Lyor	County Sampling	Date: 9/30/21
Applicant/Owner: Minnesota Department of Transportation	Sta	te: MN	N Sampling	Point: 4DU
Investigator(s): Lewis, DeCesare	5	Section, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'36.57"N	Long:	95%47'40.7	75"W Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	e of the yea	r? Y	(If no, explain in rema	arks)
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "norm	al circumstances"
Are vegetation , soil , or hydrology	naturall	y problematic?		present? No
SUMMARY OF FINDINGS	_		(If needed, explai	n any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	ls ti	ne sampled are	a within a wetland?	' N
Indicators of wetland hydrology present? N	lf ye	s, optional wetla	ind site ID:	
Remarks: (Explain alternative procedures here or in a separate	report)	•		
Tremarks. (Explain alternative procedures here of in a separate	e report.)			
The vegetation is a	rtificially p	lanted and m	anicured.	
VECETATION Lies scientific names of plants				
	Densi-		Dominance Toet	Worksheet
ADSOIUT Tree Stratum (Plot size: 30' Radius) % Cove	e Domina er Specie	ant indicator	Number of Domino	
1(rist of 20) // // // // // // // // // // // // //			that are OBL, FAC	N, or FAC: 1 (A)
2			Total Number of	f Dominant
3			Species Across	all Strata: <u>3</u> (B)
4			Percent of Domina	Int Species
<u> </u>	- Total C		that are OBL, FAC	N, OFFAC. <u>33.33%</u> (A/B)
Sapling/Shrub stratum (Plot size: 5' Radius)		0,01	Prevalence Index	x Worksheet
1			Total % Cover of:	
2	_		OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	50 x 3 = 150
5			FACU species	50 x 4 = 200
	= Total C	over	UPL species	$0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals	<u>100 (A) 350 (B)</u>
1 Polygonum aviculare 50	Y	FAC	Prevalence Index	= B/A = 3.50
2 Taraxacum officinale 30	Y			
s restuca arundinacea 20		FACU	Rapid test for	bydrophytic vegetation
5			Dominance te	est is >50%
6			Prevalence in	idex is ≤3.0*
7			Morphogical	adaptations* (provide
8			supporting da	ita in Remarks or on a
9			separate shee	et)
10			(explain): Adj	acent to managed plant
100	= Total C	over	comm.	
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)			*Indicators of hydric	soil and wetland hydrology must be
2			Hvdrophvtic	
	= Total C	over	vegetation	
, i i i i i i i i i i i i i i i i i i i			present?	<u>N</u>
Remarks: (Include photo numbers here or on a separate sheet	:)			

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	absence of indicators.)
Depth	Matrix		Red	dox Feat	ures			-
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	7.5YR 4/2						CLAY LOAM	
6-20	7.5YR 5/2						CLAY LOAM	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **I	Location: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators for	Problematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast Pra	iirie Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Surfa	ace (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Mang	ganese Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Shal	low Dark Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (exp	olain in remarks)
2 cr	m Muck (A10)		Dep	pleted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (⊦7)	*Indicators	of hydrophytic vegetation and weltand
San	idy Mucky Minera	I (S1) Deet (00	、Rec	lox Depr	essions ((F8)	hydrology	must be present, unless disturbed or
5 Cr	n Mucky Peat or	Peat (53)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					-		Hydric soil	present? N
Depth (inche	es):				-			
HYDROLO	DGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	oply)		Second	lary Indicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	S	urface Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)	D	Prainage Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l)D	ry-Season Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots C	rayfish Burrows (C8)
Drift Dor	it Deposits (B2)			Brocono	o of Podu	upod Iron	(CA) - S	aturation Visible on Aerial Imagery (C9)
Algal Ma	ousius (DS) it or Crust (B4)			Recent		iction in T	(C4) 3	Geomorphic Position (D2)
Iron Dep	(B_{+})			(C6)	Ion Redu		F	AC-Neutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hydrology present? N
(includes ca	piliary minge)							
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	ispections), if availa	able:
Remarks:								
-								

Marshall		City/County	/: <u>M</u>	arshall/Lyon	County	Sampling	Date:	9/30/2	21
Minnesota Dep	partment of Transportation	on S	tate:	MN		Sampling	Point:	4E	
wis, DeCesare			Secti	on, Township	o, Range	:	S4, T11	11N, R41W	
, terrace, etc.):	Hillslope	I	_ocal r	elief (concav	e, conve	x, none):		Concave	
Lat:	44°26'36.81"N	Long	j:	95°47'43.68	8"W	Datum:			
e51: La Prairie L	_oam			NWI	Classifica	ition:	R2U	BH, R2UBG	ì
ogic conditions o	of the site typical for this	time of the ye	ear?	Y (I	f no, exp	lain in rem	arks)		
, soil	, or hydrology	signif	icantly	disturbed?		Are "norn	nal circun	nstances"	
, soil	, or hydrology	natur	ally pro	oblematic?				present?	Yes
FINDINGS					(If nee	ded, explai	in any an	swers in ren	narks.)
getation present	t? Y								
sent?	Y	ls	the sa	ampled area	within a	a wetland?	? _	Y	
etland hydrology	r present? Y	lfy	yes, op	tional wetlar	id site ID	:			
alternative proce	edures here or in a sepa	arate report.)							
-									
- Use scientif	ic names of plants.								
	Abs	olute Domi	nant	Indicator	Domin	ance Test	t Worksh	neet	
(Plot size:	30' Radius) % C	over Spec	cies	Staus	Numbe	r of Domina	ant Specie	es	
	Marshall Minnesota Dep wis, DeCesare , terrace, etc.): E51: La Prairie L ogic conditions c , soil FINDINGS getation present sent? etland hydrology alternative proce - Use scientif (Plot size:	Marshall Minnesota Department of Transportation wis, DeCesare , terrace, etc.): Hillslope Lat: 44*26*36.81"N e51: La Prairie Loam ogic conditions of the site typical for this	Marshall City/County Minnesota Department of Transportation S wis, DeCesare S , terrace, etc.): Hillslope I Lat: 44°26'36.81"N Long e51: La Prairie Loam Long S ogic conditions of the site typical for this time of the year , soil , or hydrology signif	Marshall City/County: Maintege Minnesota Department of Transportation State: wis, DeCesare Secti , terrace, etc.): Hillslope Local r Lat: 44'26'36.81"N Long: e51: La Prairie Loam Logic conditions of the site typical for this time of the year? significantly	Marshall City/County: Marshall/Lyon Minnesota Department of Transportation State: MN wis, DeCesare Section, Township , terrace, etc.): Hillslope Local relief (concav Lat: 44°26'36.81"N Long: 95°47'43.68 e51: La Prairie Loam NWI Cogic conditions of the site typical for this time of the year? Y (I	Marshall City/County: Marshall/Lyon County Minnesota Department of Transportation State: MN wis, DeCesare Section, Township, Range , terrace, etc.): Hillslope Local relief (concave, converted to the state) Lat: 44º26'36.81"N Long: 95º47'43.68"W e51: La Prairie Loam VWI Classificator VWI Classificator ogic conditions of the site typical for this time of the year? Y (If no, explication)	Marshall City/County: Marshall/Lyon County Sampling Minnesota Department of Transportation State: MN Sampling wis, DeCesare Section, Township, Range:	Marshall City/County: Marshall/Lyon County Sampling Date: Minnesota Department of Transportation State: MN Sampling Point: wis, DeCesare Section, Township, Range: S4, T1' , terrace, etc.): Hillslope Local relief (concave, convex, none): Lat: 44'26'36.81"N Long: 95'47'43.68"W Datum: e51: La Prairie Loam NWI Classification: R2U ogic conditions of the site typical for this time of the year? Y (If no, explain in remarks)	Marshall City/County: Marshall/Lyon County Sampling Date: 9/30/2 Minnesota Department of Transportation State: MN Sampling Point: 4E wis, DeCesare Section, Township, Range: S4, T111N, R41W 4E , terrace, etc.): Hillslope Local relief (concave, convex, none): Concave

1				that are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across all Strata: 3 (B)
4 5	0	= Total Cover		Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
Sapling/Shrub stratum (Plot size: 5' Radius)	Ū	_		Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species $30 \times 2 = 60$
4				FAC species $20 \times 3 = 60$
5				FACU species $50 \times 4 = 200$
	0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)		_		Column totals 100 (A) 320 (B)
1 Fraxinus americana	50	Y	FACU	Prevalence Index = B/A = 3.20
2 Elymus virginicus	30	Y	FACW	
3 Rhamnus cathartica	20	Y	FAC	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	100	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separa	te sheet)			•

Profile Dese	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Red	dox Feat	ures_				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-13	7.5YR 5/3						CLAY		
13-21	7.5YR 5/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	s for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast	Prairie Rec	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-N	langanese l	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)			
X Thio	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicat	tors of hydro	ophytic vegetation and weltand
San	idy Mucky Minera	I (S1)	、Rec	lox Depr	essions ((F8)	hydrol	ogy must be	e present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:					-		Hydric s	soil present	t? <u>Y</u>
Depth (inche	es):								
HYDROLO	DGY								
Wetland Hv	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check :	all that ar	oply)		Se	condary Indi	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Eauna (B	13)	000	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aa	uatic Plar	nts (B14)		X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) <u> </u>	Dry-Seas	on Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturation	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5) an Misible an Aaria		(DZ)	(C6)	-l. 0	- (07)	_	FAC-Neu	tral Test (D5)
Sparsoly	Vegetated Conca	i imagery	(B7)		ck Surfac	e (C7)			
Water-S	tained Leaves (B9			Other (F	volain in	ala (D9) Romarks)		
Field Obsor	wations:)				Remains	/	- T	
Surface wate	er present?	Yes	No	х	Denth (i	nches).			
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	drology present? Y
(includes ca	pillary fringe)				``	,			
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if a	vailable:	
Remarks:									

Project/Site TH 19 Marshall Ci	ty/County:	Marshall/Lyor	County Sampling	Date: 9/30/21
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	Sampling	Point: 4EU
Investigator(s): Lewis, DeCesare	s	Section, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'36.49"N	Long:	95°47'43.8	6"W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year	·? Y	(If no, explain in rema	arks)
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "norm	al circumstances"
Are vegetation , soil , or hydrology	naturally	y problematic?		present? No
SUMMARY OF FINDINGS	_ `		(If needed, explai	n any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	ls th	ne sampled are	a within a wetland?	N
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate	report.)			
	(lopoliti)			
The vegetation is a	rtificially p	lanted and m	anicured.	
VEGETATION Use scientific names of plants				
	e Domina	nt Indicator	Dominance Test	Worksheet
Tree Stratum (Plot size: 30' Radius) % Cove	r Specie	s Staus	Number of Domina	nt Species
1			that are OBL, FAC	<i>N</i> , or FAC: 0 (A)
2			Total Number of	Dominant
3			Species Across	all Strata: 1 (B)
4			Percent of Domina	nt Species
5			that are OBL, FAC	<i>N</i> , or FAC: 0.00% (A/B)
Sonling/Shruh strature (Plot size: 5' Padius)	= 1 otal Co	over	Brovalance Index	x Warkshaat
1			Total % Cover of:	K WORKSHEEL
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	0 x 3 = 0
5			FACU species	100 x 4 = 400
0	= Total Co	over	UPL species	$0 \times 5 = 0$
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column totals	<u>100</u> (A) <u>400</u> (B)
1 Glechoma hederacea 90	Y	FACU	Prevalence Index	= B/A = 4.00
2 Festuca arundinacea 10	N	FACU	Lludronbutic Vec	etation Indicatore.
3			Rapid test for	bydrophytic vegetation
5			Dominance te	est is >50%
6			Prevalence in	idex is ≤3.0*
7	_		Morphogical a	adaptations* (provide
8			supporting da	ta in Remarks or on a
9			separate shee	et)
10			(explain): Adj	acent to managed plant
100	= I otal Co	over	comm.	
1			*Indicators of hydric present, unle	soil and wetland hydrology must be ss disturbed or problematic
2			Hydrophytic	
0	= Fotal Co	over	present?	Ν
Remarks: (Include photo numbers here or on a separate sheet)		1 -	
	/			

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Re	dox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-20	7.5YR 5/3						LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduc	ed Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	: (S4)	Coast	t Prairie Red	lox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	x (S5)		Dark	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-N	langanese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Loa	amy Mucl	ky Minera	al (F1)	Very	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5))	Loa	amy Gley	ed Matrix	(F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)		De	pleted Ma	atrix (F3)				
Dep	bleted Below Dark	Surface	e (A11) Ree	dox Dark	Surface	(F6)			
	ck Dark Surface (A12)		pleted Da	irk Surfa	Ce (F7)	*Indica	tors of hydro	ophytic vegetation and weltand
Sar	ndy Mucky Minera	ll (51) Deet (52	, <u> </u>	dox Depr	essions ((F8)	hydrol	logy must be	e present, unless disturbed or
5 CI	II MUCKY Peat OF	Peal (55)			-			problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric s	soil present	t? <u>N</u>
Depth (inche	es):								
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	(ylac		Se	condarv Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	, nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) —	Dry-Seas	on Water Table (C2)
Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish I	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	bosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted c	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in 1	illed Soils	Geomorp	training (D2)
Inundatio	on Visible on Aeria	l Imager	(B7)	Thin Mu	ck Surfac			FAC-Neu	itrai Test (D5)
Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:	,		- `			,		
Surface wat	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	drology present? N
(includes ca	pillary fringe)								
Describe rec	corded data (strea	am gauge	e, monitoring wel	l, aerial p	hotos, pr	revious ir	spections), if a	available:	
Remarks:									
Remarks:									

Project/Site TH 19 Marshall	City/County:	Marshall/I von	County Sampling	Date: 9/30/21	
Applicant/Owner: Minnesota Department of Transportatio	n Stat	e: MN	Sampling F	Point: 4F	
Investigator(s): Lewis. DeCesare	<u> </u>	ection. Townshi	ip. Range:	S4. T111N. R41W	
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (conca	ve. convex. none):	Concave	
Slope (%): Lat: 44°26'36.48"N	Lona:	95%47'45.9	3"W Datum:		
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG	
Are climatic/hydrologic conditions of the site typical for this t	ime of the year	? Y (If no, explain in remar	·ks)	
Are vegetation , soil , or hydrology	significa	intly disturbed?	Are "norma	al circumstances"	
Are vegetation , soil , or hydrology	naturally	/ problematic?		present? Yo	es
SUMMARY OF FINDINGS			(If needed, explain	any answers in rema	ırks.)
Hydrophytic vegetation present? Y					
Hydric soil present? Y	ls th	e sampled are	a within a wetland?	Y	
Indicators of wetland hydrology present? Y	If yes	s, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separ	rate report.)				
VEGETATION Use scientific names of plants					
	lute Domina	nt Indicator	Dominance Test	Worksheet	
Tree Stratum (Plot size: 30' Radius) % Co	over Specie	s Staus	Number of Dominan	t Species	
1			that are OBL, FACW	, or FAC: 2	(A)
2			Total Number of	Dominant	
3			Species Across	all Strata: 2	(B)
4			Percent of Dominan	t Species	
5			that are OBL, FACW	, or FAC: 100.00%	(A/B)
	= 1 otal Co	over		14 (
<u>Saping/Shrub stratum</u> (Plot size: <u>5 Radius</u>)			Total % Cover of:	worksneet	
			OBL species	$40 \times 1 - 40$	
3			FACW species	$\frac{40}{0}$ x 2 = 0	-
4			FAC species	$\frac{6}{60}$ x 3 = 180	-
5			FACU species	$\frac{0}{0} \times 4 = 0$	-
) = Total Co	over	UPL species	$\frac{0}{0} \times 5 = 0$	-
Herb stratum (Plot size: 5' Radius)			Column totals	100 (A) 220	(B)
1 Rhamnus cathartica 6	0 Y	FAC	Prevalence Index =	= B/A = 2.20	•
2 Boehmeria cylindrica 4	0 Y	OBL			•
3			Hydrophytic Vege	atation Indicators:	
4			Rapid test for h	nydrophytic vegetation	ก
5			X Dominance tes	st is >50%	

6			X Prevalence index is ≤3.0*		
8 9			Morphogical adaptations [*] (provide supporting data in Remarks or on a separate sheet)		
10			(explain): Adjacent to managed plant		
-	100	= Total Cover	comm.		
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>) 1			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2			Hydrophytic		
	0	= Total Cover	vegetation present? Y		
Remarks: (Include photo numbers here or on a separa	te sheet)			
		/			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth <u>Matrix Redox Features</u>						-			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ire	Remarks
0-14	7.5YR 4/1						LOAM		
-							_		
1 ype: C = C	oncentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	^^Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	Il Indicators:					(a 1)	Indicator	s for Proble	ematic Hydric Soils:
X Hist	isol (A1)		Sar	idy Gleye	ed Matrix	(S4)	Coas	t Prairie Re	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	idy Redo	ox (S5)		Dark	Surface (S/	
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)			vianganese	Masses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	+)	Loa	my Muck	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	itified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other	r (explain in	remarks)
2 cr	n Muck (A10)	0			atrix (F3)	(50)			
	Neted Below Dark			JOX Dark	Surface	(F0)			
	K Dark Sunace (ATZ)			ark Suria		*Indica	itors of hydr	ophytic vegetation and weltand
San	oy Mucky Minera	II (51) Deet (82	, <u> </u>	lox Depr	essions ((67)	hydro	logy must b	e present, unless disturbed or
5 CI	IT MUCKY Peat of	Peal (55)						problematic
Restrictive	Layer (if observe	ed):							
Туре:							Hydric	soil presen	t? <u>Y</u>
Depth (inche	es):								
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that ap	oply)		<u>Se</u>	condary Ind	licators (minimum of two required)
Surface	Water (A1)			Aquatic I	Fauna (B	13)		Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aqu	uatic Plar	nts (B14)	_	X Drainage	e Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1)	Dry-Seas	son Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	it Deposits (B2)			(C3)				Saturatio	on Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	Iced Iron	(C4)	Stunted	or Stressed Plants (D1)
Algai Ma	t or Crust (B4)			Recent I	ron Reau	iction in 1			utral Tast (D5)
	osiis (D3) on Visible on Aeria	Imagen	(B7)	Thin Mu	ck Surfac		—	FAC-Net	dia lest (D3)
Sparsely	Vegetated Conca	ive Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xolain in	Remarks)		
Field Obser	vations:	/					/	-	
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Inc	licators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	/drology present? Y
(includes ca	oillary fringe)	-			-				
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if a	available:	
Remarks:									

Project/Site TH 19 Marshall Cit	ty/County:	Marshall/Lyon	County Sampling	Date: 9/30/21			
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	Sampling	Point: 4FU			
Investigator(s): Lewis, DeCesare	s	Section, Township, Range: S4. T111N. R41W					
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Concave			
Slope (%): Lat: 44°26'36.45"N	Long:	95%47'46.3	4"W Datum:				
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG			
Are climatic/hydrologic conditions of the site typical for this time	of the year	r? Y (If no, explain in rema	arks)			
Are vegetation X, soil, or hydrology	significa	antly disturbed?	Are "norm	al circumstances"			
Are vegetation , soil , or hydrology	naturall	y problematic?		present? No			
SUMMARY OF FINDINGS	_		(If needed, explair	n any answers in remarks.)			
Hydrophytic vegetation present? N							
Hydric soil present? N	ls th	ne sampled are	a within a wetland?	Ν			
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:				
Remarks: (Explain alternative procedures here or in a separate	report.)						
The vegetation is ar	tificially p	lanted and m	anicured.				
VEGETATION Use scientific names of plants.							
Absolute	e Domina	Indicator	Dominance Test	Worksheet			
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cove	r Specie	s Staus	Number of Domina	nt Species			
1			that are OBL, FAC	N, or FAC: 0 (A)			
2			Total Number of	Dominant			
3			Species Across	all Strata: <u>1</u> (B)			
5			that are OBL_EAC	nt Species			
	= Total C	over					
Sapling/Shrub stratum (Plot size: 5' Radius)	_		Prevalence Index	x Worksheet			
1			Total % Cover of:				
2			OBL species	0 x 1 = 0			
3			FACW species	0 x 2 = 0			
4			FAC species	$0 \times 3 = 0$			
<u> </u>	Total C			$\frac{100}{0}$ x 4 = $\frac{400}{0}$			
U Herb stratum (Plot size: 5' Radius)		over	Column totals	$\frac{0}{100}$ (A) $\frac{400}{100}$ (B)			
1 Festuca arundinacea 100	v	FACU	Prevalence Index	-B/A = 4.00			
		1400	Frevalence index	= D/A = 4.00			
3			Hydrophytic Veg	etation Indicators:			
4			Rapid test for	hydrophytic vegetation			
5			Dominance te	est is >50%			
6	_		Prevalence in	dex is ≤3.0*			
7			Morphogical a	adaptations* (provide			
8			supporting da	ta in Remarks or on a			
9 10				j) j, j			
100	= Total C	over	comm.	acent to managed plant			
Woody vine stratum (Plot size: 30' Radius)	_		*Indicators of hydric	soil and wotland bydrology must be			
1			present, unle	ss disturbed or problematic			
2			Hydrophytic				
0	= Total C	over	vegetation	N			
			prosent:				
Remarks: (Include photo numbers here or on a separate sheet))						

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abse	nce of indicators.)
Depth	Depth Matrix Redox Features							
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	7.5YR 3/1						CLAY LOAM	
*Type: C = 0	Concentration, D :	= Depleti	on, RM = Reduce	ed Matrix	a, MS = N	lasked S	and Grains. **Locat	ion: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicators for Prol	plematic Hydric Soils:
His	tisol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast Prairie R	edox (A16) (LRR K, L, R)
His	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Surface (67) (LRR K, L)
Bla	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Manganes	e Masses (F12) (LRR K, L, R)
Hyc	drogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Shallow D	ark Surface (TF12)
Stra	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (explain	n remarks)
2 ci	m Muck (A10)		Dep	pleted Ma	atrix (F3)			
Dep	pleted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
Thi	ck Dark Surface (A12)	Dep	pleted Da	ark Surfa	ce (F7)	*Indicators of hy-	drophytic vegetation and weltand
Sar	ndy Mucky Minera	il (S1)	、Rec	lox Depr	essions	(⊦8)	hydrology must	be present, unless disturbed or
5 CI	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					_		Hydric soil prese	ent? N
Depth (inche	es):				-			
HYDROLO	DGY							
Wetland Hy	drology Indicate	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that a	oply)		Secondary Ir	ndicators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	e Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Draina	ge Patterns (B10)
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C	1) Dry-Se	ason Water Table (C2)
Water N	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayfis	h Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Satura	tion Visible on Aerial Imagery (C9)
	tt Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)							or Stressed Plants (D1)
Iron Der	a(0) Clust (B4)			(C6)	IION Redu		FAC-N	eutral Test (D5)
Inundati	on Visible on Aeria	l Imager	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)	· · ·	Other (E	xplain in	Remarks)	
Field Obser	rvations:							
Surface wat	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):	h	ndicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		nydrology present? N
(includes ca	pillary fringe)							
Describe ree	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if available:	
Remarks:								

Project/Site TH 19 Marshall				ty: N	larshall/Lyon County	Sampling Date:		9/30/21	
Applicant/Owner:	Minnesota Depar	tment of Transportatio	n	State:	MN	Sampling	Point:	4G	
Investigator(s): Lev	wis, DeCesare			Sect	ion, Township, Range	:	S4, T11	1N, R41W	
Landform (hillslope	, terrace, etc.):	Hillslope		Local	relief (concave, conve	x, none):		Concave	
Slope (%):	Lat:	44≌6'36.75"N	Lor	ig:	95°47'47.62"W	Datum:			
Soil Map Unit Nam	e51: La Prairie Loa	am			NWI Classifica	ation:	R2U	BH, R2UBG	
Are climatic/hydrolo	ogic conditions of th	he site typical for this t	time of the	year?	Y (If no, exp	lain in rem	arks)		
Are vegetation	, soil	, or hydrology	sigr	ificantl	y disturbed?	Are "norn	nal circum	nstances"	
Are vegetation	, soil	, or hydrology	natu	irally pi	oblematic?			present? Yes	
SUMMARY OF	FINDINGS				(If nee	ded, explai	in any ans	swers in remarks.)	
Hydrophytic ve	getation present?	Y							
Hydric soil pres	sent?	Y	1	s the s	ampled area within a	a wetland?	?	Υ	
Indicators of we	etland hydrology pr	resent? Y	li	If yes, optional wetland site ID:					
Remarks: (Explain	alternative procedu	ures here or in a sepa	rate report.)					
VEGETATION -	- Use scientific	names of plants							

· · · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	Dominance Test Worksheet					
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>)	% Cover	Species	Staus	Number of Dominant Species					
1 Acer negundo	40	Y .	FAC	that are OBL, FACW, or FAC: <u>3</u> (A)					
2 Ribes cynosbati	30	Y	FAC	Total Number of Dominant					
3 Fraxinus pennsylvanica	30	<u>Y</u>	FACW	Species Across all Strata: <u>3</u> (B)					
4				Percent of Dominant Species					
5		<u></u>		that are OBL, FACW, or FAC: 100.00% (A/B)					
Quella e/Ohenik strature (District size)	<u>, 100</u>	= I otal Cover		Describer as he day Washak as (
Sapling/Shrub stratum (Plot size: 5 Radius)			Prevalence Index Worksheet					
1			<u> </u>	Total % Cover of:					
2				$OBL species \qquad 0 \qquad x \ r = \qquad 0$					
3				FACW species $30 \times 2 = 60$					
4				FAC species $70 \times 3 = 210$					
5		Total Causer		FACU species $0 \times 4 = 0$					
Liech stratum (Dist size) 5' Dedius	、	= Total Cover		$\begin{array}{c} \text{OPL species} 0 x \text{ 5} = 0 \\ \text{Oplume tatals} 100 (A) 270 (B) \end{array}$					
Herb stratum (Plot size: 5 Radius)			Column totals 100 (A) 270 (B)					
1				Prevalence Index = $B/A = 2.70$					
2									
3				Hydrophytic Vegetation Indicators:					
4				Rapid test for hydrophytic vegetation					
5				X Dominance test is >50%					
6				X Prevalence index is $\leq 3.0^*$					
7				Morphogical adaptations* (provide					
8				supporting data in Remarks or on a					
9				separate sneet)					
10				(explain): Adjacent to managed plant					
	、 <u> </u>	= I otal Cover		comm.					
1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
2				Hydrophytic					
	0	= Total Cover		vegetation					
				present? Y					
Remarks: (Include photo numbers here or on a sepa	rate sheet)								
Profile Des	cription: (Descr	ibe to th	e depth needed	d to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
--------------	-----------------------	------------------	------------------	--------------	--------------------------	-----------------	--------------------	--------------------	-----------------------------------
Depth	Matrix		Re	edox Feat	ures				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Text	ure	Remarks
0-5	7.5YR 6/2						LOAM		
5-14	GLEY 1 6/1						SANDY CI	ΑΥΙΟΑΜ	
5 14	OLLI I O/I						UNID I UL		
				_					
					l				
*Type: C = C	concentration, D =	= Depleti	on, RM = Reduc	ced Matrix	k, MS = №	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:		N/ O			(0 ()	Indicato	rs for Proble	ematic Hydric Soils:
Hist	tisol (A1)		<u> </u>	indy Gleye	ed Matrix	(S4)	Coa	st Prairie Red	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sa	indy Redo	ox (S5)		Dark	Surface (S7	() (LRR K, L)
Blac	ck Histic (A3)		St	ripped Ma	ıtrix (S6)		Iron-	Manganese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	4)	Lo	amy Mucl	ky Minera	al (F1)	Very	Shallow Da	'k Surface (TF12)
Stra	atified Layers (A5))	Lo	amy Gley	ed Matrix	(F2)	Othe	er (explain in	remarks)
2 cr	m Muck (A10)		De	epleted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11) Re	dox Dark	Surface	(F6)			
Thio	ck Dark Surface (A12)	De	epleted Da	ark Surfa	ce (F7)	*Indica	ators of hydr	ophytic vegetation and weltand
Sar	idy Mucky Minera	l (S1)		edox Depr	essions	(F8)	hydro	ology must b	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Type:							Hydric	soil presen	t? Y
Depth (inche	es):				-				
Pomorko:									
	OGY								
Wotland Hy	drology Indicate	vre:							
Drimony Indi		ns. of one io	required, sheek	all that a	nnhu)		6	ممرم مام سر الم ما	
Primary Indi	cators (minimum)	of one is	requirea; check	all that a	<u>ppiy)</u> Faura (D	40)	<u>Se</u>	econdary Ind	icators (minimum of two required)
Surface	Vvater (A1)				Fauna (B	13) to (D14)	-	Surface :	Soll Cracks (B6)
Hign Wa	iter Table (A2)				uatic Plar	Odor(C)		X Drainage	Patterns (B10)
X Saturatio	on (A3) Jorke (B1)					baraa an	l) Living Booto	Dry-Seas	
	at Deposite (B2)			(C3)	a Knizosp	neres on		Crayiish	n Visible on Aerial Imageny (CQ)
Drift Der	(B3)			- Presence	e of Redu	iced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent	Iron Redu	iction in T	illed Soils	Geomorr	phic Position (D2)
Iron Dep	osits (B5)			(C6)				FAC-Neu	Itral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	_ Thin Mu	ck Surfac	e (C7)	-		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)	· · · · ·	Other (E	xplain in	Remarks)		
Field Obser	vations:			_					
Surface wat	er present?	Yes	No	Х	Depth (i	nches):			
Water table	present?	Yes	X No		Depth (i	nches):	8	Ind	licators of wetland
Saturation p	resent?	Yes	X No		Depth (i	nches):	8	hy	drology present? Y
(includes ca	pillary fringe)								
Describe red	corded data (strea	am gauge	e, monitoring we	ll, aerial p	hotos, pr	revious ir	nspections), if	available:	
		0.00	5.0		, 1.				
Remarks:									
I									

Project/Site TH 19 Marshall Cit	y/County:	Marshall/Lyon	County S	Sampling Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	State	e: MN	I S	ampling Point:	4GU
Investigator(s): Lewis, DeCesare	S	ection, Townshi	p, Range:	S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Loc	al relief (concav	ve, convex, i	none):	Concave
Slope (%): Lat: 44°26'36.59"N	Long:	95%47'47.4	1"W C	Datum:	
Soil Map Unit Name51: La Prairie Loam		NWI	Classificatio	on: R2UE	3H, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year	? Y (lf no, explaii	n in remarks)	
Are vegetation X , soil , or hydrology	significa	ntly disturbed?	А	vre "normal circum	stances"
Are vegetation , soil , or hydrology	 naturally	problematic?			present? No
SUMMARY OF FINDINGS	_		(If neede	d, explain any ans	wers in remarks.)
Hydrophytic vegetation present? N					
Hydric soil present? N	Is th	e sampled area	a within a w	vetland?	Ν
Indicators of wetland hydrology present? N	If yes	, optional wetla	nd site ID:		
Remarks: (Explain alternative procedures here or in a separate	report)				
	roport.)				
The vegetation is ar	tificially pl	anted and ma	anicured.		
VEGETATION Use scientific names of plants					
	Dominar	t Indicator	Dominar	ice Test Worksh	eet
Tree Stratum (Plot size: 30' Radius) % Cover	r Species	S Staus	Number of	f Dominant Species	S
1			that are O	BL, FACW, or FAC	: 0 (A)
2	_		Total N	lumber of Dominan	t
3			Specie	es Across all Strata	: <u> </u>
4			Percent of	f Dominant Species	S
5			that are O	BL, FACW, or FAC	: <u>0.00%</u> (A/B)
0	= I otal Co	ver	Drevelar		t
<u>Sapling/Shrub straturr</u> (Plot size: <u>5 Radius</u>)			Total % (Cover of:	leet
2			OBL spec	cies 0 x 1	= 0
3			FACW sp	pecies 0×2	$\frac{0}{2} = 0$
4			FAC spe	cies 0 x 3	3 = 0
5			FACU sp	ecies 100 x 4	4 = 400
0	= Total Co	ver	UPL spec	cies 0 x 5	5 = 0
Herb stratum (Plot size: 5' Radius)			Column t	otals 100 (A) <u>400</u> (B)
1 Festuca arundinacea 100	Y	FACU	Prevalen	ce Index = B/A =	4.00
2					
3			Hydroph	ytic Vegetation I	ndicators:
				inance test is \50	
6			Preva	alence index is ≤3	.0*
7			Morp	bodical adaptation	ns* (provide
8			supp	orting data in Rem	harks or on a
9			sepa	rate sheet)	
10			(expl	ain): Adjacent to n	nanaged plant
100	= Total Co	ver	comr	n.	
Woody vine stratum (Plot size: 30' Radius)			*Indicators	of hydric soil and we	tland hydrology must be
1			pre Lude	esent, unless disturbe	d or problematic
2	- Total Co	vor	veqe	tation	
0			pres	ent? N	
Remarks: (Include photo numbers here or on a separate sheet)			1		_

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)
Depth	<u>Matrix</u>		Rec	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-13	7.5YR 3/1						CLAY LOAM	
13-20	7.5YR 2.5/2						LOAM	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	k, MS = №	lasked S	and Grains. **Loca	ation: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicators for Pro	oblematic Hydric Soils:
Hist	tisol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast Prairie	Redox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	idy Redo	ox (S5)		Dark Surface	(S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	itrix (S6)			
Hyd	Irogen Sulfide (A4	1)	Loa	my Mucl	ky Minera	al (⊢1) . (⊑0)	Very Shallow	Dark Surface (TF12)
	atified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Other (explain	n in remarks)
	n Muck (ATU)	Curtoos		leted IVia	Surface	(Ec)		
	oleled Below Dark	(Sunace (\ 12)		Jotod Dr		(F0) co (E7)	*1 1	
San	dy Mucky Minera	A 12)				(F8)	*Indicators of h	ydrophytic vegetation and weitand
5 cr	m Mucky Peat or	Peat (S3		iox Depi	63310113	(10)	nyuroiogy mu:	problematic
)			r		problemate
Restrictive	Layer (if observe	ed):						
Type: Donth (incho					-		Hydric soll pres	sent? N
Depth (inche					-			
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required: check a	all that a	(vlaa		Secondary	Indicators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfa	ce Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	Drain	age Patterns (B10)
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C1	1) Dry-S	Season Water Table (C2)
Water M	larks (B1)			Oxidized	d Rhizosp	heres on	Living Roots Crayf	ish Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)			Satur	ation Visible on Aerial Imagery (C9)
Drift Dep	bosits (B3)			Presenc	e of Redu	uced Iron	(C4) Stunt	ed or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	Iron Redu	iction in 1	Illed Soils Geon	norphic Position (D2)
Inundatio	on Visible on Aeria	l Imager	(B7)	Thin Mu	ck Surfac	e (C7)	FAC-	Neutral Test (D3)
Sparselv	Vegetated Conca	ive Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:			, v	-	-	·	
Surface wate	er present?	Yes	No	х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hydrology present? N
(includes ca	pillary fringe)		-					
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if available	:
<u> </u>								
Remarks:								

N.4.1 - I. ----_ . .

	NATIO	NDAIAF		awest i	Region	- / /- /
Project/Site TH 19 Marshall	City/C	ounty: Ma	arshall/Lyon	County	Sampling Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	on	State:	MN		Sampling Point:	4H
Investigator(s): Lewis, DeCesare		Section	on, Township	o, Range:	S4, 1	Г111N, R41W
Landform (hillslope, terrace, etc.): Hillslope		Local r	elief (concav	e, convex	k, none):	Concave
Slope (%): Lat: 44°26'37.22"N		Long:	95°47'48.44	1"W	Datum:	
Soil Map Unit Name51: La Prairie Loam			NWI	Classificat	tion: R	2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this	time of	the year?	Y (I	f no, expl	ain in remarks)	
Are vegetation, soil, or hydrology		significantly	disturbed?		Are "normal circ	cumstances"
Are vegetation, soil, or hydrology		naturally pro	blematic?			present? Yes
SUMMARY OF FINDINGS				(If need	led, explain any	answers in remarks.)
Hydrophytic vegetation present? Y						
Hydric soil present? Y		Is the sa	ampled area	within a	wetland?	Y
Indicators of wetland hydrology present? Y		lf yes, op	tional wetlar	nd site ID:		
Remarks: (Explain alternative procedures here or in a sepa	arate rer	oort.)				
		,				
VEGETATION Use scientific names of plants.						
Abs	solute	Dominant	Indicator	Domin	ance Test Work	sheet
Tree Stratum (Plot size: 30' Radius) % C	Cover	Species	Staus	Number	of Dominant Spe	ecies
1				that are	OBL, FACW, or F	FAC: 1 (A)
2				Total	Number of Domi	inant
3				Spe	cies Across all St	rata: <u> </u>
4				Percent	of Dominant Spe	ecies
5				that are	OBL, FACW, or F	FAC: 100.00% (A/B)
	0 =	Total Cover				
Sapling/Shrub stratum (Plot size: 5' Radius)				Prevale	ence Index Wor	ksheet
2						v1- 0
2					species 0	$x^{2} = 0$
4				FAC sr	pecies 0	$x_{3} = 0$
5				FACU	species 0	x = 0
	0 =	Total Cover		UPL sp	ecies 0	x 5 = 0
Herb stratum (Plot size: 5' Radius)				Columr	n totals 100	(A) 200 (B)
1 Elymus virginicus 1	100	Y	FACW	Prevale	ence Index = B/A	x = 2.00
2						
3				Hydrop	ohytic Vegetatio	on Indicators:
4				Ra	pid test for hydro	phytic vegetation
5				X Do	minance test is >	>50%
6				X Pre	evalence index is	s ≤3.0*
7				Мо	rphogical adapta	ations* (provide
8				sup	porting data in F	Remarks or on a
9				sep	parate sheet)	,
10	100 =	Total Cover		(ex cor	plain): Adjacent nm.	to managed plant
Woody vine stratum (Plot size: 30' Radius)				*Indicate	ors of hydric soil and	d wetland hydrology must be
1				I	present, unless dist	urbed or problematic
2				Hy	drophytic	
	0 =	Total Cover		yey pre	esent?	Y

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

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the ab	sence of indicators.)
Depth	Matrix		Ree	dox Feat	ures_			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	7.5YR 4/1						LOAM	
14-21	7 5YR 3/1						SANDY CLAY LOA	AM .
1421	7.511(5/1						OANDT OEAT LOP	
*Type: C = C	Concentration D.	- Depleti	on RM – Reduce	d Matrix	MS – M	laskod S	and Grains **Lo	cation: PL – Pore Lining M – Matrix
Hydric So	il Indicators:	- Depieti			, 1013 – 10	laskeu S	Indicators for P	roblematic Hydric Soils:
X Hist			Sar	ndv Glave	ad Matrix	(\$4)	Coast Prairie	P Redox (A16) (I RR K I R)
	is Eninedon (A2)			dy Redo	50 Matrix vy (95)	(04)	Dark Surfac	e(S7) (IRR K I)
Blac	rk Histic (A3)		Stri	nned Ma	triv (S6)		Iron-Mangar	nese Masses (F12) (LRR K. L. R)
	Irogen Sulfide (A)	1)		ppeu Muel	(UIX (00)	al (E1)	Very Shallov	w Dark Surface (TE12)
Stra	atified Lavers (A5)	+) \	Loa		od Matrix	(E2)	Other (evola	in in remarks)
2 cr	n Muck (A10)	,		leted Ma	atrix (F3)	((Z)		
	leted Below Dark	Surface		lov Dark	Surface	(E6)		
	rk Dark Surface (Δ12)			ounace ark Surfa	(10) ce (F7)	*ladiaatara af	
	dy Mucky Minera	(S1)		lov Denr	Assions I	(F8)	hydrology m	nydrophytic vegetation and weitand
5 cr	n Mucky Peat or	n (51) Peat (53		ION Depi	63310113 ((10)	nyurology m	problematic
)					problemate
Restrictive	Layer (if observe	ed):						
Type:	`				-		Hydric soil pr	esent? Y
Depth (inche	es):				-			
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	(ylqc		Secondar	v Indicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Sur	face Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	X Dra	inage Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) Dry	Season Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Cra	yfish Burrows (C8)
Sedimer	t Deposits (B2)			(C3)			Sat	uration Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4) Stu	nted or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils Geo	omorphic Position (D2)
Iron Dep	osits (B5)			(C6)			FAC	C-Neutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
X Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	X	Depth (i	nches):		
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):		Indicators of wetland
Saturation p	resent?	Yes	NO	X	Depth (i	ncnes):		nyarology present? Y
(includes ca	piliary mnge)							
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	ispections), if availab	e:
Remarks:								

Project/Site TH 19 Marshall	City/County:	Marshall/Lyon	County Sampling	Date: 9/30/21
Applicant/Owner: Minnesota Department of Transportation	n Stat	e: MN	Sampling	Point: 4HU
Investigator(s): Lewis, DeCesare	S	Section, Townshi	p, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (concav	/e, convex, none):	Concave
Slope (%): Lat: 44°26'37.00"N	Long:	95%47'48.6	6"W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this til	me of the year	·? Y (If no, explain in rema	arks)
Are vegetation X, soil, or hydrology	significa	antly disturbed?	Are "norm	al circumstances"
Are vegetation , soil , or hydrology	naturall	y problematic?		present? No
SUMMARY OF FINDINGS			(If needed, explain	n any answers in remarks.)
Hydrophytic vegetation present? N				
Hydric soil present? N	ls th	e sampled area	a within a wetland?	N
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separa	ate report.)			
The vegetation is	artificially p	lanted and ma	anicured.	
VEGETATION Use scientific names of plants.				
Absol	lute Domina	nt Indicator	Dominance Test	Worksheet
Tree Stratum (Plot size: 30' Radius) % Co	ver Specie	s Staus	Number of Domina	nt Species
1			that are OBL, FAC	<i>N</i> , or FAC: 0 (A)
2			Total Number of	Dominant
3			Species Across	; all Strata: <u>1</u> (B)
5			that are OBL_EAC	nt Species
	= Total Co	over		
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index	x Worksheet
1			Total % Cover of:	
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	$0 \times 3 = 0$
5 <u> </u>	Total C			$100 \times 4 = 400$
U Herb stratum (Plot size: 5' Radius)		Jvei	Column totals	100 (A) 400 (B)
1 Festuce arundinacea	n v	FACU	Prevalence Index	-B/A = 400
2		1,00	T Tevalence muex	- B/A - 4.00
3			Hydrophytic Veg	etation Indicators:
4			Rapid test for	hydrophytic vegetation
5			Dominance te	est is >50%
6			Prevalence in	dex is ≤3.0*
7			Morphogical a	adaptations* (provide
8			supporting da	ta in Remarks or on a
9				
10	0 = Total Co	over	comm.	acent to managed plant
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric	soil and wotland bydrology must be
1			present, unle	ess disturbed or problematic
2			Hydrophytic	
0	= Total Co	over	vegetation	Ν
Demonstra (la chada chada come)	- ()		present	
Remarks: (Include photo numbers here or on a separate she	eet)			

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth	Matrix		Red	dox Feat	ures_				·
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
1-4	7.5YR 4/2						SILT LOAM		
4-20	7.5YR 3/1						LOAM		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coas	t Prairie Re	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7	(LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	tified Layers (A5))	Loa	my Gley	ed Matrix	(F2)	Othe	r (explain in	remarks)
2 cr	n Muck (A10)	. <i>.</i>	Dep	pleted Ma	atrix (F3)	(=0)			
	eted Below Dark	Surface	(A11)Rec	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)	Dep	leted Da	ark Suria		*Indica	ators of hydro	ophytic vegetation and weltand
5 cm	n Mucky Post or J	II (31) Poat (83		iox Debi	essions	(ГО)	nyaro	logy must b	e present, unless disturbed or
	IT MUCKY I EAL OF	i eat (00)						problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric	soil presen	t? <u>N</u>
Depth (Inche	es):				-				
	DGY								
Wetland Hy	drology Indicato	ors:							
Primary India	cators (minimum)	of one is	required: check a	all that a	(vlac		Se	condary Ind	icators (minimum of two required)
Surface	Water (A1)	01 0110 10	roquirou, oncont	Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	-	Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) —	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimen	t Deposits (B2)			(C3)			_	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	bhic Position (D2)
Inundatio	osiis (63) In Visible on Aeria	Imagen	(B7)	(CO) Thin Mu	ck Surfac		_	FAC-Net	ilitai Test (D5)
Sparselv	Vegetated Conca	ve Surfa	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-St	tained Leaves (B9)		Other (E	xolain in	Remarks)		
Field Obser	vations:	,					,		
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	drology present? N
(includes ca	pillary fringe)				-				
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	evious ir	spections), if a	available:	
Remarks:									
i tomanto.									

Project/Site TH 19	Marshall		City/	County:	Marshall	Lyon County	Sampling Date:	9/30/2	1
Applicant/Owner:	Minnesota Depar	tment of Transportat	ion	State	:	MN	Sampling Point:	41	
Investigator(s): Le	wis, DeCesare			Se	ection, To	wnship, Range	e:	111N, R41W	
Landform (hillslope	e, terrace, etc.):	Hillslope		Loca	al relief (c	oncave, conve	ex, none):	Concave	
Slope (%):	Lat:	44°26'37.86"N		Long:	95°47	''48.44"W	Datum:		
Soil Map Unit Nam	e51: La Prairie Loa	am				NWI Classifica	ation: R	2UBH, R2UBG	
Are climatic/hydrole	ogic conditions of t	he site typical for this	s time o	of the year?	, Y	(If no, exp	olain in remarks)		
Are vegetation	, soil	, or hydrology		significar	ntly distur	bed?	Are "normal circ	umstances"	
Are vegetation	, soil	, or hydrology		naturally	problema	tic?		present?	′es
SUMMARY OF	FINDINGS					(If nee	eded, explain any	answers in rem	arks.)
Hydrophytic ve	getation present?	Y							
Hydric soil pres	sent?	Y		Is the	samples	d area within	a wetland?	Y	
Indicators of w	etland hydrology pi	resent? Y		lf yes,	, optional [,]	wetland site ID):		
VEGETATION	Use scientific	names or plants.	- aluta	Dominon	t Indiac		nance Test Work	chaot	
<u>Tree Stratum</u> 1	(Plot size: 30	Radius) %	solute Cover	Dominan Species	stau	IS Numbe that are	er of Dominant Spe OBL, FACW, or F	cies AC: 2	(A)
2 3						Tota Spo	al Number of Domi ecies Across all St	nant rata: 2	(B)
45						Percer that are	nt of Dominant Spe e OBL, FACW, or F	cies AC: <u>100.00%</u>	(A/B)
Conling/Chruch of	nature (Distaine)		0	= Total Cov	ver	Drava		kakaat	
Sapling/Shrub st	raturr (Plot size:	5 Radius)				Total	Cover of:	KSNEET	
· ·						Total			

5					that are OBL, FACW, or FAC: 100.00% (A/B)
		0	= Total Cover		
Sapling/Shrub stratum (Plot si	ize: 5' Radius)	_		Prevalence Index Worksheet
1					Total % Cover of:
2					OBL species 10 x 1 = 10
3					FACW species $30 \times 2 = 60$
4					FAC species <u>60</u> x 3 = <u>180</u>
5					FACU species 0 x 4 = 0
		0	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot s	ize: 5' Radius)			Column totals 100 (A) 250 (B)
1 Plantago major		60	Y	FAC	Prevalence Index = $B/A = 2.50$
2 Elymus virginicus		30	Y	FACW	
3 Bidens cernua		10	N	OBL	Hydrophytic Vegetation Indicators:
4					Rapid test for hydrophytic vegetation
5					X Dominance test is >50%
6					X Prevalence index is ≤3.0*
7					Morphogical adaptations* (provide
8					supporting data in Remarks or on a
9					separate sheet)
10					(explain): Adjacent to managed plant
		100	= Total Cover		comm.
Woody vine stratum (Plot s	ize: 30' Radius)	_		*Indicators of hydric soil and wetland hydrology must be
1		_			present, unless disturbed or problematic
2					Hydrophytic
		0	= Total Cover		vegetation
					present? Y

Profile Desc	cription: (Descr	ibe to th	e depth need	ed to	docu	ment the	indicate	or or confirm	n the absend	e of indicators.)
Depth	Matrix			Redox	(Featu	ures_				
(Inches)	Color (moist)	%	Color (mois	t)	%	Type*	Loc**	Tex	ture	Remarks
0-2	GLEY1 6/1							SANDY LO	DAM	
2-6	GLEY1 5/1							LOAMY S	AND	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Red	uced N	Matrix	, MS = M	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:							Indicato	ors for Proble	ematic Hydric Soils:
Hist	isol (A1)		:	Sandy	Gleye	ed Matrix	(S4)	Coa	ast Prairie Ree	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)			Sandy	Redo	x (S5)		Dar	k Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)			Strippe	ed Ma	trix (S6)		Iron	-Manganese	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)		_oamy	/ Muck	ky Minera	al (F1)	Ver	y Shallow Dai	rk Surface (TF12)
Stra	atified Layers (A5))	X	oamy	/ Gleye	ed Matrix	: (F2)	Oth	er (explain in	remarks)
2 cr	n Muck (A10)			Deplet	ted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11)	Redox	Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)		Deplet	ted Da	rk Surfac	ce (F7)	*Indic	cators of hydro	ophytic vegetation and weltand
San	idy Mucky Minera	l (S1)		Redox	Depro	essions ((F8)	hydr	rology must b	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)							problematic
Restrictive	Layer (if observe	ed):								
Туре:								Hydric	c soil presen	t? Y
Depth (inche	es):									
Remarks:										
)GY									
Wetland Hy	drology Indicate	vre.								
Brimony Indi	ators (minimum	of one is	required: ebo	ok oll t	that ar	and w				licotore (minimum of two required)
Surface		or one is	required, che		<u>inai ap</u>	<u>ppiy)</u> Soupo (B	12)	<u>5</u>	Surface 9	Soil Crocks (R6)
High Wa	iter Table (A2)		-		i ue Ani	auria (B	13) its (R14)			Patterns (B10)
X Saturatio	on (A3)		-	— Hv	/droae	n Sulfide	Odor (C1)	Drv-Seas	son Water Table (C2)
Water M	arks (B1)		-	Ox	xidized	Rhizospl	heres on	, Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C	3)	•		Ū	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		-	Pre	esenc	e of Redu	iced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)		-	Re	ecent I	ron Redu	ction in T	illed Soils	Geomorp	phic Position (D2)
Iron Dep	osits (B5)			(C	;6)				FAC-Neu	utral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Th	nin Muo	ck Surfac	e (C7)			
Sparsely	vegetated Conca	ve Surra	се (В8)	- Ga	auge o	r Well Da	ita (D9) Demonitari	\ \		
vvater-S	tained Leaves (B9)	-	0	iner (E	xpiain in i	Remarks)		
Field Obser	vations:	Vee	NI	_	V	Danth (i				
Surface wate	er present?	Yes		2 —	Х	Depth (II	ncnes):	0	Ind	lipstore of watland
Vvater table	present?	Yes		<u> </u>		Deptn (II	ncnes):	2	- Ind	vdrology present?
(includes ca	nillary fringe)	165		, <u> </u>		Deptil (ii	ncnes).	2		
Describe rec	pindi y mingo)		monitoring		orial n	hotos pr		enactions) it	fovoiloblo:	
Describe 160	orueu uala (Sliea	ani yauge		ven, at	enai p	notos, pr	evious Ifi	ispections), li	availaule.	
Remarks:										

Project/Site TH 19 Marshall City/	County: Marshall/Lyon	County Sampling Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point:	4IU
Investigator(s): Lewis, DeCesare	Section, Townshi	ip, Range: S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'37.99"N	 Long: 95°47'47.5	2"W Datum:	
Soil Map Unit Name 51: La Prairie Loam	NWI	Classification: R2UI	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y (If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circum	istances"
Are vegetation , soil , or hydrology	naturally problematic?		present? No
SUMMARY OF FINDINGS		(If needed, explain any ans	swers in remarks.)
Hydrophytic vegetation present? N			
Hydric soil present? N	Is the sampled are	a within a wetland?	N
Indicators of wetland hydrology present? N	If yes, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate re	eport.)		
The vegetation is arti	ficially planted and m	anicured.	
VEGETATION Use scientific names of plants.			
Absolute	Dominant Indicator	Dominance Test Worksh	eet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover	Species Staus	Number of Dominant Specie that are OBL, FACW, or FAC	s 2: 0 (A)
2		Total Number of Dominar	nt (D)
3	· ·	Species Across all Strata	a: <u>1</u> (B)
5	·	that are OBL_EACW_or EAC	s :: 0.00% (A/B)
	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)		Prevalence Index Works	neet
1		Total % Cover of:	
2		OBL species 0 x	1 = 0
3		FACW species 0 x 2	2 = 0
4		FAC species 0 x 3	3 = 0
5	Total Cover	FACU species 100 x 4	4 = 400
UU	= rolar Cover	Column totals 100 (A	b = 0
1 Footuos arundinaasa		$\frac{1}{2} = \frac{1}{2} $	(B) <u>400</u>
	T FACO	Frevalence muex = D/A =	4.00
3		Hydrophytic Vegetation	ndicators:
4		Rapid test for hydrophy	ytic vegetation
5		Dominance test is >50	%
6		Prevalence index is ≤3	3.0*
7		Morphogical adaptation	ns* (provide
8	·	supporting data in Ren	narks or on a
10	·		managed plant
100	= Total Cover	comm.	nanageu plant
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)		*Indicators of hydric soil and we	etland hydrology must be
1	·	present, unless disturbe	ed or problematic
2 <u></u>	- Total Covor	vegetation	
0		present? N	_
Remarks: (Include photo numbers here or on a separate sheet)		•	

Profile Des	cription: (Descri	ibe to the	e depth needed	to docu	ment the	e indicat	or or confirn	n the absend	ce of indicators.)	
Depth	Matrix		Red	dox Feat	ures				-	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Tex	ture	Remarks	
*Type: C = C	Concentration, D =	= Depletic	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix	
Hydric So	il Indicators:						Indicato	ors for Proble	ematic Hydric Soils:	
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coa	st Prairie Re	dox (A16) (LRR K, L, R)	
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Darl	k Surface (S7	7) (LRR K, L)	
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron	-Manganese	Masses (F12) (LRR K, L, R)	
Hyc	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very	/ Shallow Da	rk Surface (TF12)	
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Othe	er (explain in	remarks)	
2 cr	m Muck (A10)		Dep	leted Ma	atrix (F3)					
Dep	leted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)				
Thio	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indic	ators of hydr	ophytic vegetation and weltand	
Sar	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydr	ology must b	e present, unless disturbed or	
5 cr	m Mucky Peat or I	Peat (S3)							problematic	
Restrictive	Laver (if observe	ed):								
Type:							Hydric	soil presen	it? N	
Depth (inche	es).				-		. i yan e			
					-					
HYDROLO	DGY									
Wetland Hy	drology Indicato	ors:								
Primary Indi	cators (minimum)	of one is	required: check a	all that a	(vlac		s	econdary Ind	licators (minimum of two required	
Surface	Water (A1)	0. 0.10 10		Aquatic	Eauna (B	13)	<u> </u>	Surface :	Soil Cracks (B6)	
High Wa	iter Table (A2)			True Aa	uatic Plar	nts (B14)	-	Drainage	e Patterns (B10)	
Saturatio	on (A3)			Hvdroge	n Sulfide	Odor (C1	D	Drv-Seas	son Water Table (C2)	
Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)	
Sedimer	nt Deposits (B2)			(C3)			5	Saturatio	on Visible on Aerial Imagery (C9)	
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)	
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomor	ohic Position (D2)	
Iron Dep	osits (B5)			(C6)			-	FAC-Neu	utral Test (D5)	
Inundatio	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)	-			
Sparsely	Vegetated Conca	ve Surfac	e (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wat	er present?	Yes	No	X	Depth (i	nches):				
Water table	present?	Yes	No	X	Depth (i	nches):		Ind	licators of wetland	
Saturation p	resent?	Yes	No	X	Depth (i	nches):		hy	/drology present? N	
(includes ca	pillary fringe)									
Describe rec	corded data (strea	am gauge	, monitoring well	, aerial p	hotos, pr	evious ir	nspections), if	available:		
Domortico										
Remarks:										

Project/Site TH 19	Marshall		City/County	y: N	larshall/Lyon County	Sampling	JDate:	9/30/21
Applicant/Owner:	Minnesota Depar	tment of Transportatio	n S	State:	MN	Sampling	Point:	4J
Investigator(s): Lev	wis, DeCesare			Sec	tion, Township, Range	:	S4, T1	11N, R41W
Landform (hillslope	, terrace, etc.):	Hillslope		Local	relief (concave, conve	x, none):		Concave
Slope (%):	Lat:	44°26'36.87"N	Lonç	g:	95°47'45.95"W	Datum:		
Soil Map Unit Name	e51: La Prairie Loa	am			NWI Classifica	ation:	R2L	JBH, R2UBG
Are climatic/hydrolo	ogic conditions of t	he site typical for this t	ime of the y	ear?	Y (If no, exp	lain in rem	arks)	
Are vegetation	, soil	, or hydrology	signif	ficantl	y disturbed?	Are "norn	nal circu	mstances"
Are vegetation	, soil	, or hydrology	natur	rally p	roblematic?			present? Yes
SUMMARY OF	FINDINGS				(If nee	ded, explai	in any ar	swers in remarks.)
Hydrophytic ve	getation present?	Y						
Hydric soil pres	sent?	Y	ls	s the s	sampled area within a	a wetland?	? _	Y
Indicators of we	etland hydrology pr	resent? Y	lf	yes, o	ptional wetland site ID	: <u> </u>		
Remarks: (Explain	alternative proced	ures here or in a separ	rate report.)					
· · · · · · · · · · · · · · · · · · ·								

Tree Stratum (Plot size: 30' Radius) % Cover Species Staus Number of Dominant Species 1		Absolute	Dominant	Indicator	Dominance Test Worksheet
2Image: Constraint of the stratumTotal Number of Dominant Species Across all Strata:3(B)4Image: Constraint of the stratum0Image: Constraint of the stratum10Percent of Dominant Species that are OBL, FACW, or FAC:100.00% (A/E5Image: Constraint of the stratum0Image: Constraint of the stratum10Image: Constraint of the stratum101Acer rubrum40YFACImage: Constraint of the stratum10Image: Constraint of the stratum2Image: Constraint of the stratum40YFACImage: Constraint of the stratumImage: Constraint of the stratum3Image: Constraint of the stratum40YFACImage: Constraint of the stratumImage: Constraint of the stratum4Image: Constraint of the stratumImage: Constraint of the stratumImage: Constraint of the stratumImage: Constraint of the stratumImage: Constraint of the stratum1Xanthium strumarium30YFACImage: Constraint of the stratumImage: Constraint of the stratum1Xanthium strumarium30YFACImage: Constraint of the stratumImage: Constraint of the stratum1Xanthium strumarium30YFACImage: Constraint of the stratumImage: Constraint of the stratum2Solanum dulcamara20YFACImage: Constraint of the stratumImage: Constraint of the stratum3Amaranthus tuberculatus10NOBLImage: Constraint of the stra	<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
3	2				Total Number of Dominant
4	3				Species Across all Strata: 3 (B)
5Image: Sapling/Shrub stratur (Plot size: 5' Radius)1Acer rubrum40YFAC240YFACTotal % Cover of:340YFACOBL species $10 \times 1 = 10$ 340YFACFACW species $0 \times 2 = 0$ 440YFACFACW species $0 \times 2 = 0$ 545FAC species $90 \times 3 = 270$ 540= Total CoverFACU species $0 \times 4 = 0$ 40= Total CoverUPL species $0 \times 5 = 0$ 1Xanthium strumarium30Y2Solanum dulcamara20Y3Amaranthus tuberculatus10N455545555640= Total CoverUPL species $0 \times 5 = 0$ Column totals100(A)28089040109910	4				Percent of Dominant Species
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	5				that are OBL, FACW, or FAC: 100.00% (A/B)
Sapling/Shrub stratum(Plot size:5' Radius)Prevalence Index Worksheet1Acer rubrum40YFACTotal % Cover of:2		0	= Total Cover		
1Acer rubrum40YFACTotal % Cover of:2 3	Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
2OBL species10 $x 1 =$ 103	1 Acer rubrum	40	Y	FAC	Total % Cover of:
3 A	2				OBL species $10 \times 1 = 10$
4FAC species90 $x 3 =$ 270540= Total CoverFACU species0 $x 4 =$ 0Herb stratum(Plot size:5' Radius0 $x 5 =$ 00 $x 5 =$ 01Xanthium strumarium30YFACPrevalence Index = B/A =2.80(B)2Solanum dulcamara20YFACHydrophytic Vegetation Indicators:3Amaranthus tuberculatus10NOBLHydrophytic Vegetation Indicators:	3				FACW species $0 x 2 = 0$
540= Total CoverFACU species0 $x 4 =$ 0Herb stratum(Plot size:5' Radius)= Total CoverUPL species0 $x 5 =$ 01Xanthium strumarium30YFACColumn totals100(A)280(B)2Solanum dulcamara20YFACPrevalence Index = B/A =2.803Amaranthus tuberculatus10NOBLHydrophytic Vegetation Indicators:	4				FAC species $90 \times 3 = 270$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	5				FACU species $0 x 4 = 0$
Herb stratum (Plot size: 5' Radius) Column totals 100 (A) 280 (B) 1 Xanthium strumarium 30 Y FAC Prevalence Index = B/A = 2.80 2 Solanum dulcamara 20 Y FAC Prevalence Index = B/A = 2.80 3 Amaranthus tuberculatus 10 N OBL Hydrophytic Vegetation Indicators:		40	= Total Cover		UPL species $0 \times 5 = 0$
1 Xanthium strumarium 30 Y FAC Prevalence Index = B/A = 2.80 2 Solanum dulcamara 20 Y FAC Prevalence Index = B/A = 2.80 3 Amaranthus tuberculatus 10 N OBL Hydrophytic Vegetation Indicators:	Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 280 (B)
2 Solanum dulcamara 20 Y FAC 3 Amaranthus tuberculatus 10 N OBL Hydrophytic Vegetation Indicators:	1 Xanthium strumarium	30	Y	FAC	Prevalence Index = $B/A = 2.80$
3 Amaranthus tuberculatus 10 N OBL Hydrophytic Vegetation Indicators:	2 Solanum dulcamara	20	Y	FAC	
	3 Amaranthus tuberculatus	10	N	OBL	Hydrophytic Vegetation Indicators:
4 Rapid test for hydrophytic vegetation	4				Rapid test for hydrophytic vegetation
5 X Dominance test is >50%	5				X Dominance test is >50%
6 X Prevalence index is ≤3.0*	6				X Prevalence index is ≤3.0*
7 Morphogical adaptations* (provide	7				Morphogical adaptations* (provide
8 supporting data in Remarks or on a	8				supporting data in Remarks or on a
9 separate sheet)	9				separate sheet)
10 (explain): Adjacent to managed plant	10				(explain): Adjacent to managed plant
<u>60</u> = Total Cover <u>comm</u> .		60	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius) *Indicators of hydric soil and wetland hydrology must present, unless disturbed or problematic	<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u> 1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2 Hydrophytic	2		·		Hydrophytic
0 = Total Cover vegetation		0	= Total Cover		vegetation
present? Y					present? Y
Remarks: (Include photo numbers here or on a separate sheet)	Remarks: (Include photo numbers here or on a sepa	rate sheet)			•

SOIL

Profile Dese	cription: (Descr	ibe to th	e depth nee	ded t	to docu	ment the	e indicate	or or confirm the	absence of in	ndicators.)
Depth	Matrix			Red	lox Featu	ures				
(Inches)	Color (moist)	%	Color (moi	st)	%	Type*	Loc**	Texture		Remarks
0-8	7.5YR 4/2							SANDY CLAY L	OAM	
8-14	7.5YR 6/1							SANDYLOAM	-	
44.00										
14-20	GLEY 1 7/1							SANDY LOAM		
+= 0 0										
*Type: C = C	concentration, D =	= Depleti	on, RM = Re	duce	d Matrix	, MS = №	lasked S	and Grains. **I	Location: PL =	= Pore Lining, M = Matrix
Hydric So	il Indicators:			~			(0 1)	Indicators for	Problematio	C Hydric Soils:
Hist	isol (A1)			San	dy Gleye	d Matrix	(S4)	Coast Pra	urie Redox (A	16) (LRR K, L, R)
Hist	ic Epipedon (A2)			San	dy Redo	x (S5)		Dark Surfa	ace (S7) (LRI	K K, L)
Blac	ck Histic (A3)			Strip	ped Ma	trix (S6)			janese Masse	PS(FTZ)(LRR R, L, R)
Hyd	Irogen Sulfide (A4	4)	<u>X</u>	Loar	my Muck	y Minera	al (⊢1)	Very Shal	low Dark Surf	ace (TF12)
Stra	atified Layers (A5))		Loar	my Gleye	ed Matrix	(F2)	Other (exp	plain in remar	ks)
2 cr	n Muck (A10)	o ((Dep	leted Ma	atrix (F3)	(50)			
	oleted Below Dark		(A11)	Red	ox Dark	Surface	(F6)			
	ck Dark Surface (A12)		Dep	leted Da	rk Surra		*Indicators	of hydrophytic	c vegetation and weltand
San	dy Mucky Minera	il (S1) De et (O0	·	Red	ox Depre	essions ((F8)	hydrology	must be pres	ent, unless disturbed or
5 Cr	n Mucky Peat or	Peat (53)						proble	ematic
Restrictive	Layer (if observe	ed):								
Туре:								Hydric soil	present?	Υ
Depth (inches):										
Remarks:										
HYDROLO	DGY									
Wetland Hy	drology Indicate	ors:								
Drimony Indi	atoro (minimum	of one is	required: ob	ook o	ll that ar			Second	lon Indiactor	(minimum of two required)
Primary India		or one is	required, chi	еска	<u>A avetie</u> I	<u>ppiy)</u> Teurse (D	10)	Second	ary indicators	<u>s (minimum of two required)</u>
Surface	tor Table (A2)				Aquatic I	-auna (B	13) to (P14)		urrainage Botto	acks (Bb)
X Saturatio	(A3)				Hydroge	n Sulfida	Odor (C1		rv-Seeson Wa	(D10)
Water M	arks (B1)				Ovidized	Rhizoen	heres on	Living Roots C	ravfish Burrow	(C2)
Sedimer	t Deposits (B2)				(C3)	11112030		S	aturation Visib	ble on Aerial Imagery (C9)
Drift Dec	osits (B3)				Presence	e of Redu	uced Iron	(C4) S	tunted or Stre	ssed Plants (D1)
Algal Ma	t or Crust (B4)				Recent I	ron Redu	ction in T	illed Soils G	eomorphic Po	osition (D2)
Iron Dep	osits (B5)				(C6)			—F	AC-Neutral Te	est (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)		Thin Mu	ck Surfac	e (C7)			
Sparsely	Vegetated Conca	ve Surfa	ce (B8)		Gauge o	r Well Da	ata (D9)			
X Water-S	tained Leaves (B9)			Other (E	xplain in	Remarks)		
Field Obser	vations:									
Surface wate	er present?	Yes	Ν	0	Х	Depth (i	nches):			
Water table	present?	Yes	X N	0		Depth (i	nches):	12	Indicator	rs of wetland
Saturation p	resent?	Yes	X N	0		Depth (i	nches):	12	hydrolo	gy present? Y
(includes ca	pillary fringe)									
Describe rec	corded data (strea	am gauge	e, monitoring	well,	aerial p	hotos, pr	evious ir	spections), if availa	able:	
Remarks:										

Project/Site TH 19 Marshall City	County: Marshall/Lyon	County Sampling Date:	9/30/21
Applicant/Owner: Minnesota Department of Transportation	State: MN	Sampling Point:	4JU
Investigator(s): Lewis, DeCesare	Section, Townsh	ip, Range: S4, T11	1N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 4426'37.33"N	 Long: 95°47'46.1	8"W Datum:	
Soil Map Unit Name 51: La Prairie Loam	NWI	Classification: R2U	BH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y ((If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circum	istances"
Are vegetation , soil , or hydrology	naturally problematic?		present? No
SUMMARY OF FINDINGS		(If needed, explain any ans	swers in remarks.)
Hydrophytic vegetation present? N			
Hydric soil present? N	Is the sampled are	a within a wetland?	N
Indicators of wetland hydrology present? N	If yes, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate r	eport.)		
The vegetation is arti	ficially planted and m	anicured.	
VEGETATION Use scientific names of plants.			
Absolute	Dominant Indicator	Dominance Test Worksh	eet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) % Cover	Species Staus	Number of Dominant Species that are OBL, FACW, or FAC	s 2: 0 (A)
2	·	Total Number of Dominar	nt (D)
3	·	Species Across all Strata	а: <u>1</u> (В)
5	·	that are OBL. FACW, or FAC	s 2: 0.00% (A/B)
	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)		Prevalence Index Worksh	neet
1		Total % Cover of:	
2		OBL species 0 x 2	1 = 0
3		FACW species 0 x 2	2 = 0
4		FAC species 0 x 3	3 = 0
5		FACU species 100 x 4	4 = 400
U U	= Iotal Cover	UPL species 0×5	p = 0
1 Footuon or undinger) <u>400</u> (B)
1 Festuca arundinacea 100	ř FACU	Prevalence index = B/A =	4.00
3	· ·	Hydrophytic Vegetation I	ndicators:
4		Rapid test for hydrophy	vtic vegetation
5	·	Dominance test is >50	%
6	·	Prevalence index is ≤3	8.0*
7		Morphogical adaptation	ns* (provide
8	·	supporting data in Rem	narks or on a
9	·		
<u> </u>	= Total Cover	comm.	nanaged plant
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u>)		*Indicators of hydric soil and we	etland hydrology must be
	·	present, unless disturbe	ed or problematic
2	Total Causar	vegetation	
0	= Total Cover	present? N	_
Remarks: (Include photo numbers here or on a separate sheet)		<u>. </u>	

Profile Desc	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
0-4	7.5YR 4/3						CLAY LOAN	N	
4-21	7.5YR 4/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatior	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coas	t Prairie Rec	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark	Surface (S7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Othe	r (explain in	remarks)
2 cr	n Muck (A10)	o (leted Ma	atrix (F3)	(50)			
	eted Below Dark		(A11) Rec	IOX Dark	Surface	(F6)			
	ck Dark Surface (A12) L (S1)		leted Da	ark Suria	Ce (F7)	*Indica	ators of hydro	ophytic vegetation and weltand
5 cr	n Mucky Peat or l	1 (31) Deat (83		lox Depi	65510115	(го)	nyaro	logy must be	problematic
		eat (00)			1			problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric	soil present	t? <u>N</u>
Depth (Inche					-				
Remarks:									
	drology Indicate	ve:							
		ns: 	and an electric state of the	- 11 41 4			-		
Primary Indi	cators (minimum)	of one is	requirea; cneck	all that ap	<u>opiy)</u> Faura (D	40)	<u>Se</u>	Condary Ind	icators (minimum of two required)
Surface	tor Table (A2)			Aquatic	Fauna (B	13) stc (B14)	_	Drainage	Doll Cracks (Bb)
	(A2)			Hydroge	ualic Flai	Odor (C'			Fallerins (BTU)
Water M	arks (B1)			Oxidized	l Rhizosn	heres on	Living Roots	Cravfish I	Burrows (C8)
Sedimer	t Deposits (B2)			(C3)	11112000			Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	ction in T	illed Soils	Geomorp	hic Position (D2)
Iron Dep	osits (B5)			(C6)			-	FAC-Neu	tral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)	—		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:								
Surface wate	er present?	Yes	No	X	Depth (i	nches):			
vvater table	present?	Yes	No	<u> </u>	Depth (i	ncnes):		Ind	icators of wetland
Caturation p	nesent?	res		^	Depth (I	nunes):		ny	
Docoribo roc	pindry minge/	magura		aorial -	hotos r		enoctions) #	available:	
Describe rec		un yauge	e, morntoring well	, aenai p	notos, pr	evious If	ispections), It a	avallaule.	
Remarks:									

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Project/Site TH 19	Marshall		City/County	/: N	larshall/Lyon County	Sampling	JDate:	9/30/21
Applicant/Owner:	Minnesota Depar	tment of Transportatio	n S	tate:	MN	Sampling	Point:	4K
Investigator(s): Lev	wis, DeCesare			Sect	ion, Township, Range	:	S4, T1	11N, R41W
Landform (hillslope	, terrace, etc.):	Hillslope	l	Local	relief (concave, conve	x, none):		Concave
Slope (%):	Lat:	44º26'37.01"N	Long	J:	95°47'41.70"W	Datum:		
Soil Map Unit Name	e51: La Prairie Loa	am			NWI Classifica	ation:	R2L	JBH, R2UBG
Are climatic/hydrolo	ogic conditions of t	he site typical for this t	ime of the ye	ear?	Y (If no, exp	lain in rem	arks)	
Are vegetation	, soil	, or hydrology	signif	icantly	y disturbed?	Are "norr	nal circu	mstances"
Are vegetation	, soil	, or hydrology	natur	ally pr	oblematic?			present? Yes
SUMMARY OF	FINDINGS				(If nee	ded, expla	in any ar	nswers in remarks.)
Hydrophytic ve	getation present?	Y						
Hydric soil pres	sent?	Y	ls	the s	ampled area within a	a wetland?	? _	Y
Indicators of we	etland hydrology pi	resent? Y	lf y	yes, o	ptional wetland site ID	:		
Remarks: (Explain	alternative proced	ures here or in a separ	rate report.)					
			uto ropo,					

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
2 3				Total Number of Dominant Species Across all Strata: 3 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)
	0	= Total Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
1 Acer rubrum	30	Y	FAC	Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 40 x 2 = 80
4				FAC species $30 \times 3 = 90$
5				FACU species 30 x 4 = 120
	30	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 290 (B)
1 Elymus virginicus	40	Y	FACW	Prevalence Index = $B/A = 2.90$
2 Parthenocissus vitacea	30	Y	FACU	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10				(explain): Adjacent to managed plant
	70	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric soil and wetland hydrology must be
1				present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			1
· · ·	,			

Profile Dese	cription: (Descri	ibe to th	e depth neede	d to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Re	edox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Text	ure	Remarks
0-12	7.5YR 5/1						SANDY LC	AM	
				-					
				_					
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduc	ced Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicato	rs for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sa	andy Gleye	ed Matrix	(S4)	Coas	st Prairie Red	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sa	andy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		St	ripped Ma	trix (S6)		Iron-	Manganese	Masses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	4)	Lo	amy Mucl	ky Minera	al (F1)	Very	Shallow Dar	rk Surface (TF12)
Stra	tified Layers (A5))	Lo	amy Gley	ed Matrix	k (F2)	Othe	er (explain in	remarks)
2 cr	n Muck (A10)	_	De	epleted Ma	atrix (F3)				
Dep	leted Below Dark	Surface	e (A11)Re	edox Dark	Surface	(F6)			
Thio	k Dark Surface (A12)	De	epleted Da	ark Surfa	ce (F7)	*Indica	ators of hydro	ophytic vegetation and weltand
X San	dy Mucky Minera	I (S1)	ͺ <u> </u>	edox Depr	essions	(F8)	hydro	ology must b	e present, unless disturbed or
5 cr	n Mucky Peat or	Peat (S3)						problematic
Restrictive	Layer (if observe	ed):							
Туре:					_		Hydric	soil presen	t? <u>Y</u>
Depth (inche	es):				_				
HYDROLO	DGY								
Wetland Hv	drology Indicato	ors:							
Primary Indi	cators (minimum)	of one is	required: check	all that a	nnlv)		S	econdary Ind	icators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	(13)	<u></u>	Surface S	Soil Cracks (B6)
X High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	-	X Drainage	Patterns (B10)
X Saturatio	on (A3)			 Hydroge	n Sulfide	Odor (C1	1) -	Dry-Seas	son Water Table (C2)
Water M	arks (B1)			Oxidized	d Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	t Deposits (B2)			(C3)			_	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent	Iron Redu	uction in T	illed Soils	Geomorp	bhic Position (D2)
Iron Dep	OSIts (B5) Na Vicible on Aoria	Imagan	(P7)	(C6) Thin Mu	ok Surfoa		-	FAC-Neu	itral Test (D5)
Sparsely	Vegetated Conca	ve Surfa	re (B8)		or Well Da	ta (D9)			
Water-S	tained Leaves (R9			Other (F	volain in	Remarks)		
Field Obser	vations:	,					/		
Surface wate	er present?	Yes	No	х	Depth (i	inches):			
Water table	present?	Yes	X No		Depth (i	inches):	1	Ind	licators of wetland
Saturation p	resent?	Yes	X No		Depth (i	inches):	1	hy	vdrology present? Y
(includes ca	pillary fringe)				-				
Describe rec	orded data (strea	am gaug	e, monitoring we	ell, aerial p	hotos, pr	revious ir	nspections), if	available:	
Remarks:									

Project/Site TH 19 Marshall Ci	ty/County:	Marshall/Lyon	County Sampling	Date: 9/30/21
Applicant/Owner: Minnesota Department of Transportation	Stat	e: MN	I Sampling	Point: 4KU
Investigator(s): Lewis, DeCesare	s	Section, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat: 44°26'37.22"N	Long:	95°47'41.6	4"W Datum:	
Soil Map Unit Name 51: La Prairie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic conditions of the site typical for this time	of the year	r? Y (If no, explain in rema	arks)
Are vegetation X , soil , or hydrology	significa	antly disturbed?	Are "norm	al circumstances"
Are vegetation , soil , or hydrology	naturall	y problematic?		present? No
SUMMARY OF FINDINGS	_		(If needed, explair	n any answers in remarks.)
Hydrophytic vegetation present? Y				
Hydric soil present? N	ls th	ne sampled are	a within a wetland?	Ν
Indicators of wetland hydrology present? N	If yes	s, optional wetla	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate	report)			
	report.)			
The vegetation is a	tificially p	lanted and m	anicured.	
VEGETATION Use scientific names of plants				
Absolute	- Domina	nt Indicator	Dominance Test	Worksheet
Tree Stratum (Plot size: 30' Radius) % Cove	r Specie	s Staus	Number of Domina	nt Species
1			that are OBL, FACV	N, or FAC: 3 (A)
2	_		Total Number of	Dominant
3			Species Across	all Strata: <u>3</u> (B)
4			Percent of Domina	nt Species
5			that are OBL, FACV	V, or FAC: <u>100.00%</u> (A/B)
0	= I otal Co	over	Drovolonoo Indov	v Warkshast
<u>Saping/Sniub stratun</u> (Plot size. <u>5 Radius</u>)	Y	FAC	Total % Cover of:	(worksneet
2			OBL species	0 x 1 = 0
3			FACW species	0 x 2 = 0
4			FAC species	100 x 3 = 300
5	_		FACU species	$0 \times 4 = 0$
10	= Total Co	over	UPL species	0 x 5 = 0
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)			Column totals	<u>100</u> (A) <u>300</u> (B)
1 Aegopodium podagraria 60	Y	FAC	Prevalence Index	= B/A = <u>3.00</u>
2 Celtis occidentalis 30	Y	FAC		etation Indicatore.
3			Rapid test for	bydrophytic vegetation
5			X Dominance te	est is >50%
6			X Prevalence in	dex is ≤3.0*
7			Morphogical a	adaptations* (provide
8			supporting da	ta in Remarks or on a
9			separate shee	et)
10			(explain): Adja	acent to managed plant
	= Total Co	over	comm.	
1	_		*Indicators of hydric s present, unle	soil and wetland hydrology must be ss disturbed or problematic
2			Hydrophytic	
0	= Total Co	over	present?	Y
Remarks: (Include photo numbers here or on a separate sheet)		1	

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm t	he absenc	e of indicators.)
Depth	Matrix		Red	dox Feat	ures				•
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textur	re	Remarks
0-20	7.5YR 3/1						CLAY		
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Locatio	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicators	for Proble	ematic Hydric Soils:
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	: (S4)	Coast	Prairie Red	dox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark S	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-M	langanese	Masses (F12) (LRR K, L, R)
Hyd	Irogen Sulfide (A4	4)	Loa	my Mucł	ky Minera	al (F1)	Very S	Shallow Dai	k Surface (TF12)
Stra	atified Layers (A5)		Loa	my Gley	ed Matrix	k (F2)	Other	(explain in	remarks)
2 cr	m Muck (A10)	. <i>.</i>		pleted Ma	atrix (F3)	(= a)			
Dep	bleted Below Dark	Surface	e (A11) Red	lox Dark	Surface	(F6)			
	ck Dark Surface (A12)		leted Da	ark Surra	Ce (F7)	*Indicat	ors of hydro	ophytic vegetation and weltand
San	ndy Mucky Minera	1 (51) Doot (62	, <u> </u>	lox Depr	essions	(F8)	hydrolo	ogy must b	e present, unless disturbed or
	II MUCKY Feat OF	real (55)			•			problematic
Restrictive	Layer (if observe	ed):							
Type:					-		Hydric s	oil presen	t? <u>N</u>
Depth (inche	es):				-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that a	(vlac		Sec	ondarv Ind	icators (minimum of two required)
Surface	Water (A1)	01 0110 10		Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	iter Table (A2)			True Aq	uatic Plar	, nts (B14)		Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	I) —	Dry-Seas	on Water Table (C2)
Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)			(C3)				Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted o	or Stressed Plants (D1)
Algal Ma	it or Crust (B4)			Recent I	ron Redu	iction in 1	illed Soils		ohic Position (D2)
Inundatio	osiis (BD) on Visible on Aeria	Ilmager	/ (B7)	(CO) Thin Mu	ck Surfac			FAC-Net	ilirai Tesi (D5)
Sparselv	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:	,			•		,		
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	nches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	drology present? N
(includes ca	pillary fringe)				-				
Describe rec	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if a	vailable:	
Dame - ri									
Remarks:									

I

Project/Site TH 19	City/County	: Mars	Marshall/Lyon County		Sampling Date:		I.		
Applicant/Owner:	Minnesota Depar	tment of Transportatic	n S ^r	tate:	MN	Sampling) Point:	4L	
Investigator(s): Lev	wis, DeCesare			Section	, Township, Range	:	S4, T1	11N, R41W	
Landform (hillslope	, terrace, etc.):	Hillslope	L	_ocal reli	ef (concave, conve	x, none):		Concave	
Slope (%):	Lat:	44°26'37.82"N	Long	: 9	}5°47'38.20"W	Datum:			
Soil Map Unit Name	e51: La Prairie Loa	am			NWI Classifica	ation:	R2U	JBH, R2UBG	
Are climatic/hydrolc	ogic conditions of t	he site typical for this t	ime of the ye	ar?	Y (If no, exp	lain in rem	arks)		
Are vegetation	, soil	, or hydrology	signif	icantly di	sturbed?	Are "norr	nal circur	mstances"	
Are vegetation	, soil	, or hydrology	natura	ally probl	ematic?			present? Y	es
SUMMARY OF	FINDINGS				(If nee	ded, expla	in any an	swers in rema	arks.)
Hydrophytic ve	getation present?	Y							
Hydric soil pres	sent?	Y	ls	the sam	pled area within	a wetland	? _	Y	
Indicators of we	etland hydrology pr	resent? Y	lf y	/es, optic	onal wetland site ID):			
Remarks: (Explain	alternative proced	ures here or in a sepa	rate report.)						

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
23				Total Number of Dominant Species Across all Strata: 4 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)
	0	= Total Cover		
Sapling/Shrub straturr (Plot size: 5' Radius)			Prevalence Index Worksheet
1 Fraxinus pennsylvanica	20	Y	FACW	Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 40 x 2 = 80
4				FAC species 20 x 3 = 60
5				FACU species 40 x 4 = 160
	20	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 300 (B)
1 Maianthemum racemosum	40	Y	FACU	Prevalence Index = B/A = 3.00
2 Laportea canadensis	20	Y	FACW	
3 Rhamnus cathartica	20	Y	FAC	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9				separate sheet)
10		<u> </u>		(explain): Adjacent to managed plant
	80	= Total Cover		comm.
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u> 1)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			<u>.</u>

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the absen	ce of indicators.)
Depth	Matrix		Rec	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	7.5YR 6/1						SANDY CLAY LOAM	
6-20	7.5YR 4/1						CLAY LOAM	
*Type: C = 0	Concentration, D :	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains. **Location	on: PL = Pore Lining, M = Matrix
Hydric Sc	oil Indicators:					(a 1)	Indicators for Prob	lematic Hydric Soils:
Hist	tisol (A1)		San	idy Gleye	ed Matrix	(S4)	Coast Prairie Re	adox (A16) (LRR K, L, R)
Hisi	tic Epipedon (A2)		San	idy Redo	X (S5)		Dark Surface (S	
	CK HISTIC (A3)	1)		pped ivia	trix (56) av Minora	DI (E1)		r r r r r r r r r r r r r r r r r r r
Stra	atified Lavers (A5)	+)		my Glev	od Matrix	(F2)	Other (explain in	remarks)
2 cr	m Muck (A10)		Der	leted Ma	atrix (F3)	(1 Z)		(internation)
Der	pleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)		
	ck Dark Surface (A12)	Dep	leted Da	rk Surfa	ce (F7)	*Indicators of hvd	rophytic vegetation and weltand
Sar	ndy Mucky Minera	í (S1)	Rec	lox Depr	essions ((F8)	hydrology must l	be present, unless disturbed or
5 cr	m Mucky Peat or	Peat (S3)				, ,,	problematic
Restrictive	Laver (if observe	ed):						
Туре:		,					Hydric soil prese	nt? Y
Depth (inche	es):							
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check a	all that ap	<u>oply)</u>		Secondary In	dicators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	Soil Cracks (B6)
High Wa	ater Table (A2)			True Aq	uatic Plar	nts (B14)	X Drainag	e Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1) Dry-Sea	son Water Table (C2)
X Water M	larks (B1)			Oxidized	l Rhizosp	heres on	Living Roots Crayfish	Burrows (C8)
Drift Der	nt Deposits (B2)			(US) Presenc	e of Redu	iced Iron	(C4) Stupted	on Visible on Aerial Imagery (C9)
	at or Crust (B4)			Recent I	ron Redu	iction in T	Tilled Soils Geomo	phic Position (D2)
Iron Dep	osits (B5)			(C6)	Ton read		FAC-Ne	utral Test (D5)
Inundati	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wat	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	<u> </u>	Depth (i	nches):	In	dicators of wetland
Saturation p	resent? pillory fringo)	Yes	NO	X	Depth (I	nches):	n	ydrology present? Y
	pillary millige)	maqua	monitoring wall	o o riol n	hotoo nr		anastiana) if available.	
Describe rec		in gauge	e, monitoring weil	, aenai p	notos, pr	evious ir	ispections), il available.	
Remarks:								
Î								

Project/Site TH 19 Marshall		City/County:	Marshall/Lyon	County Sampling	g Date: 9/30/21
Applicant/Owner: Minnesota	Department of Transportation	on Stat	te: MN	Sampling	Point: 4LU
Investigator(s): Lewis, DeCesa	ire	ę	Section, Townsh	ip, Range:	S4, T111N, R41W
Landform (hillslope, terrace, etc	:.): Hillslope	Lo	cal relief (conca	ve, convex, none):	Concave
Slope (%): Lat:	4426'37.91"N	Long:	95°47'38.1	3"W Datum:	
Soil Map Unit Name51: La Prai	rie Loam		NWI	Classification:	R2UBH, R2UBG
Are climatic/hydrologic condition	ns of the site typical for this	time of the year	r? <u>Y</u> ((If no, explain in rem	arks)
Are vegetation, soil	, or hydrology	significa	antly disturbed?	Are "norr	nal circumstances"
Are vegetation, soil	, or hydrology	naturall	y problematic?		present? Yes
SUMMARY OF FINDINGS	<u>}</u>			(If needed, expla	in any answers in remarks.)
Hydrophytic vegetation pres	sent? Y				
Hydric soil present?	N	ls th	ne sampled are	a within a wetland	? <u>N</u>
Indicators of wetland hydrol	logy present? N	If ye	s, optional wetla	nd site ID:	
VEGEIATION Use sciel	ntific names of plants.	<u> </u>		Deminones Tes	t Workshoot
Troo Stratum (Plot size:	ADS · 30' Radius) % (olute Domina	ant Indicator	Dominance res	tworksneet
1 Fraxinus pennsylvanica		25 Y	FACW	that are OBL, FAC	ant Species W, or FAC: (A)
23				Total Number of Species Acros	of Dominant is all Strata: 2 (B)
4				Percent of Domina that are OBL, FAC	ant Species W, or FAC: 100.00% (A/B)
	2	25 = Total C	over		
Sapling/Shrub stratum (Plot s	size: 5' Radius)			Prevalence Inde Total % Cover of	•x Worksheet f:

5					Openies / lere			2	_(D)
4					Percent of Domin	ant Sp	ecies	00.000/	
5		05	Tatal Causar		that are OBL, FAU	vv, or	FAC: 1	00.00%	_(A/B)
Sanling/Shruh strature (Dist size) 5' Dadius	\ <u> </u>	25	= I otal Cover		Brovalance Ind		rlichaat		
Sapiring/Shrub straturi (Plot size. 5 Radius	_)					ex wo	rksneet		
2						n. 0	v 1 –	0	
2						25	$-\frac{1}{2}$		-
3					FAC species	70	$-\frac{2}{2}$	210	-
					FACU species	5	$-\frac{x}{x}$	210	-
٥		0	- Total Cover			0	- x 5 -	0	-
Herb stratum (Plot size: 5' Radius)	0			Column totals	100	-(A)	280	_ (B)
1 Alliaria petiolata	_`	70	Y	FAC	Prevalence Inde	ex = B/A	<u> </u>	2.80	- ` ´
2 Maianthemum racemosum		5	N	FACU					-
3					Hydrophytic Ve	egetati	on Indio	cators:	
4					Rapid test for	or hydr	ophytic	vegetatio	n
5					X Dominance	test is	>50%		
6					X Prevalence	index i	s ≤3.0*		
7					Morphogica	l adapt	ations* (provide	
8					supporting of	lata in	Remark	s or on a	l
9					separate sh	eet)			
10					(explain): Ad	djacent	to mana	aged plai	nt
		75	= Total Cover		comm.				
<u>Woody vine stratum</u> (Plot size: <u>30' Radius</u> 1)				*Indicators of hydri present, ur	c soil an Iless dis	d wetland turbed or	d hydrology problemat	y must b ic
2			_		Hydrophyti	С			
		0	= Total Cover		vegetation				
					present?		Y		

Profile Des	cription: (Descri	ibe to the	e depth needed	to docu	ment the	e indicat	or or confirm	the absenc	e of indicators.)
Depth	Matrix		Rec	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	ure	Remarks
0-21	7.5YR 4/2						CLAY LOAN	M	
				 					
				 	L				
			1	1					
	1								
		-		 					
				<u>i </u>					
*Type: C = C	Concentration, D =	= Depletion	on, RM = Reduce	d Matrix	., MS = N	lasked S	and Grains.	**Locatior	h: PL = Pore Lining, M = Matrix
Hydric So	oil Indicators:						Indicator	s for Proble	ematic Hydric Soils:
Hist	tisol (A1)		San	dy Gleye	ed Matrix	c (S4)	Coas	t Prairie Rec	lox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		San	idy Redo	x (S5)		Dark	Surface (S7) (LRR K, L)
Bla	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-I	Manganese	Masses (F12) (LRR K, L, R)
Hyc	Irogen Sulfide (A4	ł)	Loa	my Muck	ky Minera	al (F1)	Very	Shallow Dar	k Surface (TF12)
Stra	atified Layers (A5)	l.	Loa	my Gley	ed Matrix	k (F2)	Othe	r (explain in	remarks)
2 cr	n Muck (A10)		Dep	leted Ma	atrix (F3)				
Dep	pleted Below Dark	Surface	(A11) Rec	lox Dark	Surface	(F6)			
Thic	ck Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indica	ators of hydro	ophytic vegetation and weltand
Sar	ndy Mucky Minera	l (S1)	Rec	lox Depr	essions ((F8)	hydro	logy must be	e present, unless disturbed or
5 cr	n Mucky Peat or I	Peat (S3))						problematic
Restrictive	Laver (if observe	ed):							
Tvpe:		, . , .					Hydric	soil present	? N
Depth (inche	es):				-		• • • • • • •	oc., p	
(<u> </u>				
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check (ell that ar	nnlv)		Se	condary Ind	eators (minimum of two required
Surface	$\frac{\text{CalOIS}(111111111111111111111111111111111111$		IEquileu, chech a	<u>Aquatic</u>	<u>July)</u> Fauna (B	12)	<u></u>	Surface 9	Calors (minimum or two required
High Wa	Maler (AT)				rauna (D	nte (R14)	-	Drainage	Dattorne (R10)
Saturatio	$(\Delta 3)$			Hydroge	n Sulfide		n <u>–</u>	Drv-Seas	on Water Table (C2)
Water N	larks (B1)			Oxidized	Rhizosn	heres on	Living Roots	Cravfish I	$\frac{1}{2}$
Sedimer	nt Deposits (B2)			(C3)	TUILOOP	10.00 0		Saturatio	Nisible on Aerial Imagery (C9)
Drift Der	posits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	hic Position (D2)
Iron Der	posits (B5)			(C6)				FAC-Neu	tral Test (D5)
Inundati	on Visible on Aeria	I Imagery	(B7)	Thin Mu	ck Surfac	ce (C7)	-		
Sparsely	/ Vegetated Conca	ve Surfac	ce (B8)	Gauge c	or Well Da	ata (D9)			
Water-S	itained Leaves (B9)	• •	Other (E	xplain in	Remarks)		
Field Obser	vations:			·			,		
Surface wat	er present?	Yes	No	х	Depth (i	inches):			
Water table	present?	Yes	No	Х	Depth (i	inches):		Ind	icators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	inches):		hy	drology present? N
(includes ca	pillary fringe)	-			•				
Describe red	corded data (strea	am daude	e. monitorina well	. aerial p	hotos, pr	revious ir	spections), if a	available:	
	(····	3	,	,	····,				
Remarks:		-		-	-				

arshall		City/Count	unty: Marshall/Lyon County		Sampling Date: 9/30		9/30/2	1
1innesota Depart	ment of Transportatio	n s	State:	MN	Sampling Point:		4M	
s, DeCesare			Sect	on, Township, Range:		S4, T111	N, R41W	
errace, etc.):	Hillslope		Local	elief (concave, convex	k, none):	(Concave	
Lat:	44°26'38.22"N	Lon	g:	95°47'37.39"W	Datum:			
1: La Prairie Loa	ım			NWI Classifica	tion:	R2UB	H, R2UBG	
c conditions of th	ne site typical for this t	ime of the y	/ear?	Y (If no, expl	ain in remar	ks)		
, soil	, or hydrology	sign	ificantly	disturbed?	Are "norma	al circums	stances"	
, soil	, or hydrology	natu	rally pr	oblematic?		p	oresent?	Yes
NDINGS				(If need	led, explain	any ansv	vers in rem	arks.)
tation present?	Y							
nt?	Y	1	s the s	ampled area within a	wetland?		Y	
and hydrology pr	esent? Y	lf	yes, o	otional wetland site ID:				
ernative procedu	ures here or in a separ	rate report.))					
		,						
	Arshall Ainnesota Depart Ainnesota Depart Ainnesota Depart Ainnesota Depart Lat: Lat: 1: La Prairie Loa c conditions of th , soil , soil NDINGS tation present? And hydrology pr ernative procedu	Arshall Arinnesota Department of Transportation as, DeCesare errace, etc.): Lat: 44'26'38.22"N 1: La Prairie Loam c conditions of the site typical for this t , soil , or hydrology , soil , or hydrology NDINGS tation present? Y ernative procedures here or in a sepan	arshall City/Count linnesota Department of Transportation S s, DeCesare Hillslope errace, etc.): Hillslope Lat: 44°26'38.22"N Lon Lon 1: La Prairie Loam Conditions of the site typical for this time of the y _, soil _, or hydrology sign _, soil _, or hydrology natu NDINGS Itation present? Y and hydrology present? Y If ernative procedures here or in a separate report.) Itation	arshall City/County:M Iinnesota Department of Transportation State:	arshall City/County: Marshall/Lyon County linnesota Department of Transportation State: MN s, DeCesare Section, Township, Range: errace, etc.): Hillslope Local relief (concave, convex) Lat: 44°26'38.22"N Long: 95°47'37.39"W 1: La Prairie Loam NWI Classifica c conditions of the site typical for this time of the year? Y (If no, expl.)	arshall City/County: Marshall/Lyon County Sampling I Iinnesota Department of Transportation State: MN Sampling F s, DeCesare Section, Township, Range: Section, Township, Range: Section, Township, Range: errace, etc.): Hillslope Local relief (concave, convex, none): Local relief (concave, convex, none): Datum: 1: La Prairie Loam NWI Classification: Concomposition Concomposition Concomposition c conditions of the site typical for this time of the year? Y (If no, explain in remarger, soil, or hydrology significantly disturbed? Are "normation"	arshall City/County: Marshall/Lyon County Sampling Date: Iinnesota Department of Transportation State: MN Sampling Point: s, DeCesare Section, Township, Range: S4, T111 errace, etc.): Hillslope Local relief (concave, convex, none): G Lat: 44º26'38.22"N Long: 95º47'37.39"W Datum: 1: La Prairie Loam NWI Classification: R2UB c conditions of the site typical for this time of the year? Y (If no, explain in remarks) _, soil , or hydrology significantly disturbed? Are "normal circums" _, soil , or hydrology naturally problematic? P NDINGS (If needed, explain any answ tation present? Y Is the sampled area within a wetland? and hydrology present? Y If yes, optional wetland site ID: G ernative procedures here or in a separate report.) If yes, optional wetland site ID: G	arshall City/County: Marshall/Lyon County Sampling Date: 9/30/2 Minnesota Department of Transportation State: MN Sampling Point: 4M s, DeCesare Section, Township, Range: S4, T111N, R41W errace, etc.): Hillslope Local relief (concave, convex, none): Concave Lat: 44*26'38.22"N Long: 95*47'37.39"W Datum: 1: La Prairie Loam NWI Classification: R2UBH, R2UBG c conditions of the site typical for this time of the year? Y (If no, explain in remarks) _, soil _, or hydrology significantly disturbed? Are "normal circumstances" _, soil _, or hydrology naturally problematic? present? Y NDINGS (If needed, explain any answers in rem tation present? Y Is the sampled area within a wetland? Y and hydrology present? Y If yes, optional wetland site ID: Y ernative procedures here or in a separate report.)

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
23				Total Number of Dominant Species Across all Strata: 4 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 75.00% (A/B)
	0	= I otal Cover		
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
1 Fraxinus pennsylvanica	20	Y	FACW	Total % Cover of:
2				OBL species $0 \times 1 = 0$
3				FACW species $40 \times 2 = 80$
4				FAC species $20 \times 3 = 60$
5				FACU species $40 \times 4 = 160$
	20	= Total Cover		UPL species $0 \times 5 = 0$
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 300 (B)
1 Maianthemum racemosum	40	Y	FACU	Prevalence Index = B/A = 3.00
2 Laportea canadensis	20	Y	FACW	
3 Rhamnus cathartica	20	Y	FAC	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8				supporting data in Remarks or on a
9		. <u> </u>		
10	80	= Total Cover		(explain): Adjacent to managed plant comm.
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a separ	rate sheet)			

4M

Profile Desc	cription: (Descri Matrix	be to th	e depth needed	to docu	ment the	e indicat	or or confirm the abser	ice of indicators.)
(Inches)	Color (moist)	%	Color (moist)	%	Tvpe*	Loc**	Texture	Remarks
0-7	7.5YR 5/1				<u> </u>		SANDY CLAY LOAM	
7-21	7.5YR 3/1							
1 21	7.511(5/1						OLAT LOAN	
*Type: C = C	Concentration, D =	= Depleti	ion, RM = Reduce	d Matrix	, MS = N	lasked S	and Grains. **Locati	on: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:		·				Indicators for Prot	plematic Hydric Soils:
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	: (S4)	Coast Prairie R	edox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark Surface (S	67) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Manganes	e Masses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	l)	X Loa	my Mucł	ky Minera	al (F1)	Very Shallow D	ark Surface (TF12)
Stra	tified Layers (A5)		Loa	my Gley	ed Matrix	(F2)	Other (explain i	n remarks)
2 cn	n Muck (A10)		Dep	leted Ma	atrix (F3)			
Dep	leted Below Dark	Surface	e (A11) Rec	lox Dark	Surface	(F6)		
Thic	k Dark Surface (A12)	Dep	leted Da	ark Surfa	ce (F7)	*Indicators of hyderige the second se	drophytic vegetation and weltand
San	dy Mucky Minera	I (S1)	Rec	lox Depr	essions	(F8)	hydrology must	be present, unless disturbed or
5 cn	n Mucky Peat or	Peat (S3	5)					problematic
Restrictive	Layer (if observe	ed):						
Туре:					-		Hydric soil prese	nt? Y
Depth (inche	es):				-			
Remarks:								
HYDROLO	DGY							
Wetland Hy	drology Indicato	ors:						
Primary India	cators (minimum	of one is	required; check a	all that ap	oply)		Secondary Ir	ndicators (minimum of two required
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surface	e Soil Cracks (B6)
High Wa	ter Table (A2)			True Aq	uatic Plar	nts (B14)	X Draina	ge Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	1) Dry-Se	ason Water Table (C2)
X Water M	arks (B1)			Oxidized	Rhizosp	heres on	Living Roots Crayfis	h Burrows (C8)
Drift Den	il Deposits (B2)			Presenc	a of Radi	iced Iron	(C4) Satura	for Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	uction in T	Tilled Soils Geomo	prohic Position (D2)
Iron Dep	osits (B5)			(C6)	lon noue		FAC-N	eutral Test (D5)
Inundatio	on Visible on Aeria	I Imagery	/ (B7)	Thin Mu	ck Surfac	e (C7)		
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)		
Water-St	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obser	vations:							
Surface wate	er present?	Yes	No	Х	Depth (i	nches):		
Water table	present?	Yes	No	Х	Depth (i	nches):	Ir	ndicators of wetland
Saturation p	resent?	Yes	No	X	Depth (i	nches):	'	nydrology present? Y
(includes cap	pillary tringe)							
Describe rec	orded data (strea	im gauge	e, monitoring well	, aerial p	hotos, pr	revious ir	nspections), if available:	
Pomorko								
Nomaino.								

Project/Site TH 19	Marshall		City/Cour	nty: Marshall/Lyon County		Samplin	Sampling Date: 9/30/2	
Applicant/Owner:	Minnesota Depar	tment of Transportation	on	State:	MN	Sampling	g Point:	4MU
Investigator(s): Le	wis, DeCesare			Sec	tion, Township, Rang	ge:	S4, T11	1N, R41W
Landform (hillslope	e, terrace, etc.):	Hillslope		Local	relief (concave, conv	/ex, none):		Concave
Slope (%):	Lat:	44°26'38.27"N	Lo	ng:	95%47'37.65"W	Datum:		
Soil Map Unit Nam	i€51: La Prairie Loa	am			VWI Classifi	cation:	R2U	BH, R2UBG
Are climatic/hydrol	ogic conditions of t	he site typical for this	time of the	e year?	Y (If no, ex	xplain in ren	narks)	
Are vegetation	, soil	, or hydrology	sig	nificant	y disturbed?	Are "norr	mal circun	nstances"
Are vegetation	, soil	, or hydrology	nat	urally p	roblematic?			present? Yes
SUMMARY OF	FINDINGS				(If ne	eeded, expla	ain any an	swers in remarks.)
Hydrophytic ve	egetation present?	Y						
Hydric soil pres	sent?	N		Is the	sampled area within	n a wetland	l?	Ν
Indicators of w	etland hydrology p	resent? N		f yes, o	ptional wetland site	D:		
Remarks: (Explain	alternative proced	ures here or in a sepa	arate repor	t.)				
VEGETATION -	- Use scientific	names of plants.						

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1 <i>Fraxinus pennsylvanica</i>	% Cover 25	Species Y	Staus FACW	Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
23				Total Number of Dominant Species Across all Strata: 2 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
	25	= Total Cover		
Sapling/Shrub stratun (Plot size: 5' Radius)			Prevalence Index Worksheet
1				Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 25 x 2 = 50
4				FAC species $70 \times 3 = 210$
5				FACU species $5 \times 4 = 20$
	0	= Total Cover		UPL species 0 x 5 = 0
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 280 (B)
1 Alliaria petiolata	70	Y	FAC	Prevalence Index = $B/A = 2.80$
2 Maianthemum racemosum	5	N	FACU	
3				Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
°				X Prevalence index is <3.0*
7				
۲ <u>ــــــــــــــــــــــــــــــــــــ</u>		·		Morphogical adaptations* (provide
<u> </u>		· ·		supporting data in Remarks of on a separate sheet)
10				(ourplain): Adjacent to managed plant
10	75	- Total Covor		(explain): Adjacent to managed plant
Woody vine stratum (Plat size: 20' Padius)				
1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation
				present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

Project/Site TH 19	Marshall		City/Count	ty: N	larshall/Lyon County	Sampling) Date:	9/30/21	
Applicant/Owner:	Minnesota Depar	rtment of Transportatic	on s	State: MN Sampling P			Point:	4N	
Investigator(s): Lev	wis, DeCesare			Sect	ion, Township, Range:		S4, T1	11N, R41W	
Landform (hillslope		Local relief (concave, convex, none): Con				Concave			
Slope (%):	Lat:	44º26'38.41"N	Lon	Long: 95°47'37.24"W					
Soil Map Unit Name	e51: La Prairie Lo	am			NWI Classifica	tion:	R2U	JBH, R2UBG	
Are climatic/hydrolc	ogic conditions of t	he site typical for this t	time of the y	/ear?	Y (If no, expl	ain in rem	arks)		
Are vegetation	, soil	, or hydrology	sign	ificantl	y disturbed?	Are "norr	nal circur	mstances"	
Are vegetation	, soil	, or hydrology	natu	irally pr	oblematic?			present? Yes	_
SUMMARY OF	FINDINGS				(If need	ded, expla	in any an	swers in remarks	.)
Hydrophytic veg	getation present?	Y							
Hydric soil pres	sent?	Y	l.	s the s	ampled area within a	wetland	? _	Υ	
Indicators of we	etland hydrology p	resent? Y	lf	yes, o	ptional wetland site ID:				
Remarks: (Explain	alternative proced	ures here or in a sepa	rate report.))					

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>) 1	% Cover	Species	Staus	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
23				Total Number of Dominant Species Across all Strata: 4 (B)
4 5				Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)
	0	= Total Cover		、 ,
Sapling/Shrub stratum (Plot size: 5' Radius)			Prevalence Index Worksheet
1 Fraxinus pennsylvanica	20	Y	FACW	Total % Cover of:
2				OBL species 0 x 1 = 0
3				FACW species 40 x 2 = 80
4				FAC species 20 x 3 = 60
5				FACU species 40 x 4 = 160
	20	= Total Cover		UPL species 0 x 5 = 0
Herb stratum (Plot size: 5' Radius)			Column totals 100 (A) 300 (B)
1 Maianthemum racemosum	40	Y	FACU	Prevalence Index = $B/A = 3.00$
2 Laportea canadensis	20	Y	FACW	
3 Rhamnus cathartica	20	Y	FAC	Hydrophytic Vegetation Indicators:
4				Rapid test for hydrophytic vegetation
5				X Dominance test is >50%
6				X Prevalence index is ≤3.0*
7				Morphogical adaptations* (provide
8 9				supporting data in Remarks or on a separate sheet)
10				(explain): Adjacent to managed plant
	80	= Total Cover		comm.
Woody vine stratum (Plot size: 30' Radius)			*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic
	0	= Total Cover		vegetation present? Y
Remarks: (Include photo numbers here or on a sepa	rate sheet)			I

Profile Desc	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm	the absend	e of indicators.)
Depth <u>Matrix</u> Redox F			dox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Text	ure	Remarks
0-8	7.5YR 5/1						SANDY CL	AY LOAM	
8-20	7.5YR 4/1						CLAY LOAI	М	
*Type: C = C	Concentration, D =	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Matrix
Hydric So	il Indicators:						Indicator	rs for Proble	ematic Hydric Soils:
Hist	isol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coas	st Prairie Ree	dox (A16) (LRR K, L, R)
Hist	ic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark	Surface (S7	7) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-	Manganese	Masses (F12) (LRR K, L, R)
Hyd	rogen Sulfide (A4	1)	X Loa	my Muck	ky Minera	al (F1)	Very	Shallow Da	rk Surface (TF12)
Stra	itified Layers (A5))	Loa	my Gley	ed Matrix	([+2)	Othe	r (explain in	remarks)
2 cr	n Muck (A10)	Surface			ATTIX (F3)	(Ec)			
	k Dark Surface ((Sunace (\ 12)		JOX Dark	Sunace	(FO) co (E7)	*1 1		
San	dy Mucky Minera	412) 1 (S1)			ark Sulla Assions I	(F8)	^Indica	ators of hydr	ophytic vegetation and weltand
5 cr	n Mucky Peat or	Peat (S3)	ION Depi	63310113 ((10)	nyurc	nogy must b	problematic
			/			1			P. 00.011.000
Restrictive	Layer (if observe	ed):					l hudain.		1 2 Y
Type: Donth (incho	2				-		Hydric	soli presen	t? <u> </u>
Depth (Inche					-				
HYDROLO)GY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one is	required: check	all that ar	(vlac		Se	condary Ind	licators (minimum of two required)
Surface	Water (A1)			Aquatic	Fauna (B	13)	<u></u>	Surface S	Soil Cracks (B6)
High Wa	ter Table (A2)			True Aqu	uatic Plar	nts (B14)	_	X Drainage	Patterns (B10)
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1) –	Dry-Seas	son Water Table (C2)
X Water M	arks (B1)			Oxidized	l Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)
Sedimer	t Deposits (B2)			(C3)			_	Saturatio	n Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)			Presenc	e of Redu	uced Iron	(C4)	Stunted of	or Stressed Plants (D1)
Algal Ma	t or Crust (B4)			Recent I	ron Redu	iction in T	illed Soils	Geomorp	ohic Position (D2)
Inundatio	osiis (65) In Visible on Aeria	Imager	(B7)		ck Surfac		-	FAC-Net	Jirai Test (D5)
Sparselv	Vegetated Conca	ve Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)			
X Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)		
Field Obser	vations:	,			•		,		
Surface wate	er present?	Yes	No	х	Depth (i	nches):			
Water table	present?	Yes	No	Х	Depth (i	, nches):		Ind	licators of wetland
Saturation p	resent?	Yes	No	Х	Depth (i	nches):		hy	vdrology present? Y
(includes ca	pillary fringe)				-				
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									
. comunto.									

WETLAND DETER	MINATI	ON DATA	FORM - Mi	dwest Re	egion					
Project/Site TH 19 Marshall	City	/County: M	arshall/Lyon	County S	ampling Date:	9/30/21				
Applicant/Owner: Minnesota Department of Transpor	tation	State:	MN	Sa	ampling Point:	4NU				
Investigator(s): Lewis, DeCesare		Sect	ion, Townshij	p, Range:	S4, T1	11N, R41W				
Landform (hillslope, terrace, etc.): Hillslop	be	Local	relief (concav	ve, convex, r	none):	Concave				
Slope (%): Lat: 44°26'38.53"N		Long:	95°47'37.61	1"W D	atum:					
Soil Map Unit Name 51: La Prairie Loam			NWI	Classificatio	n: R2l	JBH, R2UBG				
Are climatic/hydrologic conditions of the site typical for t	his time o	of the year?	Y (I	f no, explair	n in remarks)					
Are vegetation, soil, or hydrolog	ау	significantly	disturbed?	A	re "normal circu	mstances"				
Are vegetation , soil , or hydrolog	naturally problematic? present? Yes									
SUMMARY OF FINDINGS		-		(If needeo	d, explain any ai	nswers in remarks.)				
Hydrophytic vegetation present? Y										
Hydric soil present? Y	Is the sampled area within a wetland? N									
Indicators of wetland hydrology present? N		If yes, o	If yes, optional wetland site ID:							
Remarks: (Explain alternative procedures here or in a s	enarate r	enort)								
	opulatol	oport.)								
VEGETATION Use scientific names of plant	s.									
	Absolute	Dominant	Indicator	Dominan	ice Test Works	heet				
<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>)	% Cover	Species	Staus	Number of	f Dominant Spec	ies				
1 Fraxinus pennsylvanica	25	<u>Y</u>	FACW	that are OF	BL, FACW, or FA	AC: 2 (A)				
				Total N	umber of Domina	ant				
3				Specie		lla: <u>2</u> (В)				
		·		Percent of that are OF	I Dominant Speci	les ΔC: 100.00% (Δ/Β)				
	25	= Total Cove				(100.0070 (100)				
		-		Prevalen	ce Index Work	sheet				
1				Total % C	Cover of:					
2				OBL spec	cies 0 >	(1= 0				
3				FACW sp	pecies 25 x	(2 = 50				
4				FAC spec	cies 70 >	3 = 210				
5		<u></u>		FACU sp	ecies <u>5</u>	4 = 20				
	0	= Total Cove	r	UPL spec	cies <u>0</u> >	5 = 0				
<u>Herb stratum</u> (Plot size: <u>5' Radius</u>)				Column to	otals <u>100</u> (A) <u>280</u> (B)				
1 Alliaria petiolata	70	Y	FAC	Prevalence	ce Index = B/A =	= 2.80				
2 Maianthemum racemosum	5	<u>N</u>	FACU							
				Hydroph	ytic Vegetation	Indicators:				
4		·			a test for hydrop	nytic vegetation				
5			<u> </u>		nance lest is >5	10% (3.0*				
7		·				5.0				
				Morp	nogical adaptati orting data in Pc	ons [*] (provide				
9		·		separ	rate sheet)	marks of off a				
10				(expla	ain): Adiacent to	managed plant				
	75	- Total Cove		comm	n					

omm. *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic vegetation present?

Y

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

(Plot size: 30' Radius

)

0

= Total Cover

Woody vine stratum

1

Profile Des	cription: (Descri	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm th	ne absenc	e of indicators.)			
Depth	Matrix		<u>Re</u>		Γ							
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	e	Remarks			
0-21	7.5YR 4/2	[CLAY LOAM					
				<u> </u>			1	t				
		l	<u> </u>	+	╂────	'	<u> </u>					
		i	 	──	──	 '	 	ł				
		 	┣────	──	──	 '	 	ł				
						 '	ļ					
		<u> </u>										
		Ē	Γ	Ι	Γ	Γ	Γ					
*Type: C = C	Concentration, D =	= Deplet	ion, RM = Reduc	ed Matrix	, MS = N	Jasked S	Sand Grains.	**Location	n: PL = Pore Lining, M = Matrix			
Hydric So	il Indicators:	·		<u> </u>	·	<u> </u>	Indicators	for Proble	ematic Hydric Soils:			
X Hist	tisol (A1)		Sar	ndy Gley	ed Matrix	k (S4)	Coast	Prairie Red	dox (A16) (LRR K, L, R)			
Hist	tic Epipedon (A2)		Sar	ndy Redc	ox (S5)	Dark Surface (S7) (LRR K, L)						
Blac	ck Histic (A3)		Str	ipped Ma	atrix (S6)) Iron-Manganese Masses (F12) (LRR K, I						
Hyd	Irogen Sulfide (A4	4)	Loa	amy Muc!	ky Minera	al (F1)	Very Shallow Dark Surface (TF12)					
Stra	atified Layers (A5))	Loa	amy Gley	ed Matrix	x (F2)	Other (explain in	remarks)			
2 cr	n Muck (A10)		Der	pleted Ma	atrix (F3))						
Dep	leted Below Dark	Surface	∋ (A11) Re/	dox Dark	Surface	(F6)						
Thic	ck Dark Surface (A	A12)	De	pleted Da	ark Surfa	ce (F7)	*Indicato	ors of hydro	ophytic vegetation and weltand			
San	ndy Mucky Minera	l (S1)	Re	dox Depr	ressions	(F8)	hydrolo	gy must be	e present, unless disturbed or			
5 cr	n Mucky Peat or I	Peat (S3	<i>.</i>)						problematic			
Restrictive	Layer (if observe	əd):										
Туре:	-	-					Hydric so	oil presen [.]	t? Y			
Depth (inche	es):				-							
I												
HYDROLO	OGY											
Wetland Hy	drology Indicato	ors:										
Primary Indi	cators (minimum	<u>of one is</u>	required; check	all that a	pply)		Seco	on <u>dary Ind</u>	icators (minimum of two required			
Surface	Water (A1)			Aquatic	Fauna (B	(B13) Surface Soil Cracks (B6)						
High Wa	iter Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage Patterns (B10)				
Saturatio	on (A3)			Hydroge	∍n Sulfide	, Odor (C1	son Water Table (C2)					
Water M	arks (B1)		_	Oxidized	J Rhizosp	heres on	Living Roots	Crayfish	Burrows (C8)			
Sedimen	it Deposits (B2)		_	_(C3)	(<u> </u>	Saturatio	n Visible on Aerial Imagery (C9)			
Drift Dep	osits (B3)			Presenc	e of Real	uced Iron	(C4)	Stunted c	or Stressed Plants (D1)			
Algai Ivia	t or Crust (64)			Kecent i	Iron Keau	Iction in 1	illed Soils		Dhic Position (UZ)			
Inundatio	on Visible on Aeria	l Imager	u (B7)	Thin Mu	ick Surfac	~ <u>~</u> (C7)		- FAC-INEU				
Sparsely	Vegetated Conca	ve Surfa	ce (B8)	Gauge	or Well D	ata (D9)						
Water-S	tained Leaves (B9)		Other (F	Explain in	Remarks	3)					
Field Obser	vations:						,	Т				
Surface wat	er present?	Yes	No	х	Depth (i	inches):						
Water table	present?	Yes	No	Х	Depth (inches):		Ind	licators of wetland			
Saturation p	resent?	Yes	No	Х	Depth (i	inches):		hy	vdrology present? N			
(includes ca	pillary fringe)				-							
Describe rec	corded data (strea	im gauge	ə, monitoring wel	l, aerial p	hotos, pr	revious ir	nspections), if av	ailable:				
Remarks:												

Appendix C: The Minnesota Routine Assessment Method

MNRAM 3.2 Wetland Assessment Data Form Page 1

		Wetland ID Wetland ID		land ID	Wetland ID			and name / ID	
	Date		WL-1/WL-2 11-Aug-2020		WL-3 11-Aug-2020		ug-2020		
	Special Features (from list, p.2enter letter/s)	-		-		-		-	
#1	Community Number (circle each community which represents at least 10% of the wetland)	3A, 3 <mark>9B</mark> , 1 15A,	3B, 4A, 4B, 7A, 7B, 8A, 8B, 10A, 13A, 13B, 12B, 14A, 15B, 16A, 16B	3A, 3 9B, 7 15A,	3B, 4A, 4B, 7A, 7B, 8A, 8B, 10A, 13A, 13B, 12B, 14A, , 15B, 16A, 16B	3A, 3 9B, 1 15A,	B, 4A, 4B, 7A, 7B, 8A, 8B, 0A, 13A, 13B, 12B, 14A, 15B, 16A, 16B	3A, 3 9B, 1 15A,	B, 4A, 4B, 7A, 7B, 8A, 8B, 0A, 13A, 13B, 12B, 14A, 15B, 16A, 16B
#2 & #	3 ~ Describe each communit	y type	e individually below ~		~ Describe	each	community type individually	below	1~
	Community Type (wet meadow, marsh)	9B	Shallow, Open Water	9B	Shallow, Open Water	9B	Shallow, Open Water	-	-
	Community Proportion (% of total)	10%		Rook	10% d Capary Grass/5	Pood	10% Capapy Grass/5	├──	0%
	Dominant vegetation / Cover Class	Smooth Brome Grass/3		Smooth Brome Grass/5		Smoo	th Brome Grass/2		
		Gree	Green Ash/2 Biverbank Grane/2		Rough Horsetail/3		dian Wood Nettle/3		
y #1		Boxelder Maple/2		Common Nettle/3		Buckthorn/3 American Elm/2			
nunit		Buck	thorn/2			False	Nettle/3		
Com		Ame	rican Elm/2			Cana	da Wild Rye/2		
ant (Orange Day-lily/3				Garlic Mustard/2		
_			Common Jewelweed/2						
	Invasive/exotic Vegetation / Cover Class		Reed Canary Grass/5		Reed Canary Grass/5		Reed Canary Grass/5		
			ping Thistle/3			Smooth Brome Grass/2		├──	
		Buckthorn/2				Garlic	Mustard/2		
	Community Quality (E, H, M, L)	L	0.1	L	0.1	L	0.1		0
	Community Type (wet meadow, marsh)	-	-	-	-	-	-	-	-
	Community Proportion (% of total)								
£	Dominant Vegetation / Cover Class								
nity #									
nuu									
LC C									
Plar									
	Invasive/exotic Vegetation / Cover Class								
	Community Quality (E_H_M_L)		_						
	Community Type (wet meadow, marsh)		0		0		0		0
	Community Proportion (% of total)		-		-	-	-		-
	Dominant Vegetation / Cover Class								
ty #3									
unu								<u> </u>	
Cor									
Plant									
	Invasive/exotic Vegetation / Cover Class								
	Community Quality (F. H. M. L.)								
	Community Quality (E, H, M, L)		0		0		0		0
	Community Type (wet meadow, marsh)	-	-	-	-	-	-	-	-
*	Dominant Vegetation / Cover Class								
ity #									
nmur								 	
t Cor									
Plar	Invasive/exotic Vegetation / Cover Class							<u> </u>	
	Community Quality (E, H, M, L)	-	0		0		0		0
	Circular 39 Types (primary <tab> others)</tab>								
	Cowardin Types								
L.U. a.b. a.									
Higne	st rated community veg. div./integ:	0.1	Low	0.1	Low	0.1	Low	0.0	-
Avera	Average vegetative diversity/integrity:								
		0.1	LOW	0.1	LOW	U.1	LOW		
vveigh	teu Average veg. diversity/integrity:	0.0	-	0.0	-	0.0	-	0.0	
#4 #5	Listed, rare, special plant species? Rare community or habitat?	n n	Y N Y N	n n	Y N Y N		Y N Y N		Y N Y N
#6	Pre-European-settlement conditions?	n	Y N	n	Y N		Y N		Y N
Floodplain Forest [1A, 2A, 3A] * Hardwood Swamp [3B] * Coniferous Bog [2A, 4B] * Coniferous Swamp [4B] * Open Bog [1B, 5A, 5B, 6A, 7A, 9A, 10A1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B] * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B] * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B] * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub core [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Alder Thicket [6A1 * Shrub Swamp [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Celebration For IZP 11B 14A1 * Shrub Swamp [6B1 * Celebr									ver Class Class Range
Shall	ow Marsh [13B] * Deep Marsh [12B] * We	wamp t to W	et-Mesic Prairie [14B, 15A]	* Fre	esh (Wet) Meadow [15B] * S	hallov	v, Open Water [9B, 16A] *		2 3 - 10%
Seas	onally Flooded Basin [168]								3 10 - 25% 4 25 - 50%
								5 50 - 75% 6 75 - 100%	
*If ther	e are more than four plant community types,	use tl	he next column over to enter	the re	est and do not rely on the au	Itomat	tic average		