WETLAND AND WATERBODY DELINEATION REPORT

LEMON HILL SOLAR, LLC OLMSTED COUNTY, MINNESOTA

LEMON HILL SOLAR PROJECT

Prepared by:



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1.0 INTRODUCTION

This wetland and waterbody delineation report has been prepared to describe the wetlands and waterbodies present within the survey area for Lemon Hill Solar LLC's proposed utility scale solar facility known as the Lemon Hill Solar Project (Project) in Olmsted County, Minnesota. The Project will have a generating capacity of up to 180 megawatts (MW) and will include the construction of solar modules, inverters, racking, electrical collection lines, access roads, and fencing.

The 2,036.53-acre survey area (Survey Area) represents the area available for the Project (see Figure 1). The delineated boundaries and communities described in this report will be used for project planning and the basis on which impacts to wetland and waterbodies will be determined. The purpose of this report is to document the findings from the field survey effort that was performed May 28-31, June 3-5, and June 19, 2024, and May 2, 2025, by Merjent, Inc. (Merjent).

1.1 SURVEY AREA DESCRIPTION

The 2,036.53-acre Survey Area is located in the Public Land Survey System sections listed in Table 1.1-1. The Survey Area is located between the cities of Viola and Rochester, MN. The Survey Area is a combination of row crop production, forested areas, pasture lands, residential areas, and road rights-of-way. The Survey Area is bound on the north by 65th Street Northeast, on the east by 100th Avenue Northeast, on the south by Silver Creek Road Northeast, and on the west by 55th Avenue Northeast.

	TABLE 1.1-1	
Sum	mary of Section, Township, Rang	е
Section	Township	Range
11, 12, 13, 14, 23, 24	107N	13W
7, 17, 18, 19, 20, 29	107N	12W

2.0 **DEFINITIONS**

2.1 WETLANDS DEFINITION

Wetlands are defined in the *United States Army Corps of Engineers* (USACE) *Wetlands Delineation Manual* (Environmental Laboratory, 1987) as follows:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

In order for a surveyor to make a positive determination that a wetland is present based on the methods described in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE, 2010), one positive indicator (except in certain situations) from each of the three elements must be present, which are as follows:

- Dominance of hydrophytic plant species.
- Presence of hydric soil.
- Wetland hydrology is present during the growing season.

Where one or more elements used to define the presence or absence, extent, or composition of wetland communities is obscured fully or in part by conditions that are naturally problematic and/or significantly disturbed, the extent of the wetland area and the communities within the wetland may be difficult to define. In these situations, the presence or absence of undisturbed wetland indicators, landscape position, topography, and a review of aerial photography are used to inform professional judgement to determine wetland boundaries and community types.

2.2 WATERBODIES DEFINITION

Waterbodies are defined as both linear surface water conveyances and non-linear surface water features (open waterbodies).

2.2.1 Streams Definition

Streams are defined as any linear waterway otherwise referred to as, but not limited to, streams, creeks, rivers, or other local designations. Streams are characterized by evidence of flow and a continuous bed and bank, bounded by observed and defined field indicators.

2.2.2 Open Waterbodies Definition

Open waterbodies are defined as non-linear features that permanently hold water deeper than approximately 6 feet and of enough duration to preclude most aquatic vegetation or other wetland characteristics. These features include those commonly referred to as, but not limited to, ponds, lakes, or reservoirs.

3.0 METHODS

3.1 RESOURCE REVIEW

The following processes and procedures were followed to determine the potential presence of wetlands and waterbodies within the Survey Area. Prior to the field survey, Merjent's delineators review available desktop resources to identify suspected wetlands and waterbodies which advise the development and execution of the field survey. When available, the results from previous wetland and waterbody delineations are reviewed in addition to the resources described in the following sections.

3.1.1 Topography

Merjent reviewed Minnesota Department of Natural Resources (MNDNR) two-foot contours based on Light Detection and Ranging (LiDAR) (Minnesota Geospatial Information Office, 2023). The review of topographical data aids in determining general locations of large surface water features and surface water flow across a landscape within and surrounding the Survey Area.

3.1.2 Soil Survey

Merjent reviewed the Natural Resources Conservation Service (NRCS), U.S. Dept. of Agriculture (USDA) Soil Survey Geographic Database (SSURGO; Soil Survey Staff, NRCS, USDA, 2019) soils inventory prior to the field survey. SSURGO data describes the soils for the Survey Area and surrounding landscape. Attributes within each soil's series can provide evidence for potential wetlands, most commonly the Hydric Soils classification attribute. While historical land use and common drainage practices have led to many of these areas no longer supporting any remaining indication of wetland conditions, hydric soils series are still useful in determining areas with which to focus survey effort.

3.1.3 Mapped Aquatic Resources

A desktop review was completed using the following aquatic resources datasets ahead of field survey.

The MNDNR update (MNDNR, 2015) to the National Wetlands Inventory (NWI) is a Minnesotaspecific update to the nation-wide NWI data set (United States Fish and Wildlife Service [USFWS], 2021) that was developed to remotely identify potential wetland areas.

The MNDNR Hydrography Dataset (MNDNR, 2012), which is the authoritative version of statewide hydrography. The MNDNR Hydrography Dataset is a collection of the "best available" MNDNR spatial features representing Minnesota surficial hydrology. These features originate from multiple sources representing a range of scales and accuracies. All feature classes are topologically related and will function as an integrated set of statewide features.

The MNDNR Public Waters Inventory (PWI) data set (MNDNR, 2011) is a database maintained by the State of Minnesota. It identifies and provides additional regulatory protection for features meeting selected criteria as described in Minnesota Statute Section 103G.005, subd. 15, identified on the maps authorized by Section 103G.201.

The NWI (USFWS, 2021) is a nation-wide layer developed locally to remotely identify wetland areas based on additional background information. Portions may be updated at the state or county level at various time intervals, and some may be field verified in select locations.

The USGS National Hydrography Dataset (NHD; USGS, 2004) is the most up-to-date and comprehensive nationwide dataset for rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. While originally developed by the Environmental Protection Agency (EPA) and USGS, it is now maintained and updated by multiple regulatory bodies.

3.1.4 Recent Climatic Conditions and Precipitation Data

The Wetland Delineation Precipitation Data Retrieval is a desktop tool developed by the Minnesota State Climatology Office. The gridded database is derived from a monthly precipitation database maintained by the State Climatology Office. This tool is used to support decisions as to whether field data collection and other site-specific observations occurred under normal climatic conditions (Minnesota, 2008).

3.2 OFF-SITE HYDROLOGY AND WETLAND DETERMINATIONS

Historic aerial imagery was reviewed for the Off-site Hydrology and Wetland Determinations for the presence or absence of farmed wetlands within agricultural fields in the Survey Area in accordance with USACE and Minnesota Board of Water and Soil Resources (BWSR) Guidance for Offsite Hydrology/Wetland Determinations (USACE, BWSR 2016). The method provides an objective, step-by-step evaluation of aerial imagery, which is cross-referenced with the above-referenced aquatic resources data. Associated data entry forms are populated, which calculate the probability of wetland presence for each feature reviewed.

The dates of the aerial imagery are used to determine if the images exhibit normal precipitation climate conditions. A wet year aerial image is used to mark potential features, and a minimum of five normal-precipitation aerial images were reviewed for making determinations. Suspected wetland areas are analyzed for common wetland hydrology signatures visible in aerial images including crop stress, areas that were not cropped or planted but drowned out, areas where the planting of crops were avoided, and signatures of soil wetness (darker tones of soil often surrounding standing water or prominent wetland features). Wetland signatures were also determined by observing standing water or by distinct differences in vegetative cover. For example, common wetland species such as cattails (*Typha* spp.) and reed canary grass (*Phalaris arundinacea*) can be readily identifiable on high-resolution aerial imagery (BWSR, 2010). Observations were recorded in a decision matrix to determine if a field investigation is required, and a wetland determination is made for each area (USACE, BWSR 2016).

3.3 FIELD SURVEY METHODS

3.3.1 Naming Conventions

Features identified in associated figures and appendices are named in the following manner:

- Wetlands (w0, w02, etc.)
- Streams (s01, s02, etc.)
- Open water features (o01, o02, etc.)
- Wetland delineation sample points 2024 survey (adp01, adp02, bdp01, bdp02, etc.)

- Wetland delineation sample points 2025 survey (dp01, dp02, etc.)
- Wet signatures from off-site determination (ws001, ws002, etc.)
- Stream sample points 2024 survey (asp01, asp02, bsp01, bsp02, etc.)
- Stream sample points 2025 survey (sp01, sp02, etc.)
- Photo locations (pp001, pp002, etc.)

In the 2024 survey sample point naming convention, the first letter identifies the team member who recorded the associated data. For example, adp01 is wetland determination sample point dp01 recorded by team member "a," and bdp01 is wetland determination sample point dp01 recorded by team member "b."

3.3.2 Wetlands

Merjent delineates wetlands based on the methodology described in the *USACE Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010). Delineators document wetland indicators, or lack of, on Wetland Determination Data Forms at locations representative of the vegetative communities being described during the field survey within or near the wetland. Wetland vegetative communities are identified according to the Eggers and Reed (Eggers and Reed, 2015), Hydrogeomorphic (Brinson, 1993), and Cowardin (Cowardin et al., 1979) classification systems.

3.3.2.1 Wetland Determination Data Forms

Wetland Determination Data Forms were completed during the field survey as written documentation of how representative sample point locations meet or do not meet each of the wetland criteria (see Appendix A). Plant species nomenclature follows the Regional Wetland Plant List (USACE, 2022). Hydric soils were identified using the methods outlined in Field Indicators of Hydric Soils in the United States, Version 8.2 (USDA-NRCS, 2018).

Wetland Determination Data Forms were completed during the field survey for desktop-mapped resources that are determined to be absent. In areas of upland associated with hydric soils or linear stream features, representative photos are taken of upland conditions. In areas of upland conditions within NWI mapped features, a sample point, Wetland Determination Data Form, and photos are taken to document upland conditions, unless the area is significantly sloped or otherwise obviously upland; in those circumstances, representative photos may be deemed sufficient.

3.3.2.2 Naturally Problematic and Significantly Disturbed Features

Naturally Problematic and Significantly Disturbed features are those by which wetland indicators of, or lack thereof, are obscured, and additional context may be needed in making accurate determinations. Commonly encountered Naturally Problematic conditions include hardpan, natural cobble or gravel, bedrock, and a dominance of upland and/or facultative upland plant species. Significantly Disturbed conditions relate specifically to the obscuring of indicators caused by anthropogenic influence or recent, catastrophic natural disturbances. Commonly encountered anthropogenic Significantly Disturbed conditions include row crop agriculture, forestry practices, and site clearing or grading. Natural Significantly Disturbed conditions can include dam breaches or other major flooding and storm-related blowdown.

Where wetland indicators may be disturbed or naturally problematic, a conservative assumption of the presence or absence of wetlands may be made using the observable wetland indicators and best professional judgement. Additional desktop review may also be used and can be useful, especially in agricultural settings.

3.3.3 Streams

Merjent identifies and maps streams in accordance with the USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams (David et al., 2022). Biologists fill data forms at data points during the field survey within stream areas to document indicators, or lack of, for each suspected feature.

For these features, the Ordinary High Water Mark (OHWM) width, substrate, and estimated flow are recorded, along with the OHWM indicators and analysis found within the data sheets (see Appendix B). The OHWM determination is a direct in-field observation, used to document evidence used to determine the shape of the channel of a linear feature that reflects the magnitudes and variety of flows necessary to define it based on direct observations and indicators. The OHWM width is the result of the compilation of evidence observed in-field (David et al., 2022).

3.3.3.1 Rapid Ordinary High Water Mark Field Identification Data Sheets

The Rapid OHWM Field Identification Data Sheets (David et al., 2022; see Appendix B) were completed during field survey as written documentation of what indicators of the potential OHWM were observed, and how they are applied in determining the OHWM.

This data sheet was developed for the sole purpose of identifying the OHWM of linear features, and it does not apply to open waterbodies such as lakes or ponds.

3.3.4 Open Waterbodies

Boundaries for open waterbodies are generally mapped at the transition between the presence and absence of surface water. Wetland vegetative communities may be present on either side of the open waterbody boundary.

3.3.5 Other Surface Water Connections

While often not considered as regulated features, surface water connections such as culverts, upland swales or drainages, and upland road ditches may at times connect to, drain, or drain into regulated features within the Survey Area, particularly during extreme flow events. To the extent practicable and relevant, Merjent mapped these surface water connections to aid in explaining surface water connectivity across the Survey Area.

3.3.6 Survey Photographs

Photographs provided in Appendix C provide a visual representation of wetlands and other surface water features, as well as general site conditions, at the time of inspection. Photos are geospatially referenced by their associated photo point location and presented with direction taken (e.g., "pp01 view West," "pp02 view Northeast"). Photo point locations are depicted on the wetland delineation figure (see Figure 5).

Representative photos were taken for each feature identified in the field. Site photos were collected throughout the Survey Area to demonstrate upland and transitional conditions. Additional photos not provided in Appendix C are available upon request.

3.3.7 Limitations of Survey Data

Merjent surveyed all data point locations and boundaries of wetlands, streams, and open waterbodies using Global Positioning System (GPS) technology capable of sub-meter accuracy. While these surveys provide reasonably accurate and industry-standard spatial data, they do not provide the same level of accuracy as a professional land survey.

For linear features narrower than twice the accuracy of GPS (i.e., 2 meters), the centerline is mapped, and the feature is widened utilizing GIS. A center line may be taken for forested features where GPS accuracy is less. Lateral extents for anomalies such as impoundments or culvert washes are collected in-field to accurately map the variability along entire feature.

Feature boundaries were not flagged during the field survey.

4.0 RESULTS

4.1 DESKTOP REVIEW RESULTS

4.1.1 Previous Wetland and Waterbody Delineation Review

Merjent is unaware of previous wetland and waterbody delineations at this site or associated regulatory review, as such, a review of previous wetland and waterbody delineations was not completed.

4.1.2 Background Data Review

4.1.2.1 Topography

LiDAR was acquired from MNDNR (see Figure 2; Minnesota Geospatial Information Office, 2023) for review of this Survey Area. The Survey Area ranges between 1,136 to 1,302 feet above mean sea level. Elevation varies greatly within the Survey Area generally sloping towards the mapped NHD features.

4.1.2.2 Soil Survey

The SSURGO soil map (see Figure 3) identifies 57 soil types within the Survey Area, 7 of which are classified as hydric (see Appendix D; Soil Survey Staff; NRCS, USDA, 2019). The soil unit Water does not have a hydric rating. The hydric soils are generally located around mapped NHD and NWI features.

4.1.2.3 Mapped Wetlands and Waterbody Features

The hydrology map (see Figure 4) shows approximately 121.02 acres of NWI features (see Table 4.1.2-3; (MNDNR, 2015). There are 30 NHD features including 29 streams totaling 35,425 linear feet, and one artificial path totaling 469 linear feet within the Survey Area (USGS 2004).

	TABLE 4.1.2-1	
	Mapped NWI Features	
Symbol	Description	Acres in Survey Area
PEM1A	Palustrine, Emergent, Persistent, Temporarily Flooded	0.66
PEM1B	Palustrine, Emergent, Persistent, Seasonally Saturated	72.45
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	4.18
PEM1Ch	Palustrine, Emergent, Persistent, Seasonally Flooded, Diked/impounded	0.39
PFO1B	Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Saturated	23.42
PSS1B	Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Saturated	6.51
PUBFx	Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Excavated	0.91
PUBHh	Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/impounded	1.94
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	10.47
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	0.09
	Total	121.02
Source: MNDNF	R update to the NWI; MNDNR, 2015	

4.1.3 Off-site Hydrology and Wetland Determination

The Off-site Hydrology and Wetland Determination identified 102 potential wetland signature areas within the Survey Area (see Appendix E). Thirty-six areas were determined to not be wetland and did not require field verification as they only had wetland signatures in 16.7 percent or less of normal precipitation years. Of the 66 areas that were field verified, 15 of those areas were delineated as wetland. The wetland signature areas that were field verified and were determined to be upland either lacked hydrophytic vegetation, hydric soils, or an additional hydrology indicator.

The full Off-site Hydrology and Wetland Determination, APT analyses, and the decision matrix are available in Appendix E. The Off-site Hydrology and Wetland Determination was used as a contributing factor in making determinations in agricultural fields, and all features were evaluated in-field, regardless of the results of the off-site Hydrology and Wetland Determination decision matrix.

4.1.4 Recent Climatic Conditions and Precipitation Data

Merjent compared recent precipitation data with historic precipitation data from a 30-year dataset (1991-2020) using the Minnesota State Climatology Office Precipitation Worksheet (Minnesota, 2008) to determine if normal hydrologic and climatic conditions were present on-site during field delineations. When compared, the observed precipitation data from three months prior to the field delineations indicated normal precipitation conditions at the time of the 2024 field surveys and wetter than normal precipitation conditions at the time of the 2025 field survey (see Appendix F).

4.2 FIELD SURVEY RESULTS

On May 28-31, June 3-5, and June 19, 2024, and May 2, 2025, biologists conducted a general reconnaissance of the entire Survey Area to evaluate site conditions and determine boundaries of wetlands and other surface water features.

Land use largely consists of agriculture land, pastureland, and forests, with intermittent wetlands and residences.

Approximately 17.5 acres of the portion of the Survey Area southeast of the intersection of 65th Street NE and 70th Avenue NE were inaccessible due to active livestock grazing in the area. A desktop review was completed for this area as shown in Figure 5.

The field survey was conducted during the active growing season and all dominant vegetative species were identifiable.

4.2.1 Uplands

A majority of the upland areas within the Survey Area were pastureland, agricultural land, or forest.

In the pastureland the herbaceous stratum was dense with smooth brome (*Bromus inermis*) and Kentucky blue grass (*Poa pratensis*).

In the agricultural land the herbaceous stratum was moderately dense with planted row crops including soybeans (*Glycine max*) and corn (*Zea mays*). In 2025, the survey was conducted before the planted crops sprouted.

In the forested areas the herbaceous stratum was dense with Missouri gooseberry (*Ribes missouriense*), clustered black-snakeroot (*Sanicula odorata*), spotted touch-me-not (*Impatiens capensis*), reed canary grass (*Phalaris arundinacea*), white avens (*Geum canadense*), common red raspberry (*Rubus idaeus*), Virginia-creeper (*Parthenocissus quinquefolia*), Canadian clearweed (*Pilea pumila*), and groundivy (*Glechoma hederacea*). The sapling/shrub stratum was moderately dense with black walnut (*Juglans nigra*), European buckthorn (*Rhamnus cathartica*), Missouri gooseberry, and ash-leaf maple (*Acer negundo*). The tree stratum was dense with burr oak (*Quercus macrocarpa*), ash-leaf maple, black walnut, eastern cottonwood (*Populus deltoides*), and American elm (*Ulmus americana*).

4.2.1.1 Upland Verification of Unobserved Mapped Features

Data point adp16 was located in a mapped palustrine emergent (PEM1D) NWI wetland. This area was not delineated as wetland as it lacked hydric soils indicators and indicators of wetland hydrology.

Data point bdp51 was located in a mapped palustrine emergent/palustrine forested (PEM1B/PFO1B) NWI wetland. This area was not delineated as wetland as it lacked hydric soils indicators and indicators of wetland hydrology.

Data points adp48 and adp49 were located in mapped palustrine emergent (PEM1B) NWI wetlands adjacent to a riverine feature. Data point adp48 lacked hydric soil indicators. Data point adp49 lacked dominant hydrophytic vegetation, hydric soil indicators, and indicators of wetland hydrology.

Data points ddp07 and ddp08 were located in mapped palustrine emergent (PEM1B) NWI wetlands. Data point ddp07 lacked dominant hydrophytic vegetation, hydric soil indicators, and indicators of wetland hydrology. Data point ddp08 lacked dominant hydrophytic vegetation and indicators of wetland hydrology.

Data point ddp05 was located in mapped palustrine emergent (PEM1B) NWI adjacent to a riverine feature. Data point ddp05 lacked hydric soil indicators.

Multiple locations in the Survey Area were mapped with NHD and riverine NWI features. Based on field visits, many of these locations were located in active agriculture fields or upland swales, had no defined bed or bank, and lacked wetland indicators. Refer to Appendix C for photos of these locations.

4.2.2 Wetlands

Merjent identified 37 wetlands totaling 93.03 acres to community type within the Survey Area according to Eggers and Reed (2015, see Figure 5), Hydrogeomorphic (HGM; Brinson, 1993), and Cowardin et al. (1979) classification systems (see Table 4.2.2-1 below). Representative photographs of the wetlands are provided in Appendix C. More detailed information for the associated data points is found in the wetland determination data forms in Appendix A.

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	tion ¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
	7.93	345,393	Fresh (Wet) Meadow		PEM	adp03 adp05 adp08	PEM1B PSS1B R4SBC	1	D2 – Geomorphic Position D5 – FAC- Neutral Test	A12 – Thick Dark Surface F6 – Redox Dark Surface	Culvert located at north end,	Wetland complex between agriculture fields and pastureland.
w01	2.42	105,450	Floodplain Forest	Riverine	PFO	adp67		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	wetland continues southwest to wetland w04	A portion of this wetland was determined via desktop delineation due to access restrictions.
w02	0.16	7,135	Fresh (Wet) Meadow	Riverine	PEM	adp08 representative	PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Continues northwest connecting to desktop delineated wetland w01, connected to stream s14	Wetland at the edge of a forest and pastureland
w03	0.02	865	Fresh (Wet) Meadow	Riverine	PEM	adp17	PEM1B R4SBC	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A12 – Thick Dark Surface	Connected to stream s05 and continues west offsite	Wetland located along a stream in pastureland
w04	13.17	573,886	Sedge Meadow	Riverine	PEM	bdp01 bdp47	PEM1B PEM1C	-	B10 – Drainage Patterns D2 – Geomorphic Position	A12 – Thick Dark Surface	Connected to stream s15,	Wetland complex located
wu 4	3.07	133,847	Fresh (Wet) Meadow	Depressional	PEM	bdp03	R4SBC	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	continues east and west offsite	in pastureland

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	and Classificat	ion ¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
w05	0.04	1,694	Fresh (Wet) Meadow	Depressional	PEM	adp24	PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface	Appears surficially isolated	Wetland located between agriculture fields
w06	0.04	1,889	Fresh (Wet) Meadow	Depressional	PEM	adp24 representative	PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface	Appears surficially isolated	Wetland located between agriculture fields
w07	0.01	372	Fresh (Wet) Meadow	Depressional	PEM	adp24 representative	PFO1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface	Appears surficially isolated	Wetland located between agriculture fields
w08	0.11	4,596	Seasonally Flooded Basin	Depressional	PEM	adp38	-		C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A12 – Thick Dark Surface F6 – Redox Dark Surface	Appears surficially isolated	Wetland in an agriculture field
w09	0.16	6,860	Fresh (Wet) Meadow	Depressional	PEM	adp28	PFO1B PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface	Appears surficially isolated	Wetland located in meadow between forest and agriculture

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wetl	and Classificat	tion ¹			Wetland Hydi	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	ндм	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
	5.85	254,954	Fresh (Wet) Meadow	Riverine	PEM	adp31 cdp20 ddp04		C3 – Oxidized Rhizospheres Along Living Roots C7 – Thin Muck Surface	B10 – Drainage Patterns D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface A12 – Thick Dark Surface F6 – Redox Dark Surface		
w10	10.73	467,307	Floodplain Forest	Riverine	PFO	adp32 cdp24 cdp26 cdp28	PSS1B PEM1B R4SBC PFO1B PEM1C	A1 – Surface Water A2 – High Water Table A3 – Saturation, B4 – Algal Mat Or Crust B9 – Water Stained Leaves	B6 – Surface Soil Cracks D2 – Geomorphic Position D5 – FAC- Neutral Test	A11 – Depleted Below Dark Surface A12 – Thick Dark Surface F1 – Loamy Mucky Mineral	Continues east, west, and south offsite; connected to streams s07, s08, s09, s10, s11, s26	Wetland complex located between agriculture fields in the east and in forest to the west. Follows stream s07
	0.31	13,353	Seasonally Flooded Basin	Riverine	PEM	cdp13		-	C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A12 – Thick Dark Surface F6 – Redox Dark Surface		
w11	1.06	46,257	Seasonally Flooded Basin	Slope	PEM	adp29		-	B6 – Surface Soil Cracks C9 – Saturation Visible On Aerial Imagery	F2 – Loamy Gleyed Matrix	Appears surficially	Side hill seep in an agriculture
WII	0.42	18,311	Fresh (Wet) Meadow	Slope	PEM	adp31 representative	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A12 – Thick Dark Surface	isolated	field

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	ion¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
w12	0.23	10,036	Seasonally Flooded Basin	Slope	PEM	cdp17	-	-	B6 – Surface Soil Cracks C9 – Saturation Visible On Aerial Imagery	A11 – Depleted Below Dark Surface F2 – Loamy Gleyed Matrix	Appears surficially isolated	Wetland located in active agriculture field
w13	0.15	6,705	Fresh (Wet) Meadow	Depressional	PEM	bdp20	PEM1Ch	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F7 – Depleted Dark Surface	Appears surficially isolated	Wetland located between agriculture fields
w14	0.17	7,504	Fresh (Wet) Meadow	Depressional	PEM	bdp07	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F3 – Depleted Matrix	Appears surficially isolated	Wetland located between agriculture fields in a swale
w15	0.68	29,612	Fresh (Wet) Meadow	Depressional	PEM	bdp03 representative	R4SBC	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Connected to stream s16; s16 appears to continue offsite	Wetland located between residential property and roadway
w16	0.73	31,727	Fresh (Wet) Meadow	Slope	PEM	cdp14	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	Other	May be connected to wetlands w17 and w18 via culverts. Continues northwest offsite	Wetland located in a roadside ditch
w17	1.51	65,846	Fresh (Wet) Meadow	Depressional	PEM	cdp13	PEM1A	-	C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A12 – Thick Dark Surface F6 – Redox Dark Surface	May be connected to wetland w16 via culvert	Wetland located between agriculture and roadway

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	ion¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
	3.50	152,275	Seasonally Flooded Basin		PEM	cpd02 cpd03		-	B6 – Surface Soil Cracks B10 – Drainage Patterns C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A12 – Thick Dark Surface F6 – Redox Dark Surface	Connected to	
w18	2.03	88,599	Fresh (Wet) Meadow	Slope	PEM	cdp11	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	Other	stream s03, may be connected to w16 via culvert. Continues east	Wetland complex located between agriculture to the west and shrub land to the east
	0.86	37,385	Shrub-carr	Slope	PSS	cdp07		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	offsite.	iand to the east
	0.60	25,993	Hardwood Swamp	Slope	PFO	cdp09		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface		
w19	0.03	1,195	Fresh (Wet) Meadow	Depressional	PEM	cdp05	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	Other	Appears surficially isolated	Wetland located at the edge of agriculture field
w20	0.70	30,603	Fresh (Wet) Meadow	Riverine	PEM	adp41	PEM1B R4SBC	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Connected to s18 and s19, continues west offsite	Wetland located in a pasture

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	ion¹			Wetland Hydi	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
w21	4.42	192,566	Seasonally Flooded Basin	Depressional	PEM	adp60	R4SBC	-	C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A11 – Depleted Below Dark Surface	Appears surficially isolated, culvert located at the southeastern end	Wetland located between agriculture fields
w22	0.79	34,530	Fresh (Wet) Meadow	Depressional	PEM	adp50	PUBHh R5UBH PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F3 – Depleted Matrix	Connected to s02 and s24, continues	Wetland complex located between forest,
	1.10	47,933	Floodplain Forest	Riverine	PFO	adp47	PFO1B PEM1Ch	A1 – Surface Water	D2 – Geomorphic Position	Other	southwest offsite	agriculture, and meadow
w23	0.05	2,370	Hardwood Swamp	Slope	PFO	adp52	PFO1B R4SBC	A1 – Surface Water C1 – Hydrogen Sulfide Odor	D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Connected to s02	Hillside seep located along forested riverine
w24	0.01	511	Floodplain Forest	Riverine	PFO	adp64	R4SBC	A3 – Saturation	D2 – Geomorphic Position D5 – Fac- Neutral Test	F12 – Iron- Manganese Masses	Connected to s22	Stream fringe located along forested riverine
w25	0.01	613	Floodplain Forest	Riverine	PFO	adp64 representative	PFO1B	A3 – Saturation	D2 – Geomorphic Position D5 – Fac- Neutral Test	F12 – Iron- Manganese Masses	Connected to s22	Stream fringe located along forested riverine

TABLE 4.2.2-1
Summary of Delineated Wetlands

		Area	Wet	land Classificat	ion¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
	6.07	264,247	Fresh (Wet) Meadow	Depressional	PEM	bdp35		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F1 – Loamy Mucky Mineral		
	0.70	30,492	Hardwood Swamp	Depressional	PFO	bdp41	PEM1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Connected to	Wetland located
w26	1.37	59,879	Seasonally Flooded Basin	Depressional	PEM	bdp39	PSS1B	-	C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position	A11 – Depleted Below Dark Surface	s21, continues east offsite	between agriculture fields
	3.14	136,610	Shrub-carr	Depressional	PSS	bdp42		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F1 – Loamy Mucky Mineral, F6 – Redox Dark Surface		
w27	1.06	45,962	Seasonally Flooded Basin	Depressional	PEM	bdp45	-	-	C9 – Saturation Visible On Aerial Imagery, D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Appears surficially isolated	Wetland located in active agriculture field
w28	0.001	31	Fresh (Wet) Meadow	Depressional	PEM	adp58	-		D2 – Geomorphic Position D5 – FAC- Neutral Test	Other	Appears surficially isolated	Wetland located in roadside ditch

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	ion¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
	3.48	151,421	Fresh (Wet) Meadow	Depressional	PEM	bdp29		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	A12 – Thick Dark Surface		
w29	0.59	25,729	Shrub-carr	Depressional	PSS	bdp30	R4SBC PEM1B PSS1B	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Appears surficially isolated	Wetland complex located between agriculture fields and roadway
	0.64	27,833	Hardwood Swamp	Depressional	PFO	bdp31		-	D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface		
w30	0.06	2,831	Fresh (Wet) Meadow	Depressional	PEM	bdp23	-	-	C9 – Saturation Visible On Aerial Imagery D2 – Geomorphic Position D5 – FAC- Neutral Test	A12 – Thick Dark Surface	Appears surficially isolated	Wetland located in active agriculture field
w31	0.17	7,220	Seasonally Flooded Basin	Depressional	PEM	bdp22	PUBFx	-	D1 – Stunted Or Stressed Plants D2 – Geomorphic Position	F6 – Redox Dark Surface	Appears surficially isolated	Wetland located what appears to be a previously excavated pond
w32	0.03	1,524	Fresh (Wet) Meadow	Depressional	PEM	ddp02	R4SBC		B10 – Drainage Patterns D2 – Geomorphic Position D5 – FAC- Neutral Test	F6 – Redox Dark Surface	Appears surficially isolated	Wetland located between forest and agriculture fields

TABLE 4.2.2-1 Summary of Delineated Wetlands

		Area	Wet	land Classificat	tion¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
w33	0.05	2,383	Fresh (Wet) Meadow	Depressional	PEM	ddp10	-	-	D2 – Geomorphic Position D5 – FAC- Neutral Test	Other	Appears surficially isolated	Wetland located in a roadside ditch
w34	0.09	3,894	Fresh (Wet) Meadow	Depressional	PEM	-	-	-	-	-	Continues south offsite within roadside ditch	Wetland located in a roadside ditch
	6.33	275,942	Hardwood Swamp	Depressional	PFO	dp04	PFO1D	-	D2 – Geomorphic Position D5 – FAC- neutral Test	F6 – Redox Dark Surface F7 – Depleted Dark Surface		
	0.76	33,102	Shrub-carr	Depressional	PSS	dp01	PSS1D	A2 – High Water Table A3 – Saturation B9 – Water- stained Leaves	D2 – Geomorphic Position D5 – FAC- neutral Test	F1 – Loamy Mucky Mineral F6 – Redox Dark Surface	Appears hydrologically connected to	Wetland located in an agricultural
w35	3.84	167,386	Fresh (Wet) Meadow	Depressional	PEM	dp06	PEM1D	B9 – Water- stained Leaves	D2 – Geomorphic Position D5 – FAC- neutral Test	Other	wetland w01 and stream s12 outside of Survey Area	field and unfarmed low- lying area within the field
	2.99	130,380	Seasonally Flooded Basin	Depressional	PEM	dp03	-	-	C9 – Saturation Visible on Aerial Imagery D2 – Geomorphic Position D5 – FAC- neutral Test	F6 – Redox Dark Surface		

TABLE 4.2.2-1
Summary of Delineated Wetlands

		Area	Wetl	and Classificat	ion ¹			Wetland Hyd	rology Indicators			
Wetland ID	Acres	Feet ²	Eggers and Reed	HGM	Cowardin	Sample Point	NWI (Type)	Primary	Secondary	Hydric Soil Indicators ³	Surficial Connectivity	Notes
w36	0.10	4,324	Seasonally Flooded Basin	Depressional	PEM	dp07	-	-	C9 – Saturation Visible on Aerial Imagery D2 – Geomorphic Position	F3 – Depleted Matrix	Appears surficially isolated	Wetland located in isolated depression in agricultural field
	1.88	81,724	Hardwood Swamp	Depressional	PFO	dp11	PFO1D	-	D2 – Geomorphic Position D5 – FAC- neutral Test	A12 – Thick Dark Surface	Wetland extends offsite northeast;	Wetland located in a low-lying
w37	0.42	18,411	Seasonally Flooded Basin	Depressional	PEM	dp13	-	-	C9 – Saturation Visible on Aerial Imagery D2 – Geomorphic Position	Other – soil sampled to a depth of 44 inches; presumed to meet A12	appears to connect to wetland w22 and stream s23	forest and a recently excavated swale
Total Area	93.03	4,053,629		l	I				1.			

¹ Source: Eggers and Reed, 2015; Brinson, 1993; and Cowardin et al., 1979

² Note: delineated wetlands may extend outside of Survey Area

³Unless otherwise stated, Other indicates soils were not sampled due to proximity to buried utilities and soils are assumed to be hydric based on landscape position and other indicators of wetland hydrology

4.2.2.1 Naturally Problematic and Significantly Disturbed Datapoints

Multiple wetlands were found in agricultural fields within the Survey Area. These wetlands had significantly disturbed vegetation due to recurring agricultural activities. In these situations, the problematic hydrophytic vegetation indicator was used if hydric soil and hydrology indicators were present. There were also working drain tile inlets identified in portions of the Survey Area; in these locations, hydrology indicator D2 Geomorphic Position was not used to account for the disturbance to hydrology.

4.2.3 Streams

Merjent identified 29 streams totaling 28,585 linear feet within the Survey Area (see Table 4.2.3-1 below; Figure 5). Representative photographs of the streams are provided in Appendix C. The completed Rapid OHWM Field Identification Data Sheets are provided in Appendix B.

		TABLE 4.2.3-1			
	Sum	nmary of Delineated S	Streams		
Field ID	Name	Length in Survey Area (linear feet)	OHWM Width (feet)	Substrate	Flow Regime
s01	Dry Creek	2	8	Silt/clay/mud	Perennial
s02	UNT to Whitewater River, North Branch	33	4	N/A*	Intermittent
s03	UNT to Whitewater River, North Branch	1,334	4	Silt/clay/mud	Ephemeral
s04	UNT to Dry Creek	227	2	Bedrock	Intermittent
s05	UNT to Dry Creek	1,239	4	Bedrock	Intermittent
s06	UNT to Dry Creek	39	1	Bedrock	Intermittent
s07	UNT to Whitewater River, North Branch	1,719	8	Silt/clay/mud	Intermittent
s08	UNT to Whitewater River, North Branch	519	5	Silt/clay/mud	Intermittent
s09	UNT to Whitewater River, North Branch	6,235	9	Silt/clay/mud	Perennial
s10	UNT to Whitewater River, North Branch	1,011	7	Silt/clay/mud	Intermittent
s11	UNT to Whitewater River, North Branch	63	9	Silt/clay/mud	Perennial
s12	Dry Creek	4,277	8	Silt/clay/mud	Perennial
s13	UNT to Dry Creek	365	2	Silt/clay/mud	Ephemeral
s14	UNT to Dry Creek	547	2	Silt/clay/mud	Ephemeral
s15	UNT to Dry Creek	825	2	Silt/clay/mud	Intermittent
s16	UNT to Whitewater River, North Branch	421	2	Silt/clay/mud	Perennial
s17	UNT to Whitewater River, North Branch	1,278	4	Silt/clay/mud	Perennial
s18	UNT to Whitewater River, North Branch	1,942	3	Boulders	Intermittent
s19	UNT to Whitewater River, North Branch	116	2	Silt/clay/mud	Ephemeral
s20	UNT to Whitewater River, North Branch	167	9.5	Cobble	Intermittent
s21	UNT to Silver Creek	1,450	2	Silt/clay/mud	Perennial
s22	UNT to Whitewater River, North Branch	929	6	Silt/clay/mud	Intermittent
s23	UNT to Whitewater River, North Branch	1,098	5	Silt/clay/mud	Intermittent
s24	UNT to Whitewater River, North Branch	201	4	Silt/clay/mud	Ephemeral
s25	UNT to Dry Creek	54	8	Silt/clay/mud	Perennial
s26	UNT to Whitewater River, North Branch	2,404	3	Silt/clay/mud	Intermittent
s27	UNT to Whitewater River, North Branch	22	2	Silt/clay/mud	Intermittent
s28	UNT to Whitewater River, North Branch	30	2	Silt/clay/mud	Intermittent
s29	UNT to Whitewater River, North Branch	38	3	N/A*	Intermittent
	ordinary high water mark; UNT = unnamed	,			
*Waterwa	y assessed from roadway, substrate unknow	wn			

4.2.4 Open Waterbodies

Merjent identified one open waterbody feature totaling 1.66 acres within the Survey Area (see Table 4.2.4-1 below; Figure 5). Representative photographs of the open waterbody are provided in Appendix C.

	TABLE 4.2.4-1	
	Summary of Delineated Open Water	erbodies
Feature ID	Cowardin Classification ¹	Size (acres) within Survey Area ¹
ow01	PUBHh	1.66
	Total	1.66

4.2.5 Other Surface Water Resources Identified

No other surface water resources were identified.

5.0 SUMMARY AND CONCLUSION

Merjent performed a delineation of wetlands and other surface water features for the Lemon Hill Solar Project in Olmsted County, Minnesota.

Based on the field survey and review of desktop resources, it is our professional opinion that 37 wetlands (93.03 acres), 29 waterways (28,585 linear feet), and one open waterbody (1.66 acres) exist within the 2,036.53-acre Survey Area. This report represents our best professional judgment based on our local knowledge and experience.

6.0 DISCLAIMER

The survey results described in this report represent the physical conditions encountered at the time the field survey was performed. In addition, the surveys were performed using regulatory guidance and scientific methods in effect and current at the time. If regulatory frameworks or technical guidance change in the future, some additional survey work or modifications to the survey report may be required.

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Figure 1
Project Location

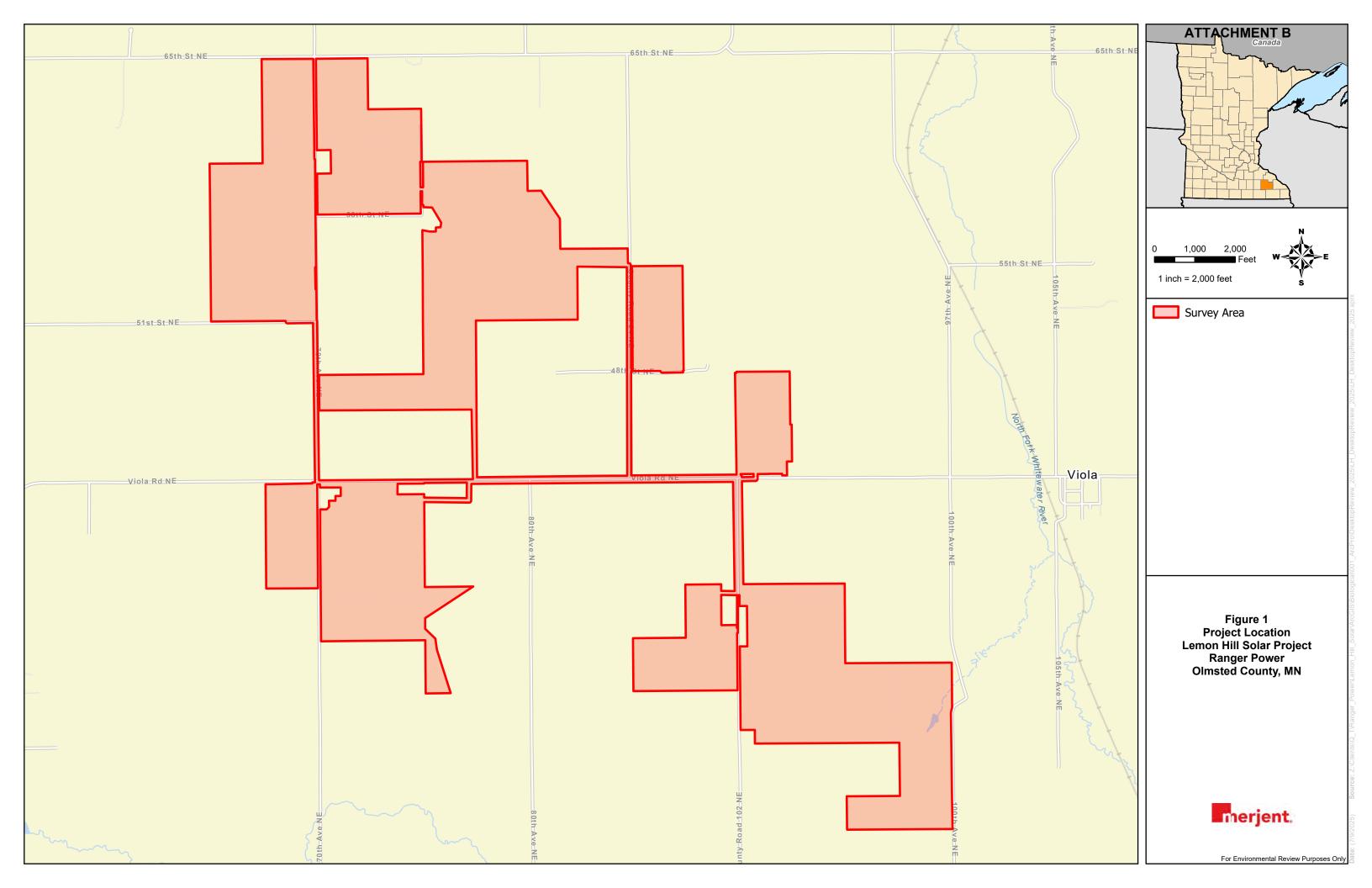
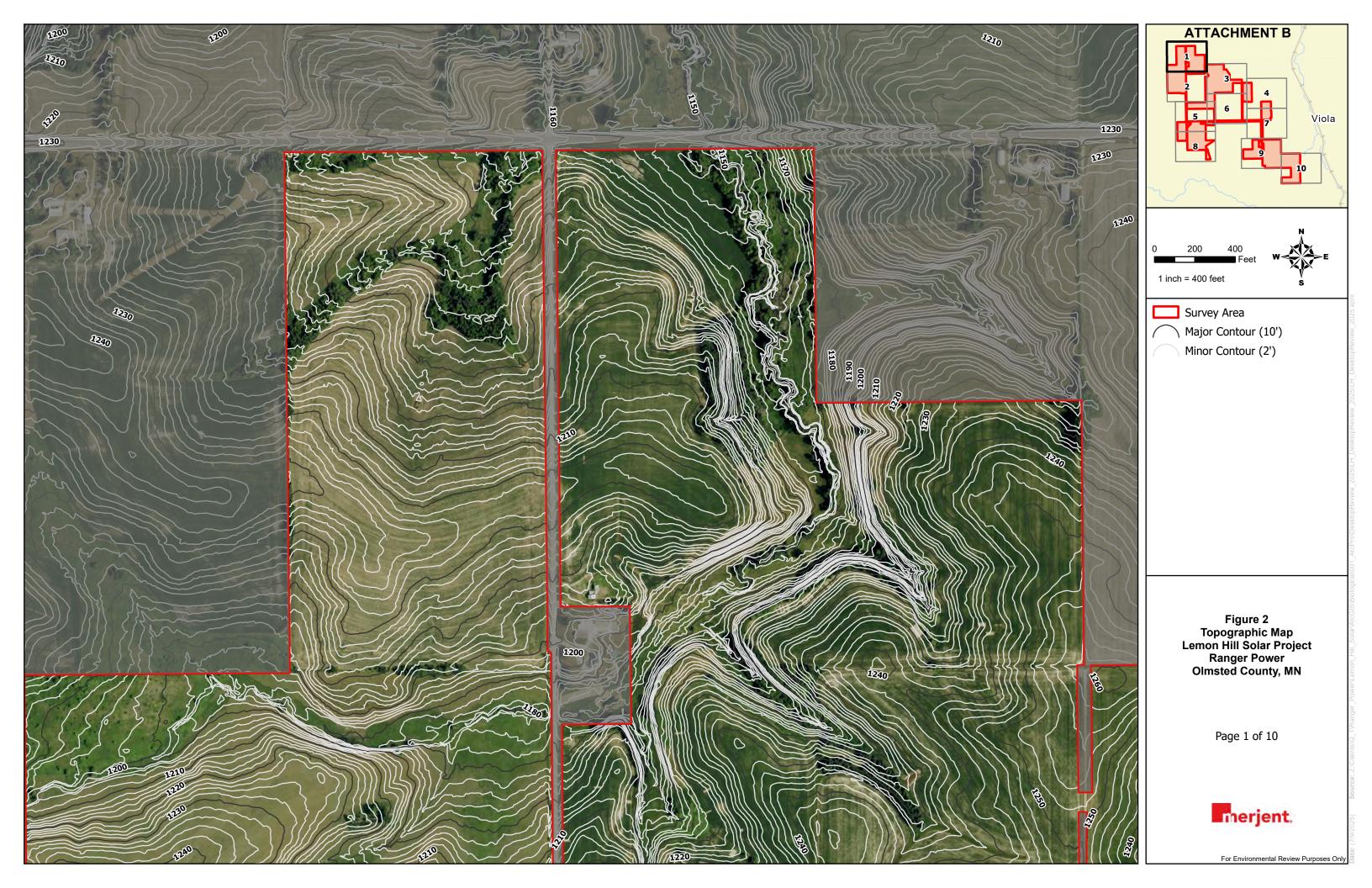
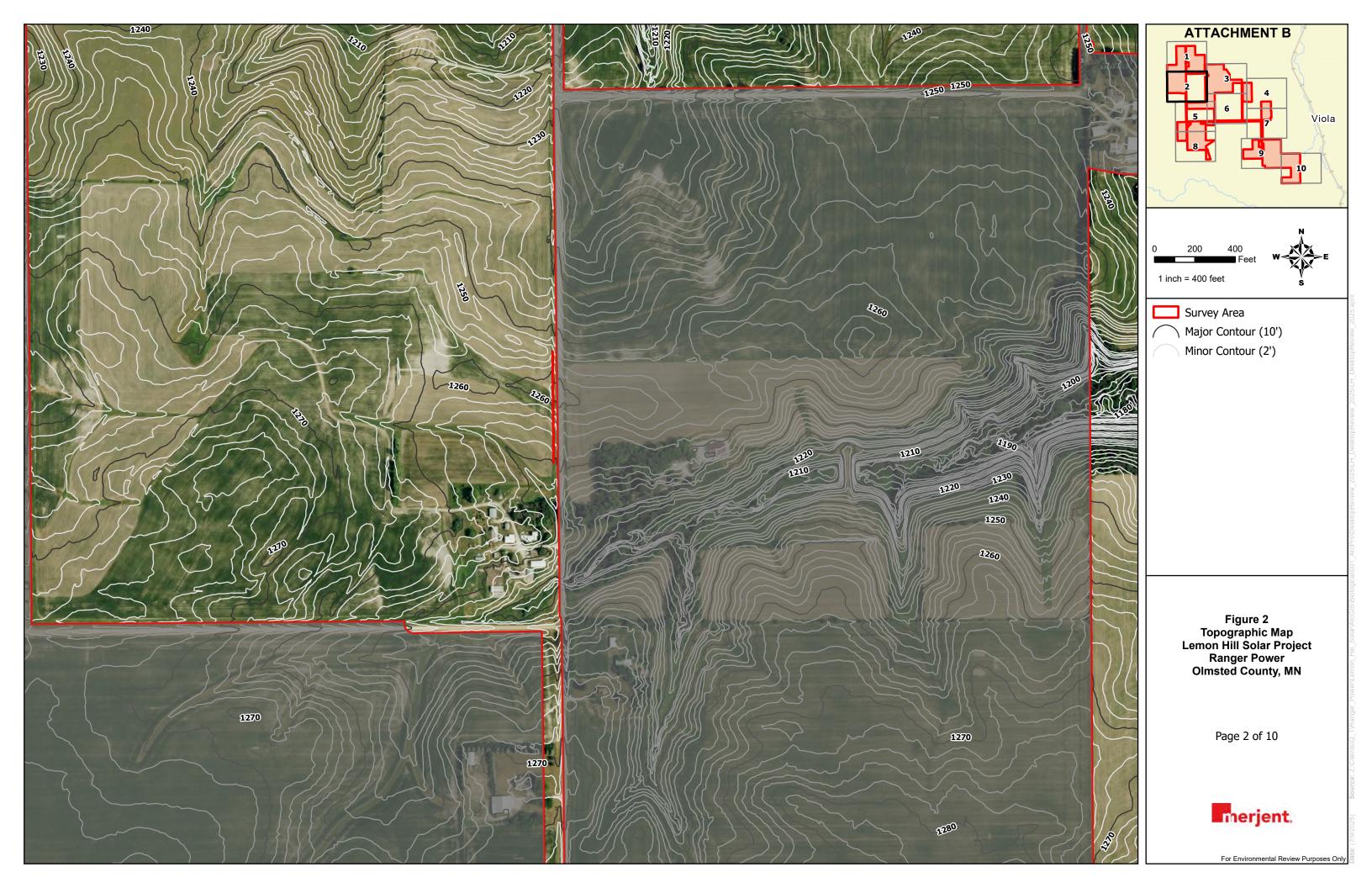
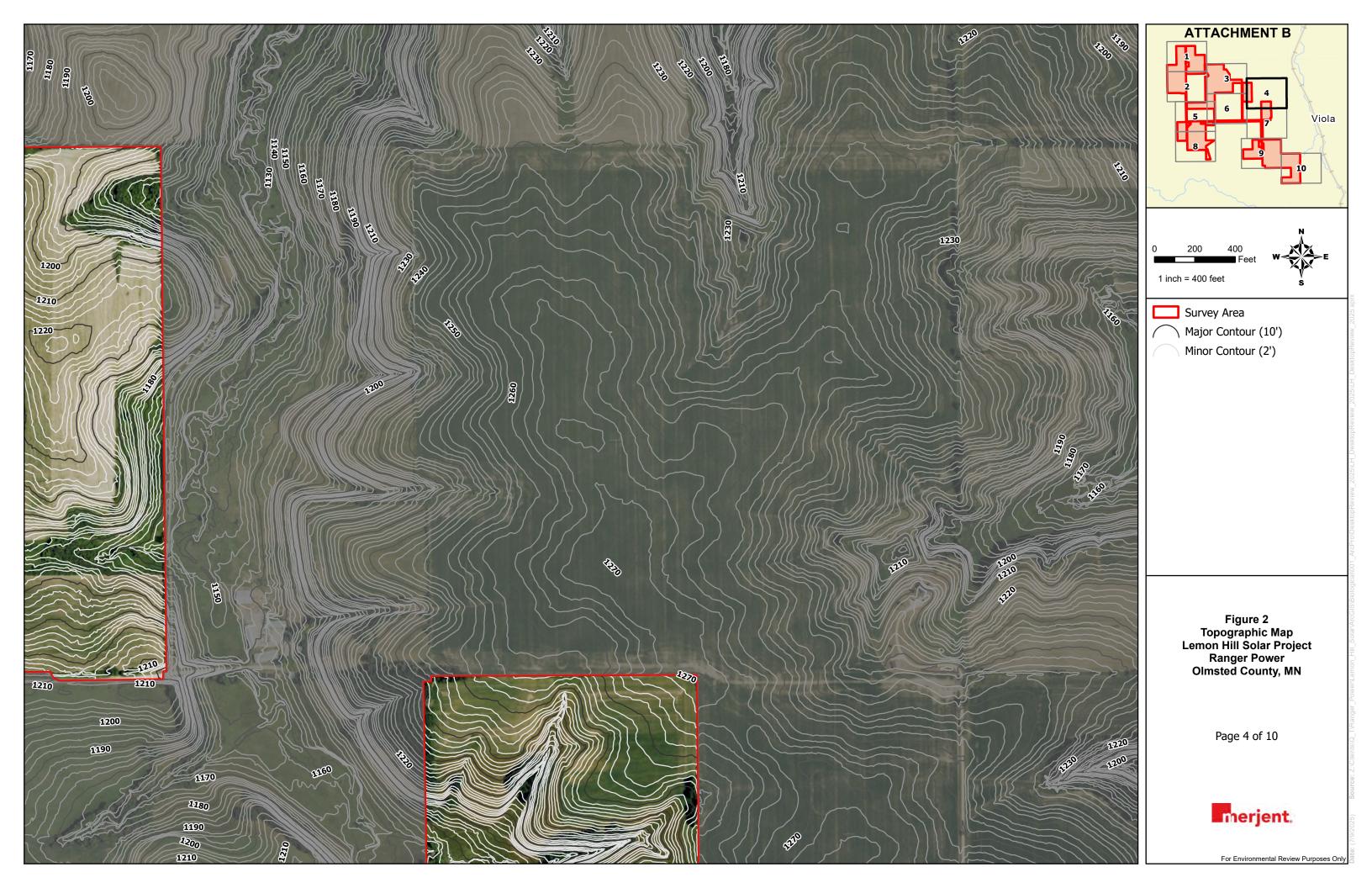


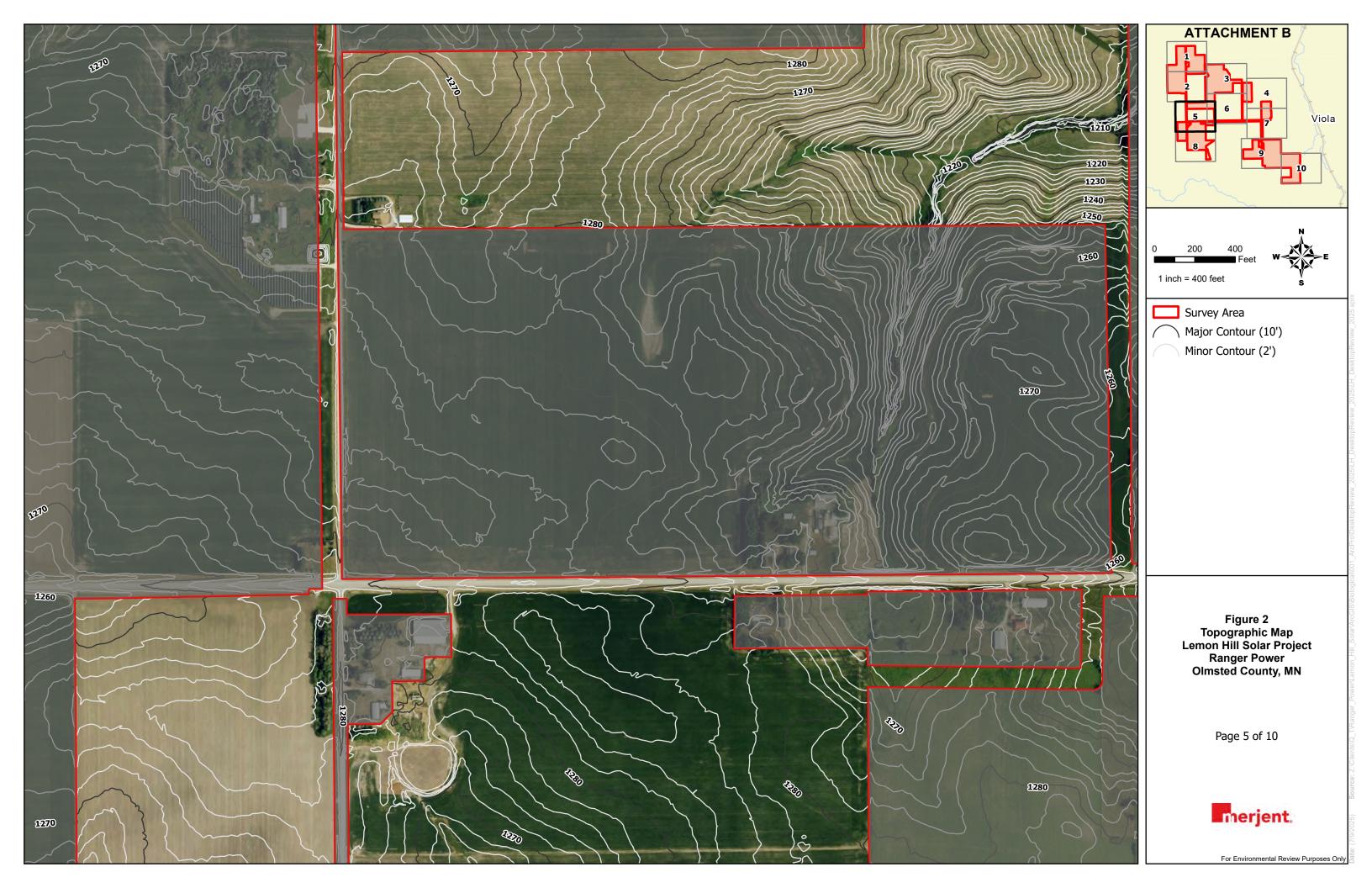
Figure 2
Topography



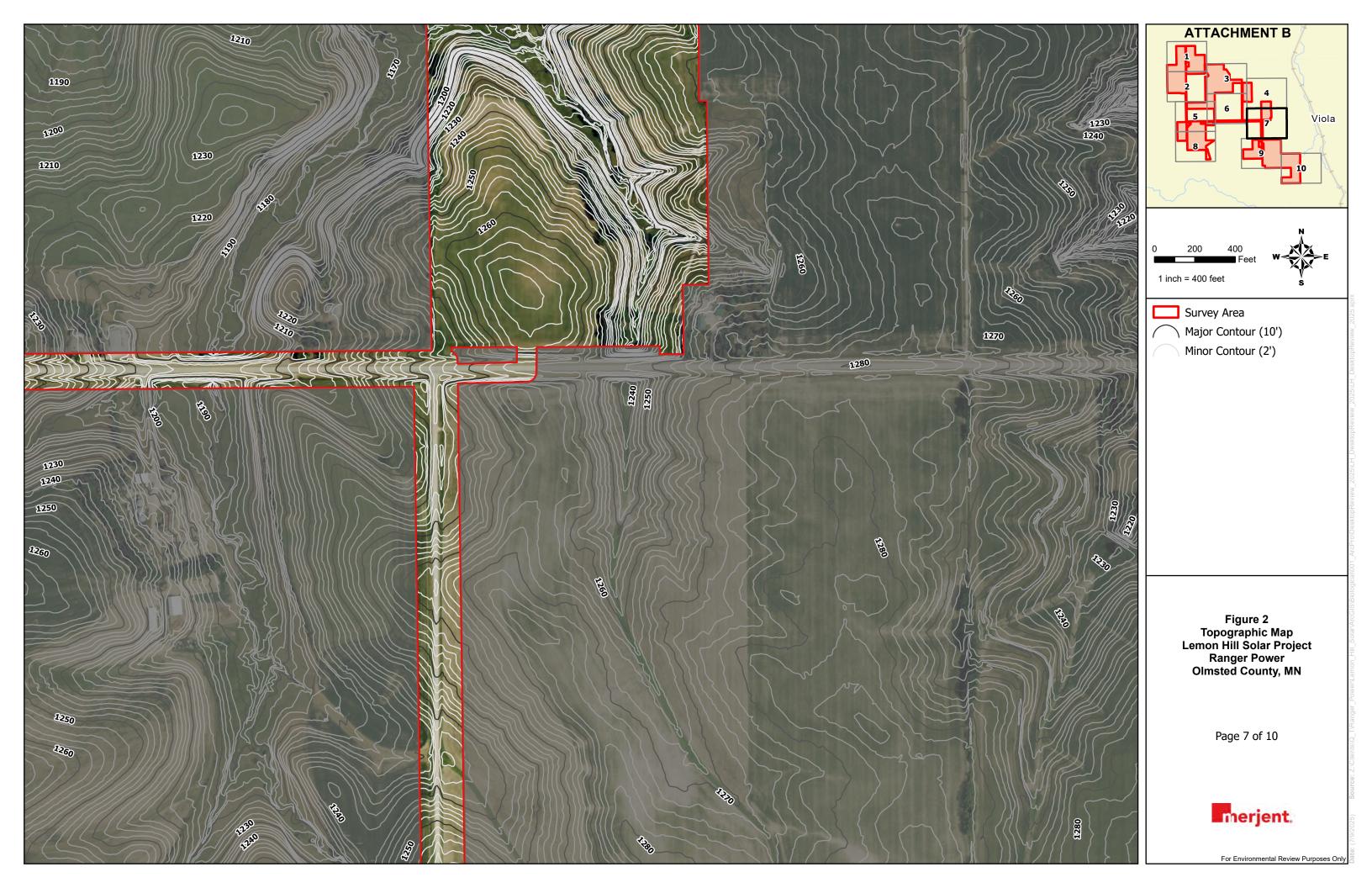


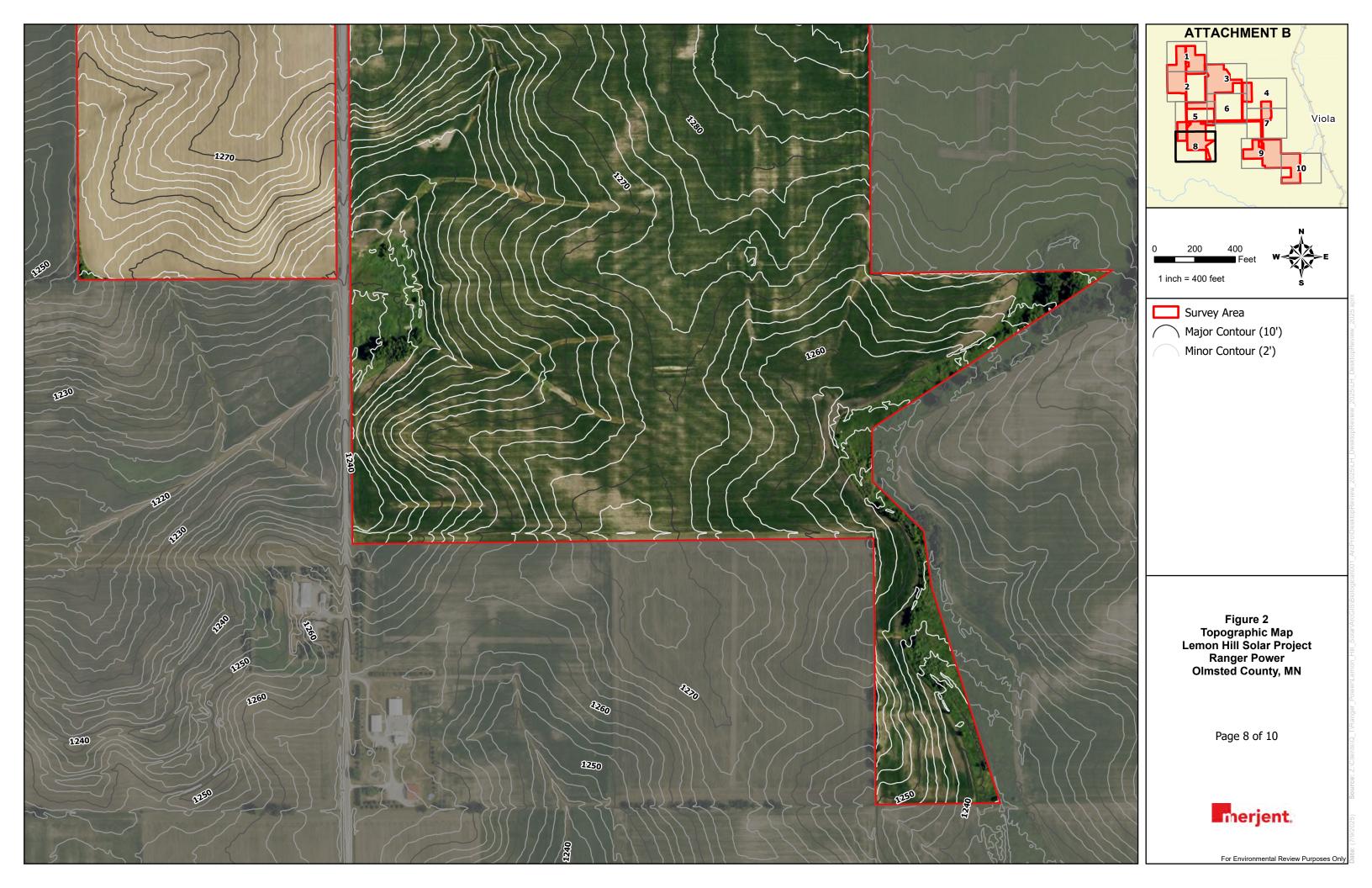














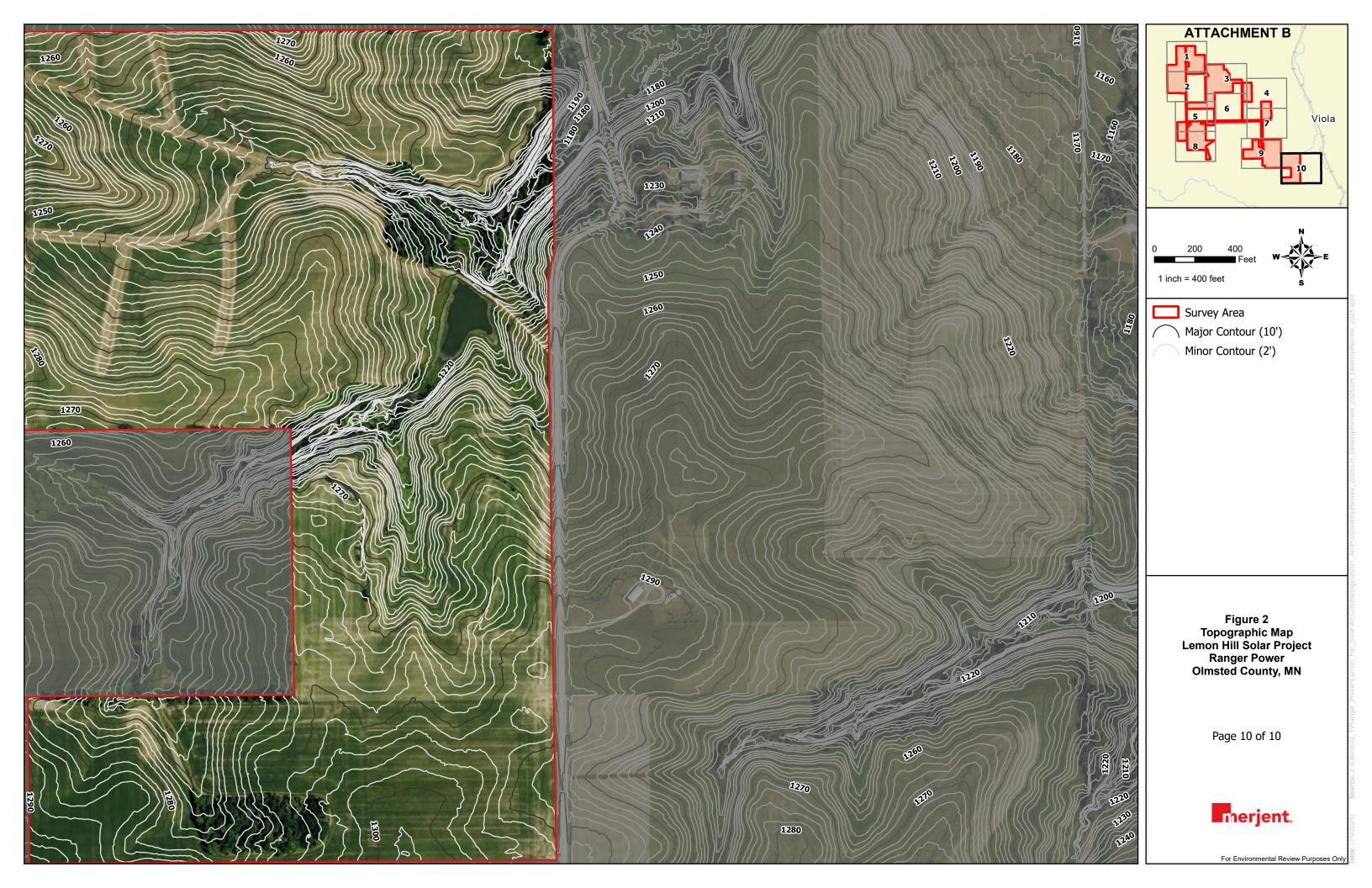
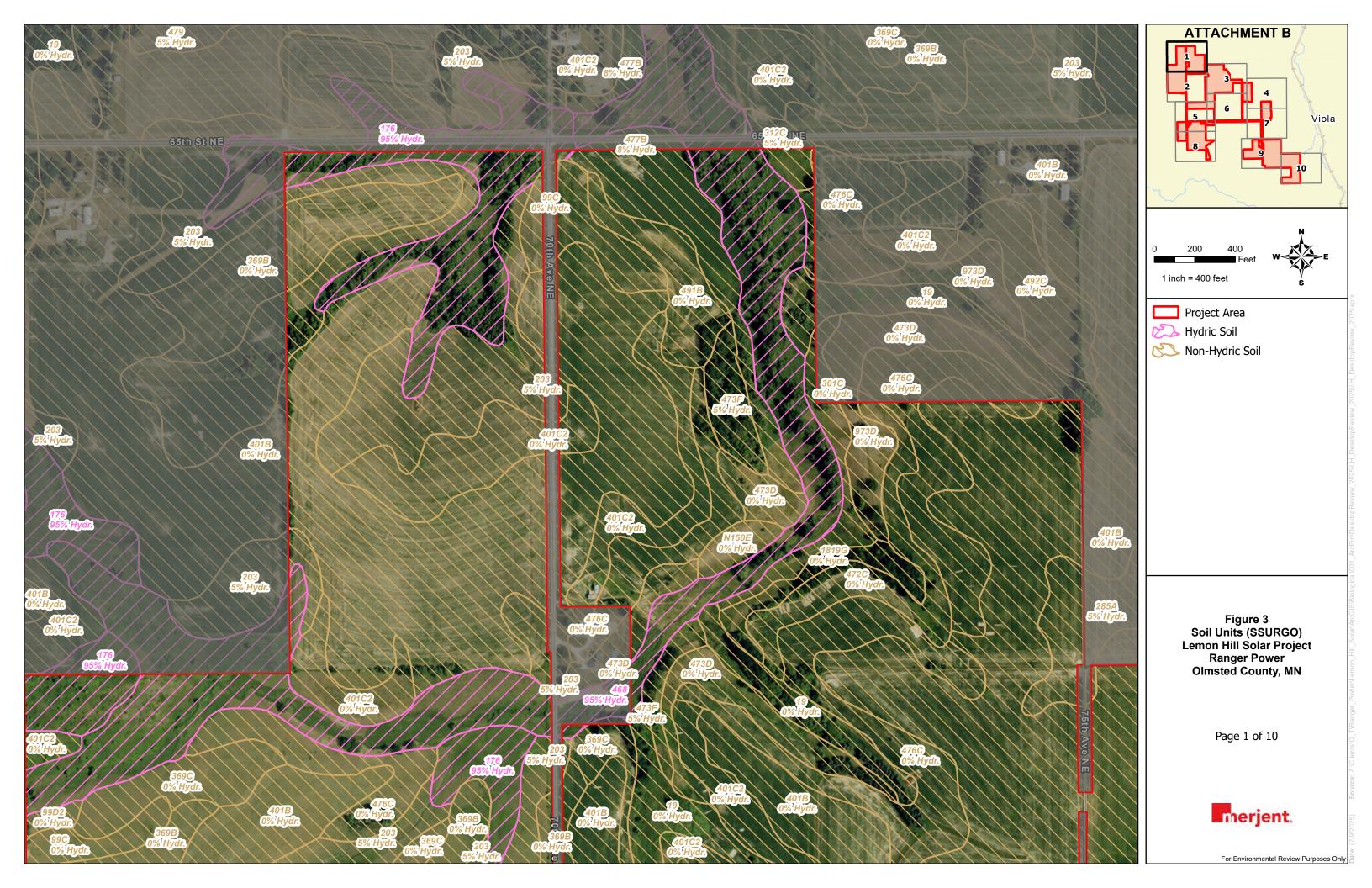
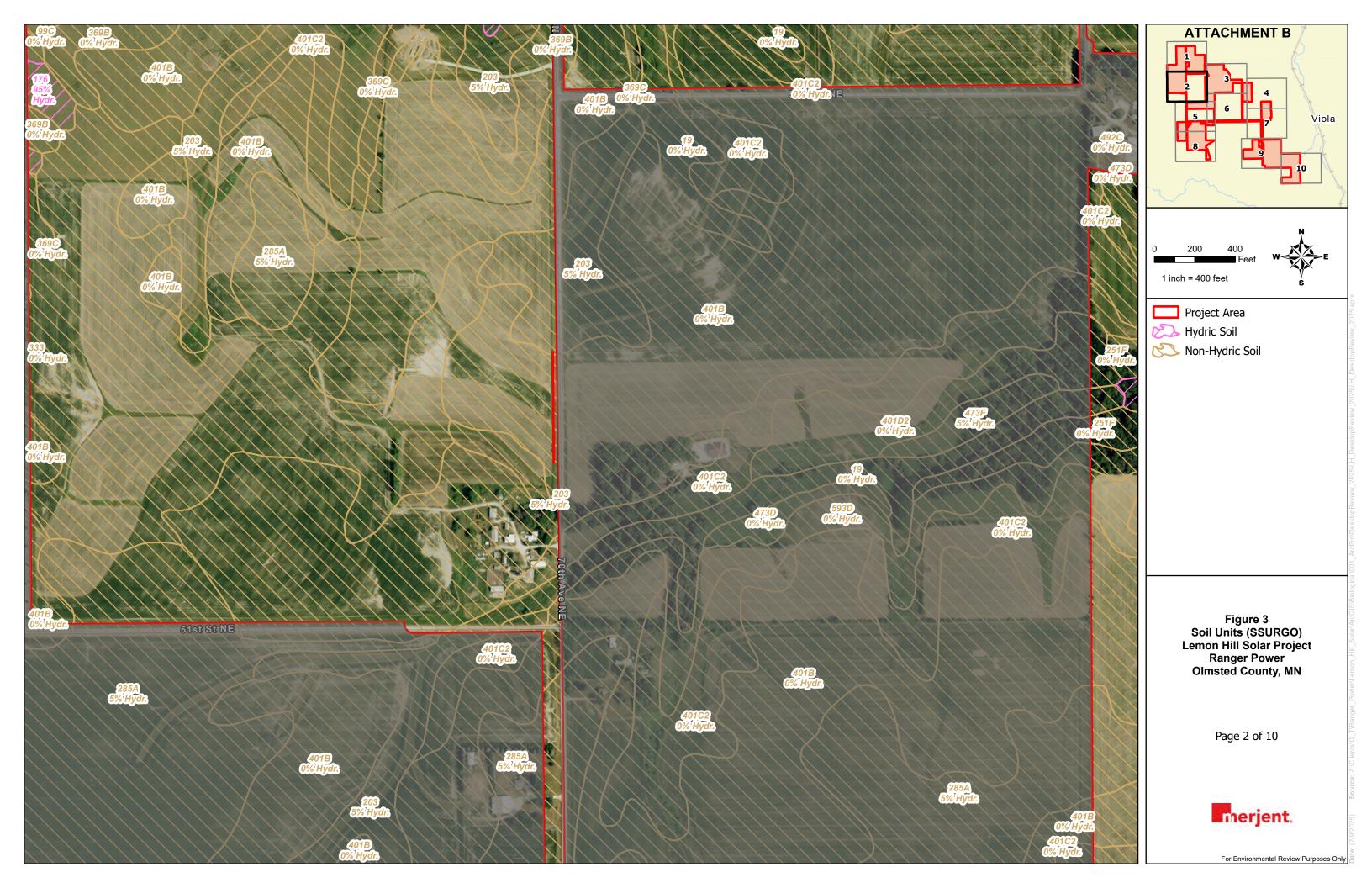
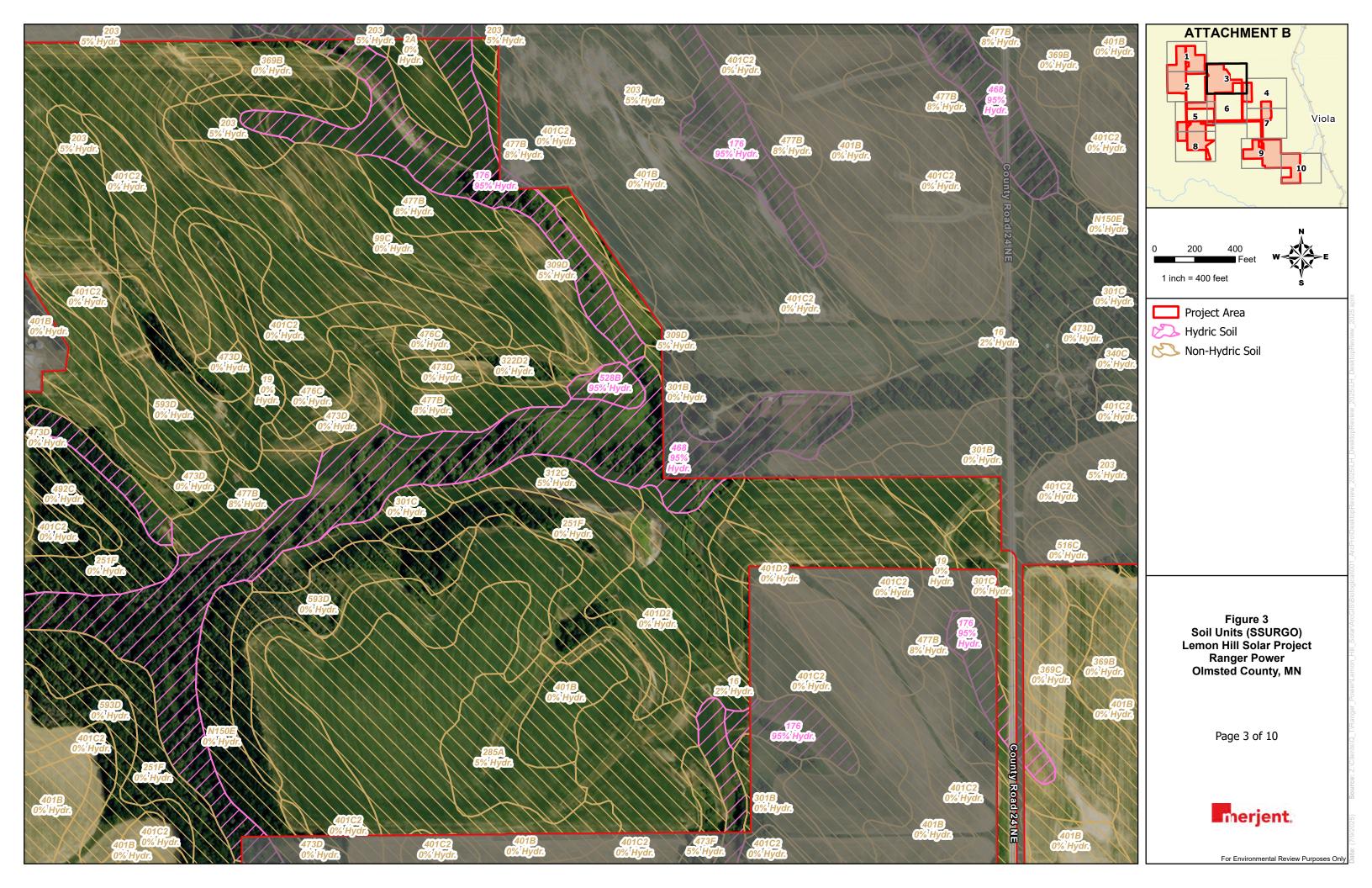
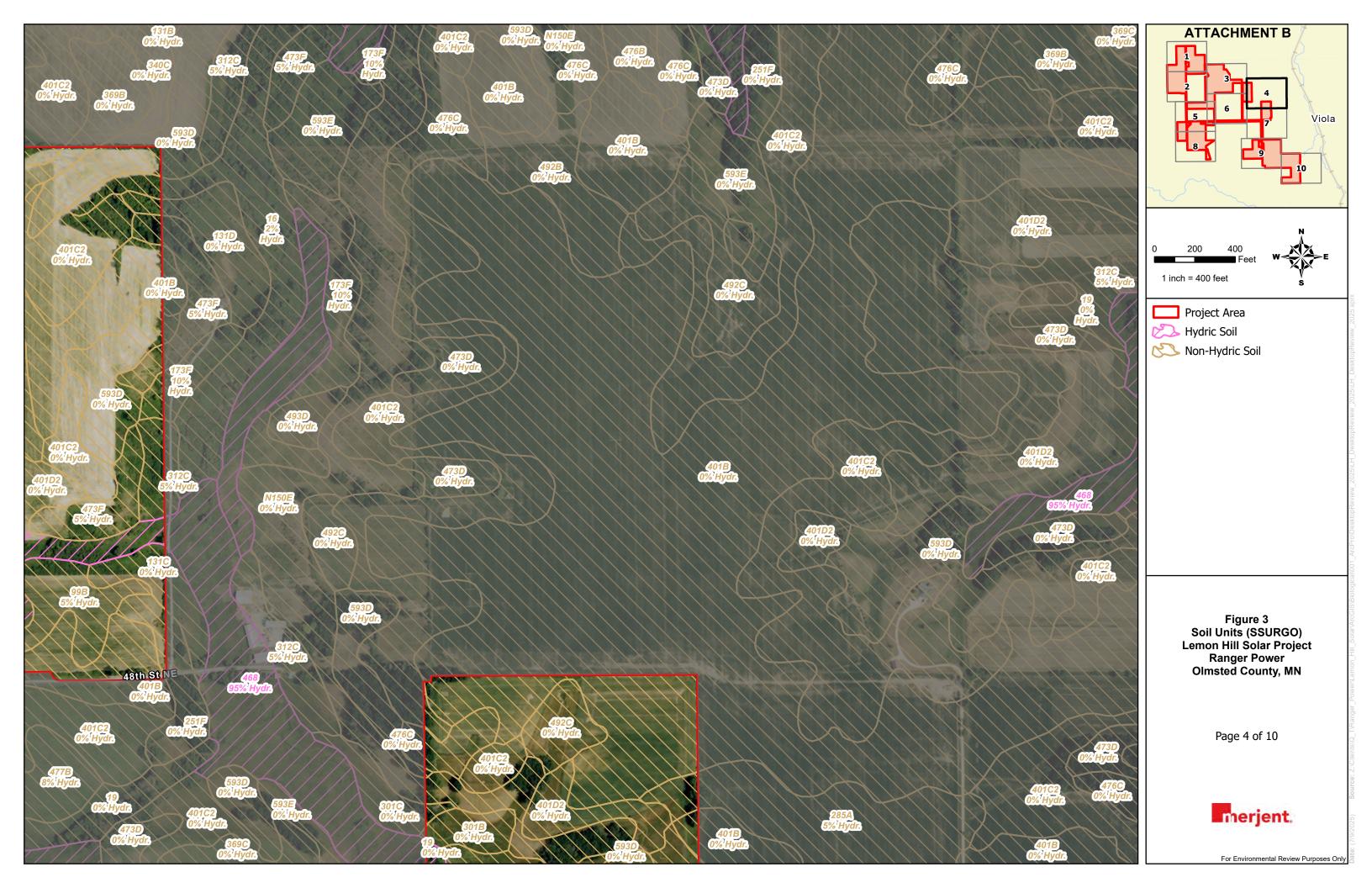


Figure 3
Soil Units (SSURGO)

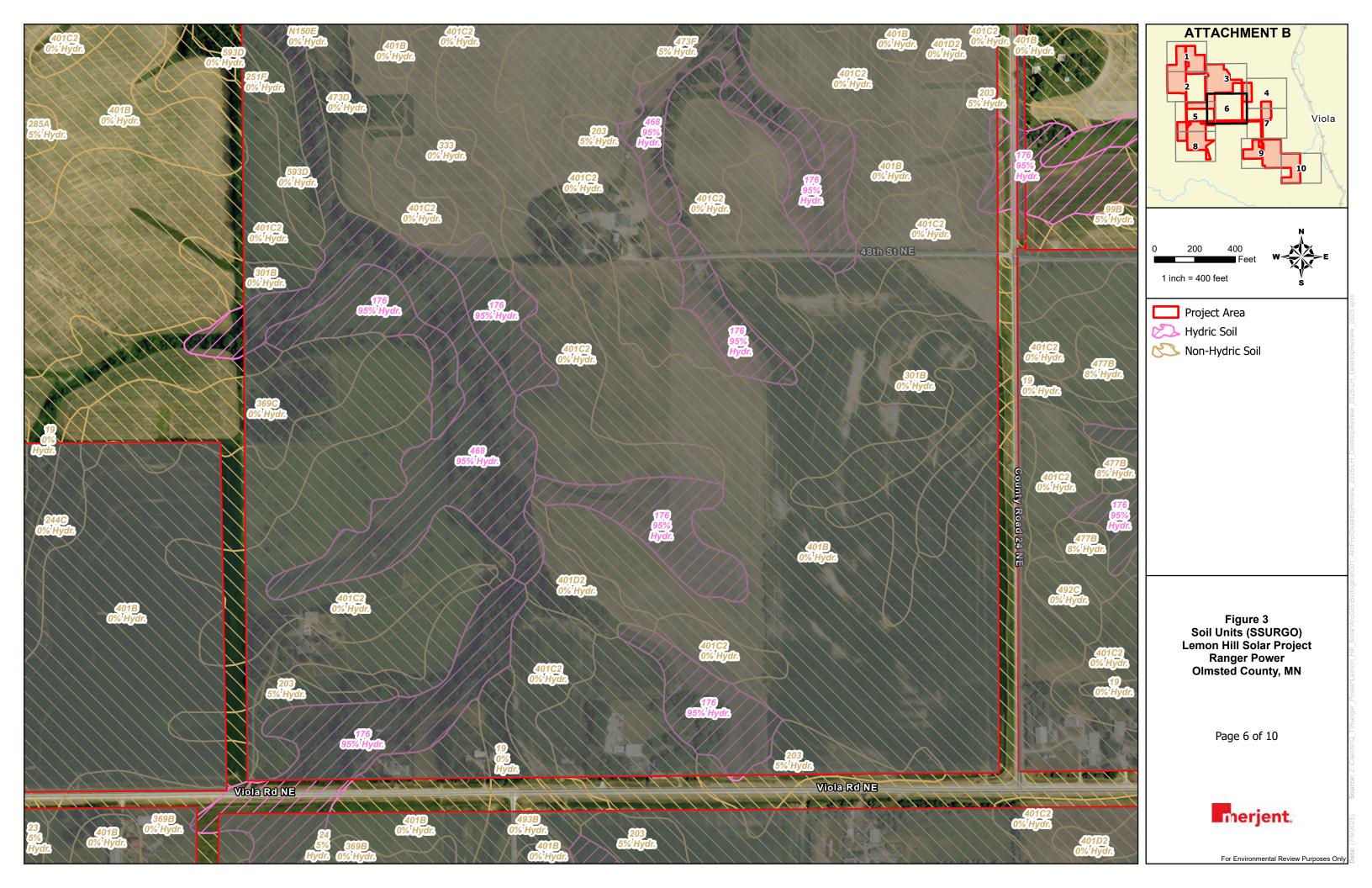


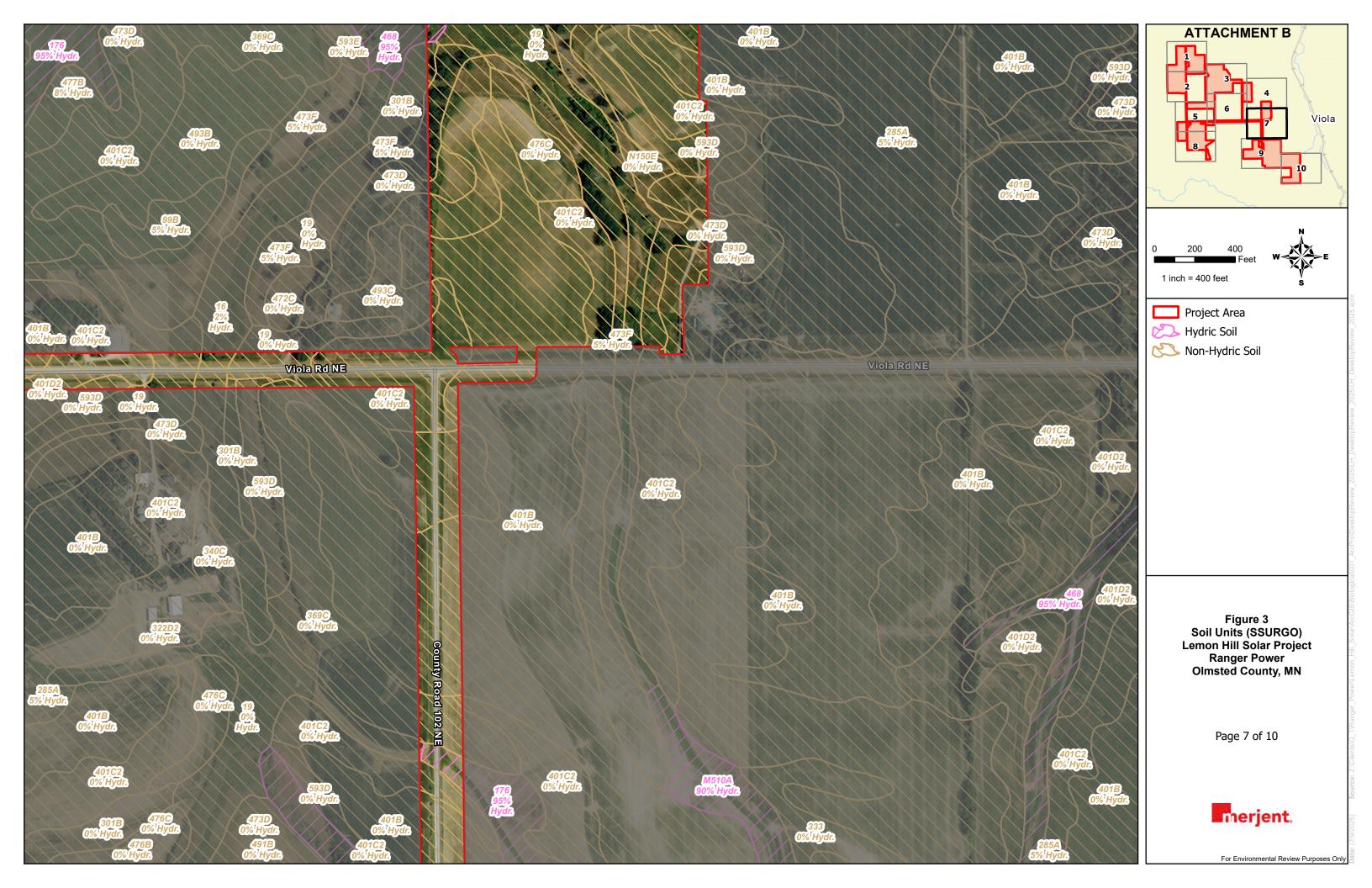


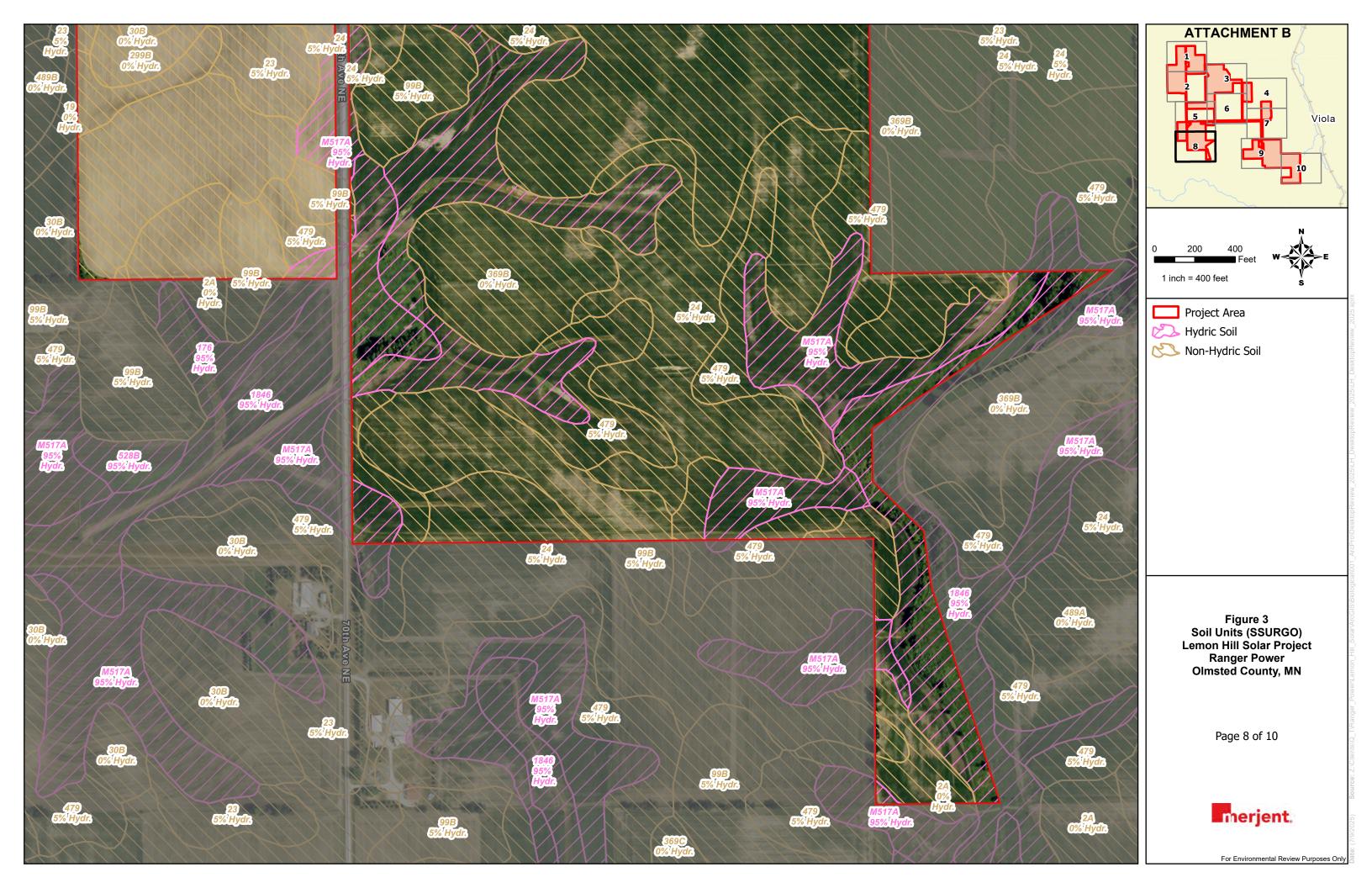














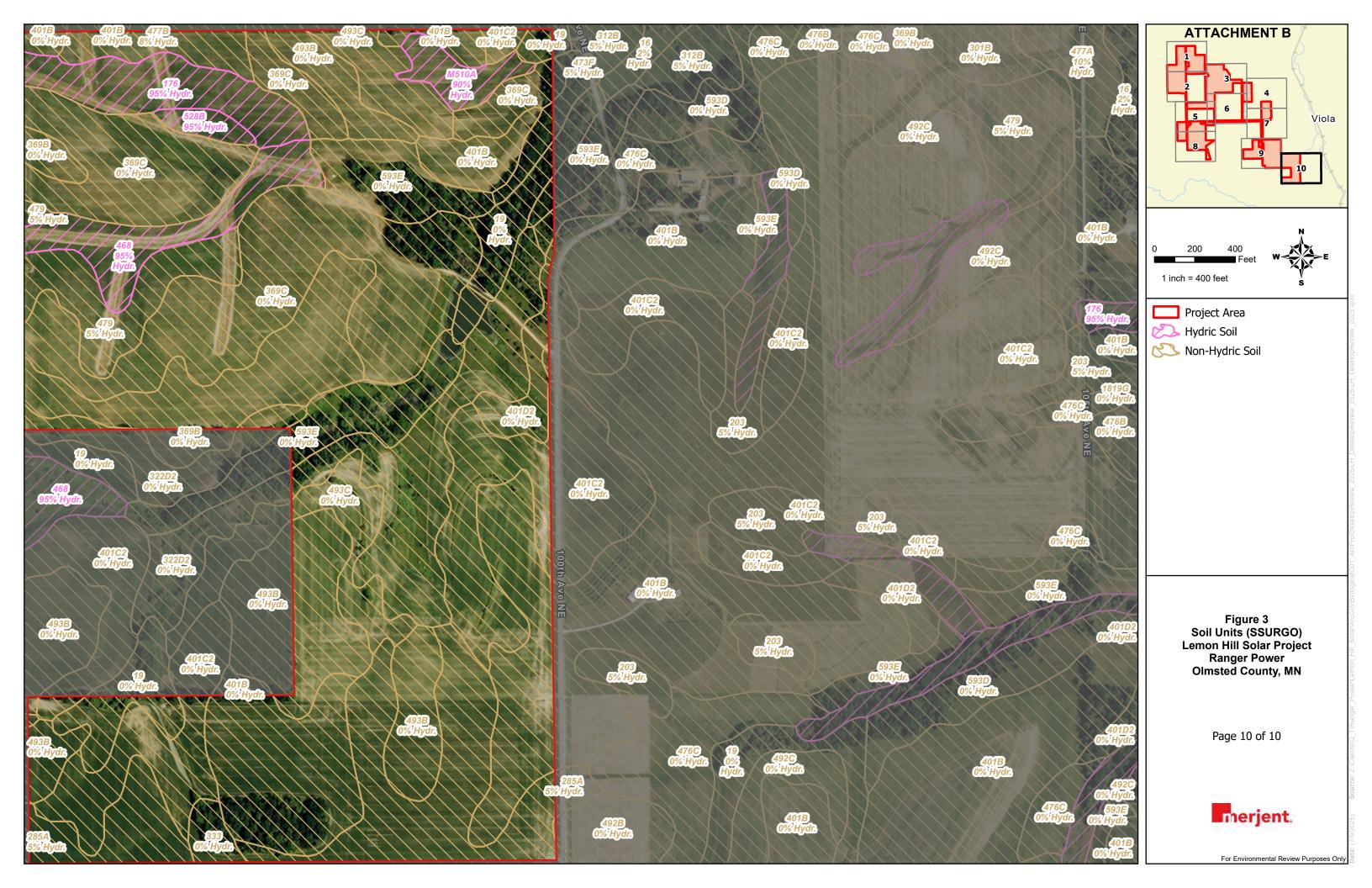


Figure 4
Hydrology

















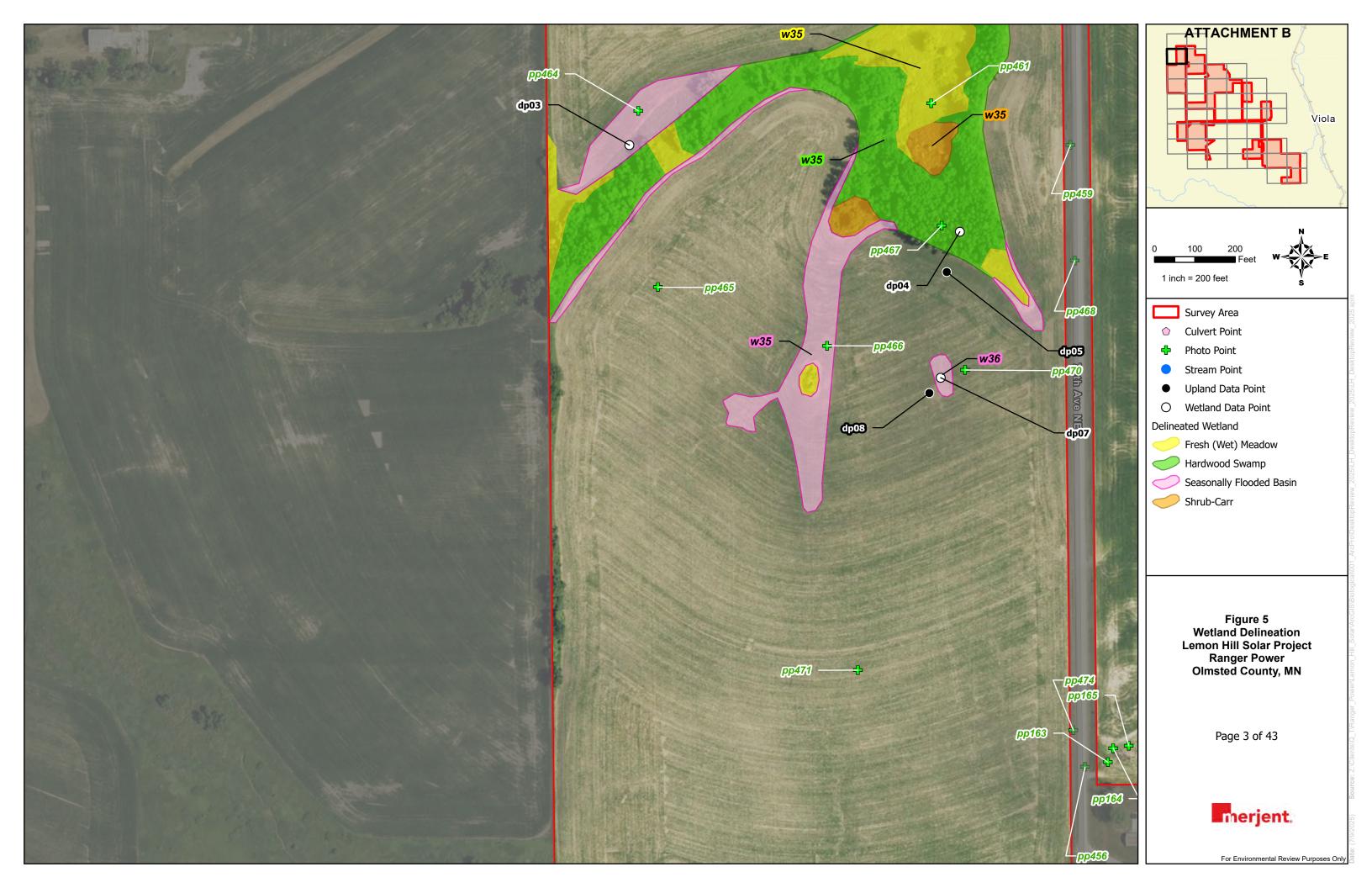


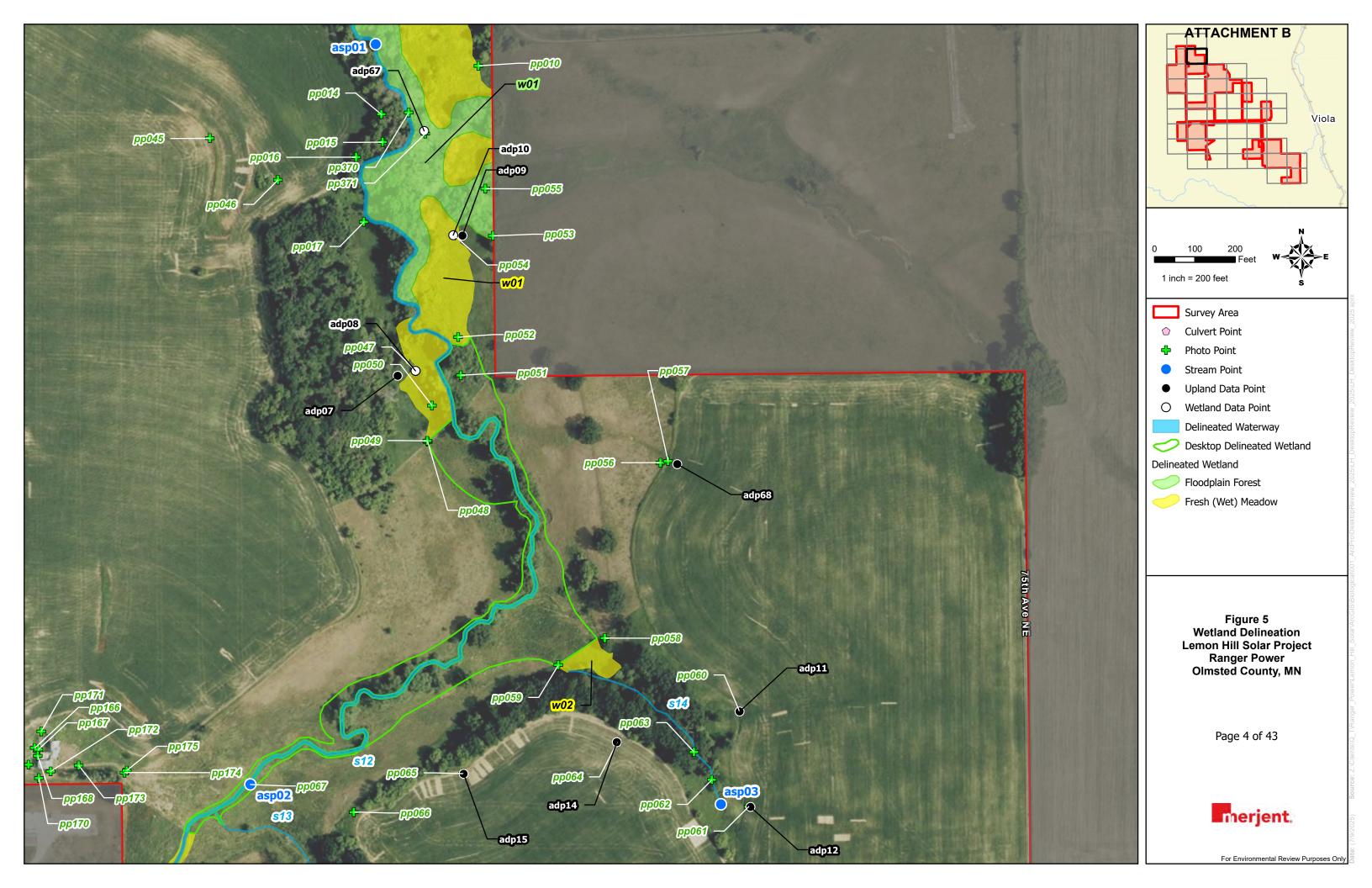


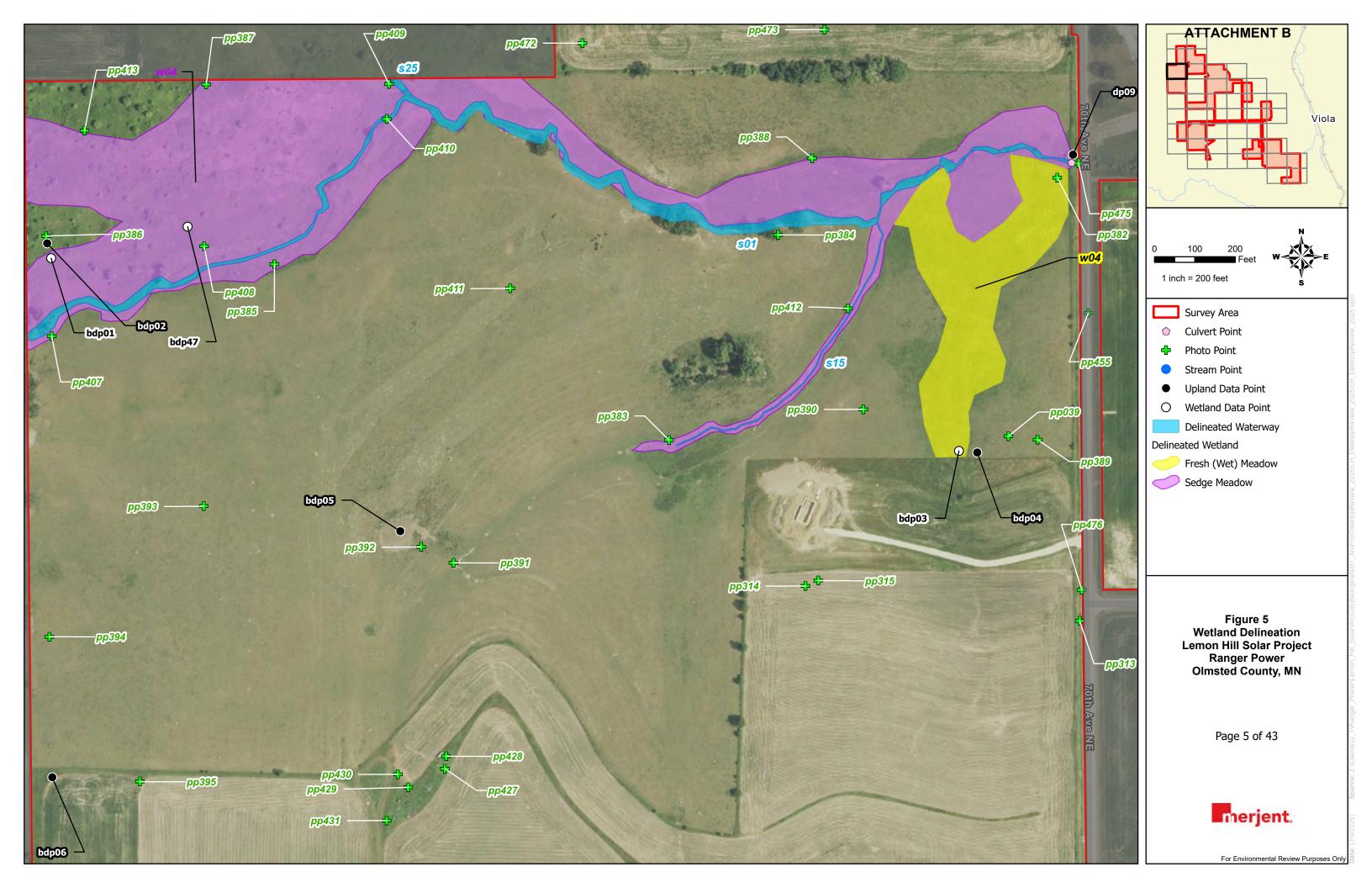
Figure 5 Wetland and Waterbody Delineation









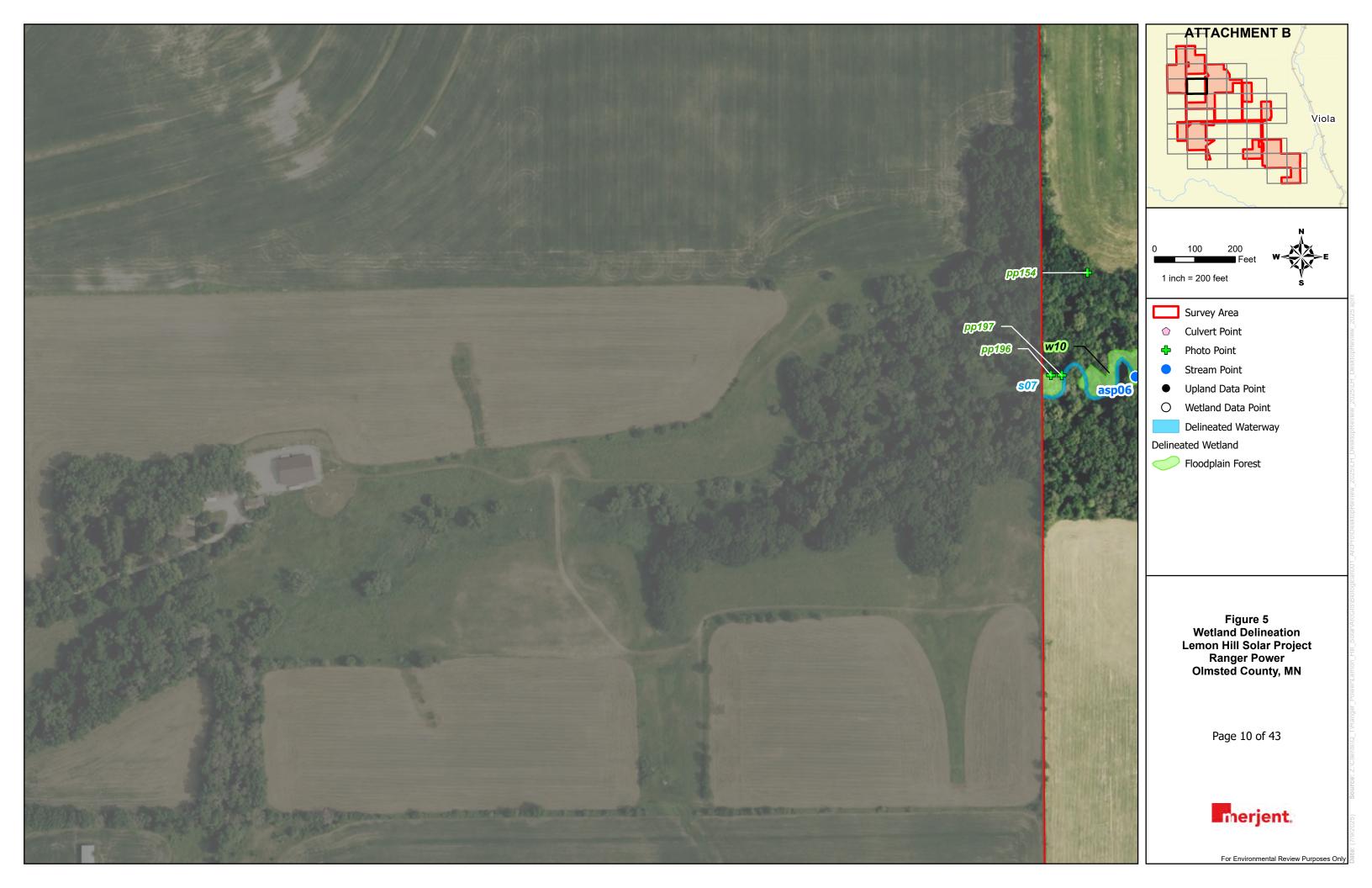


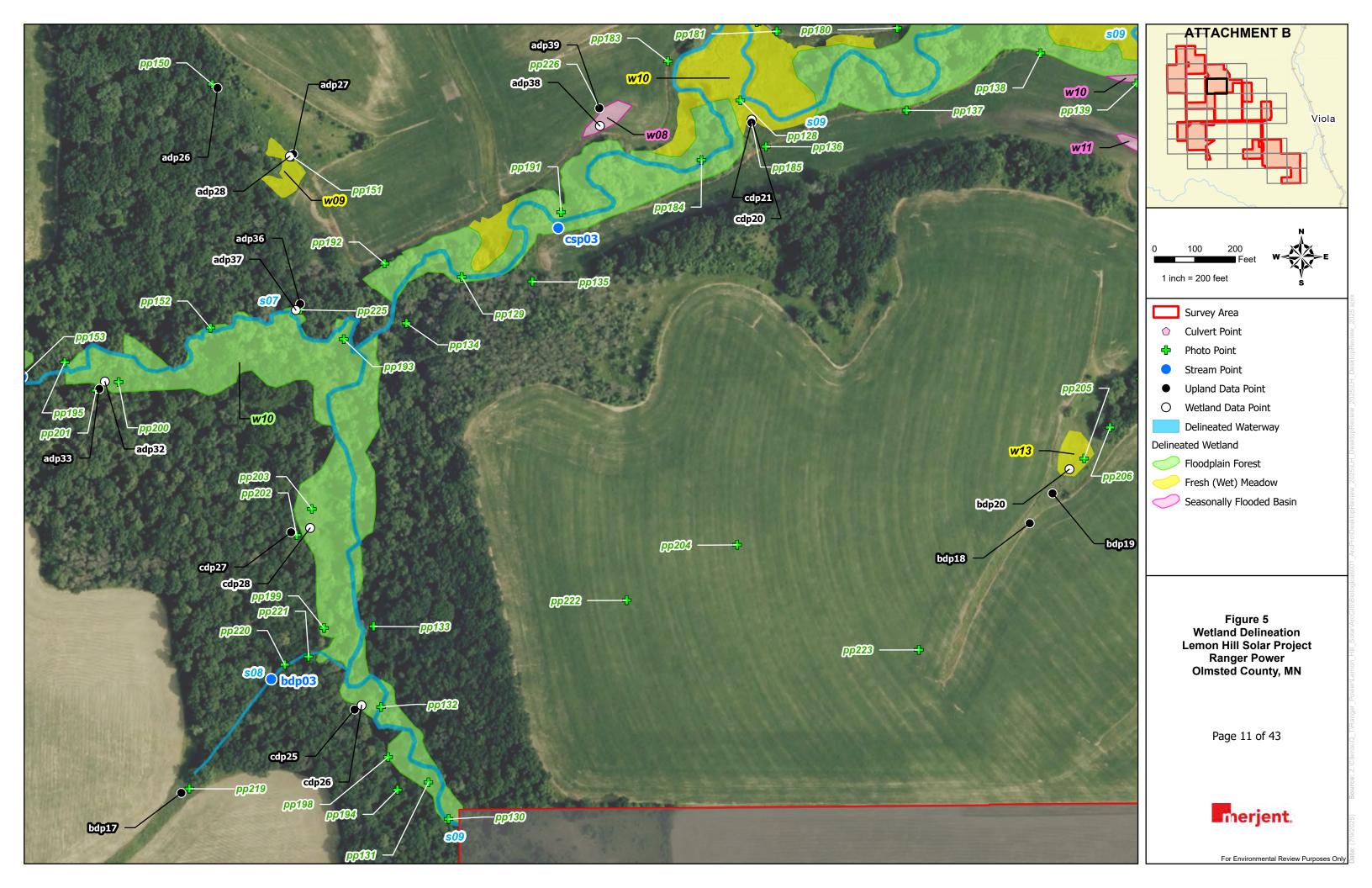


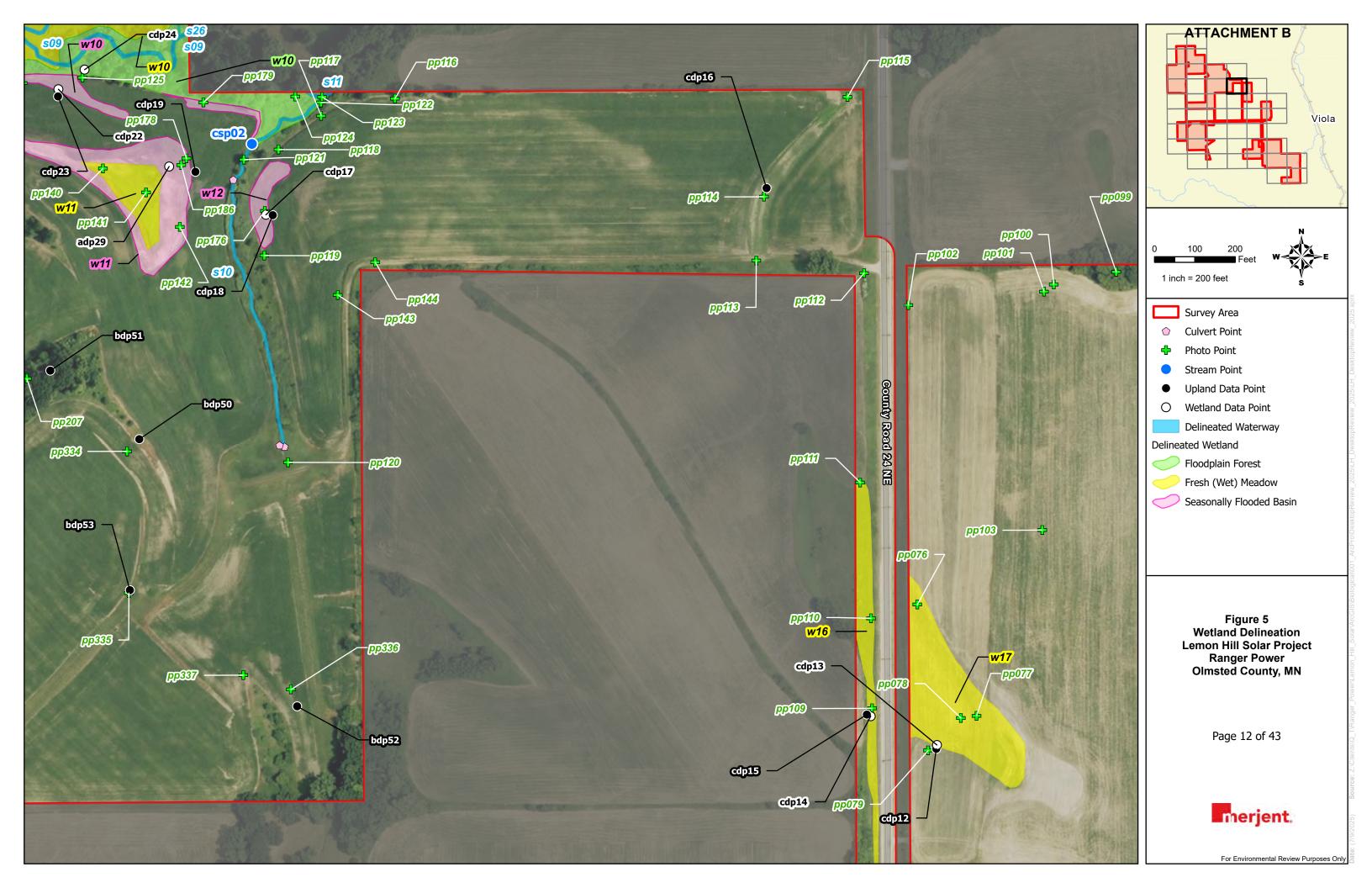


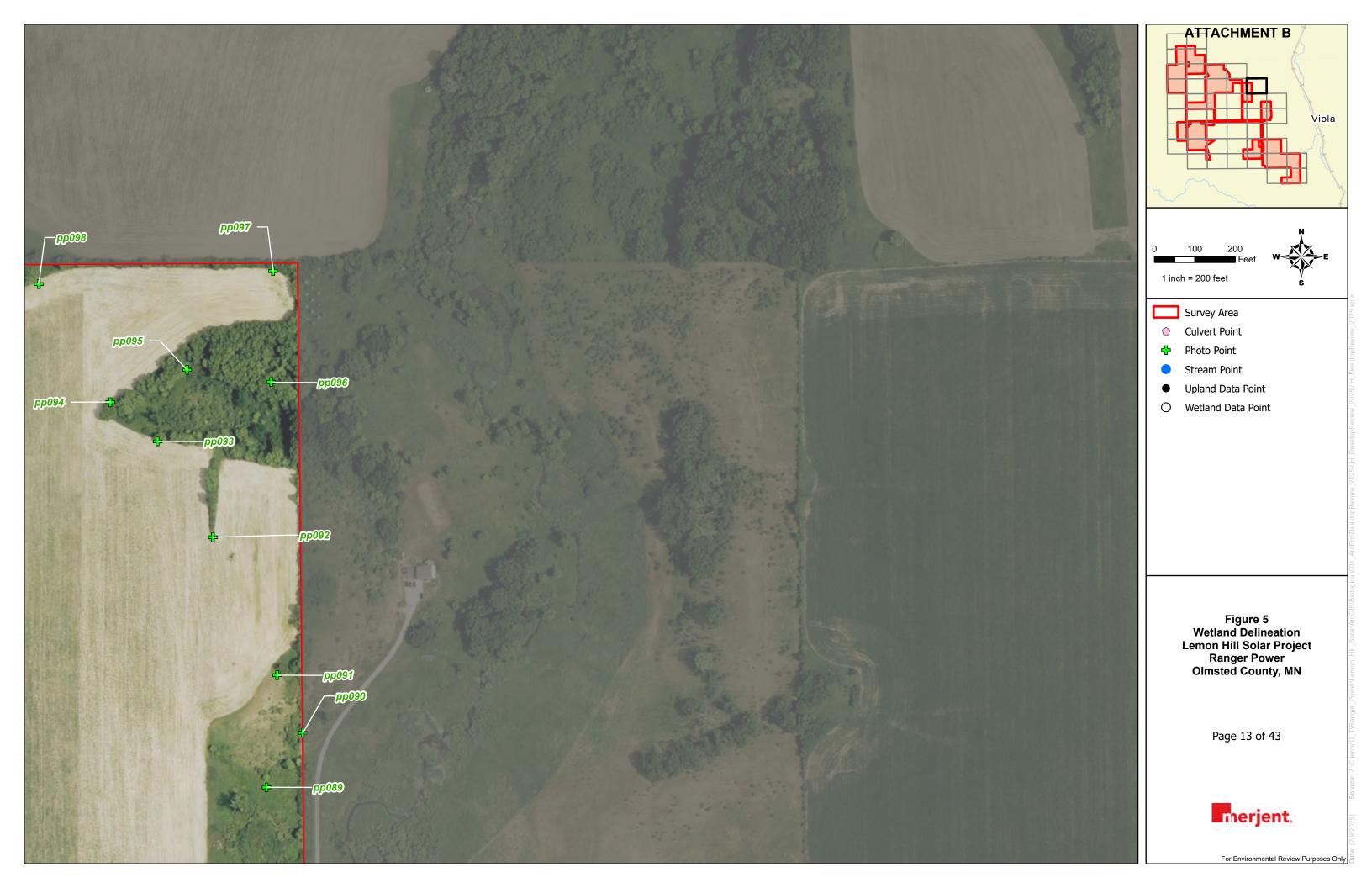








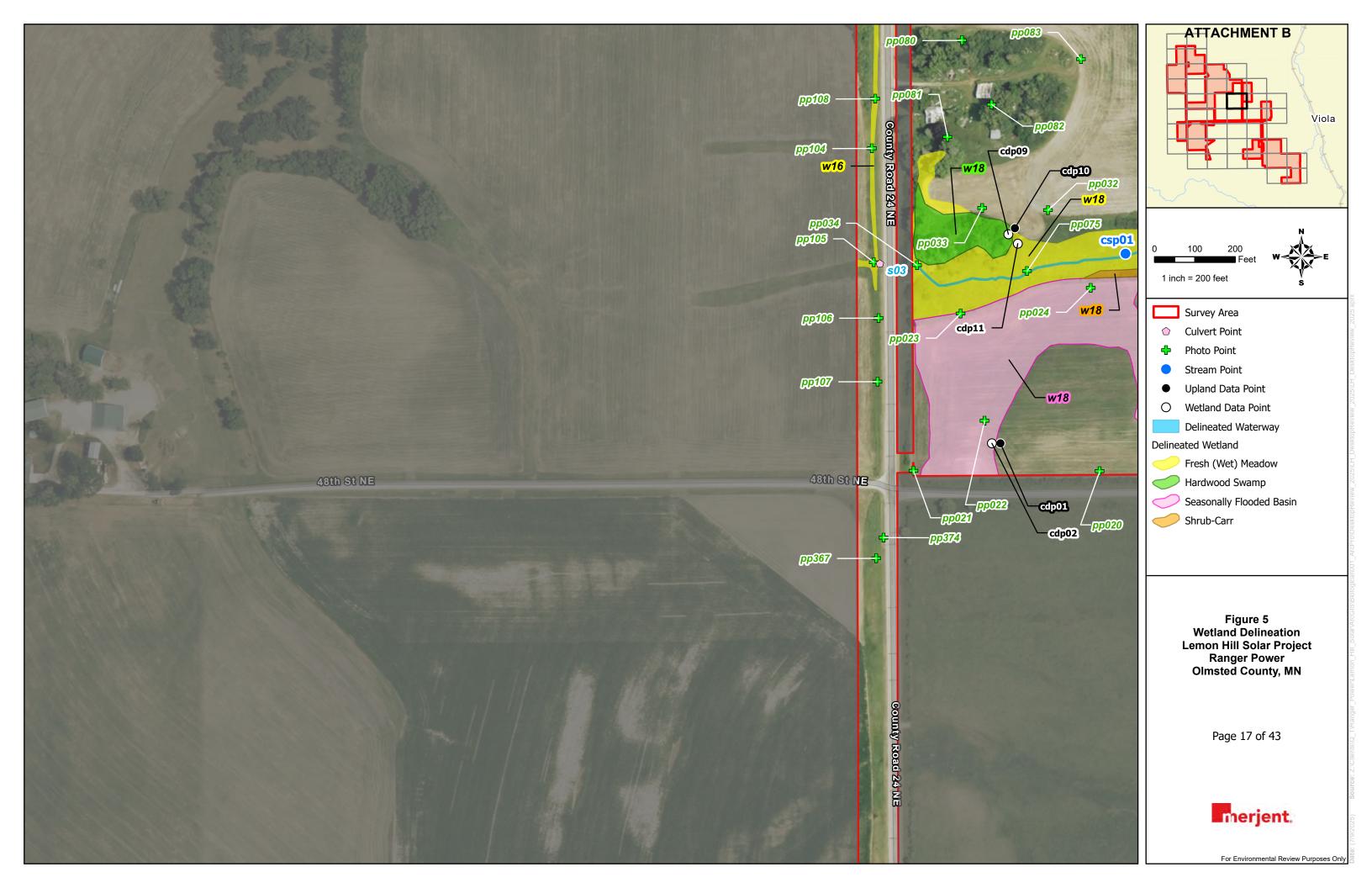


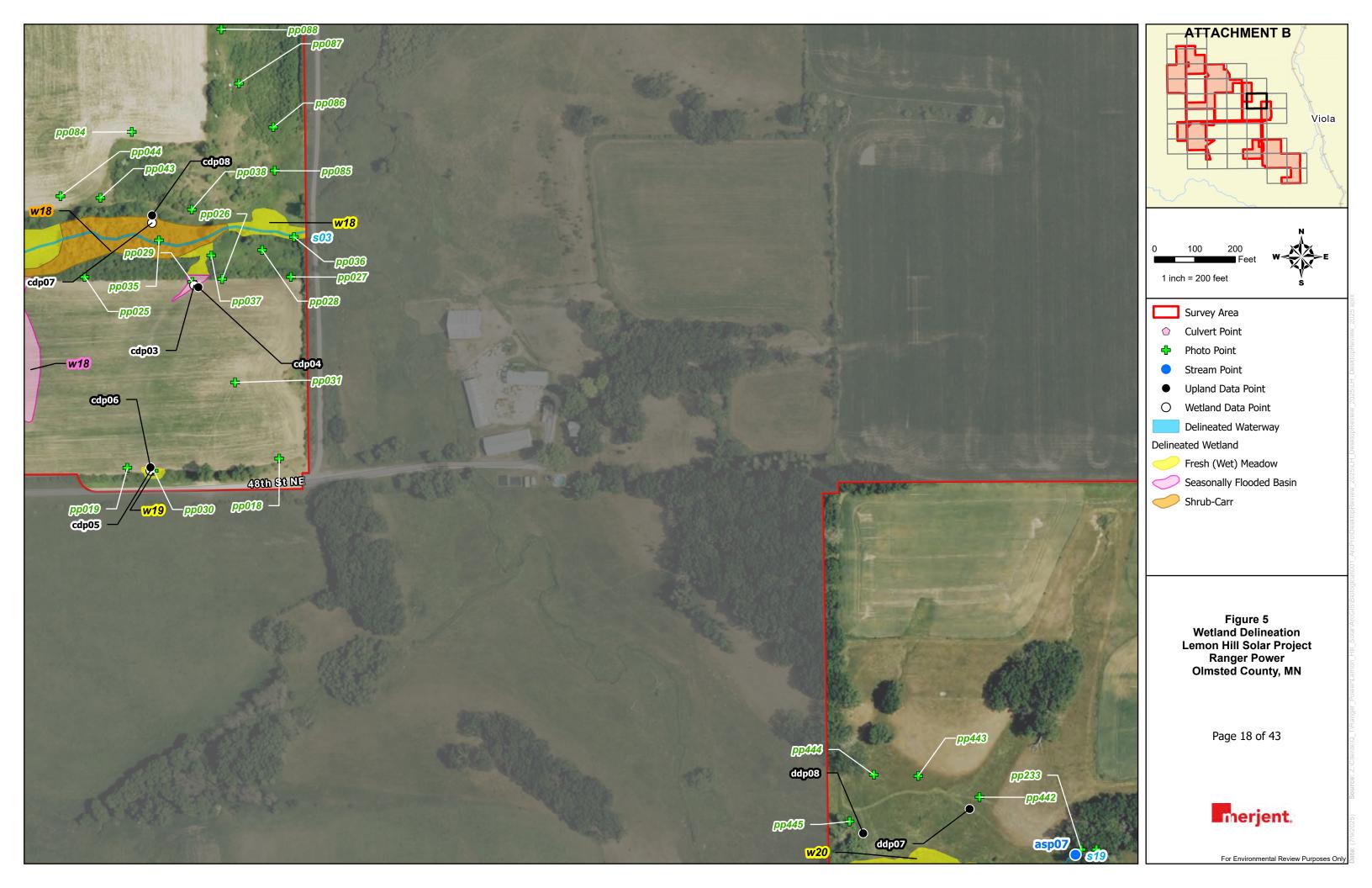






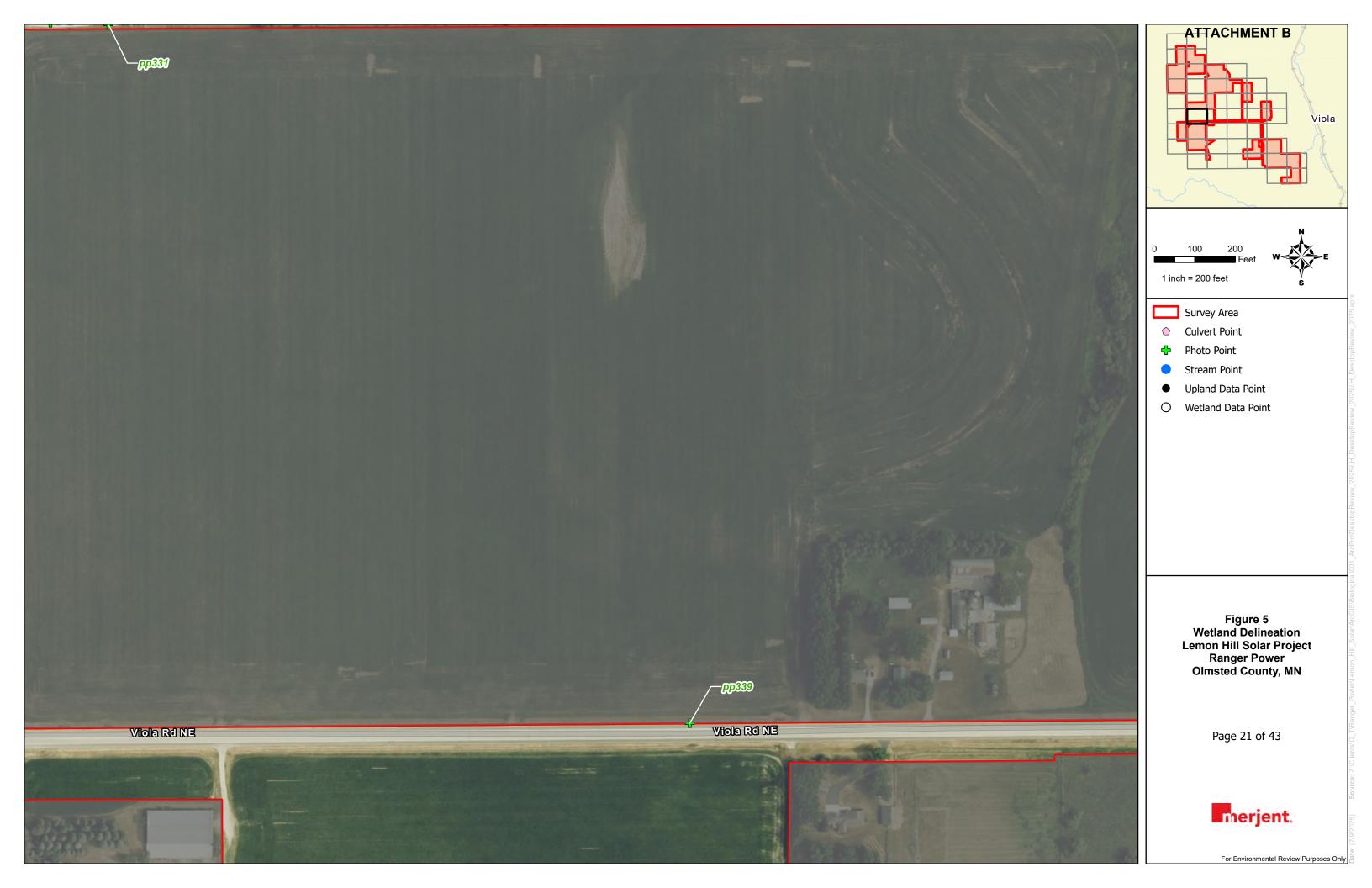




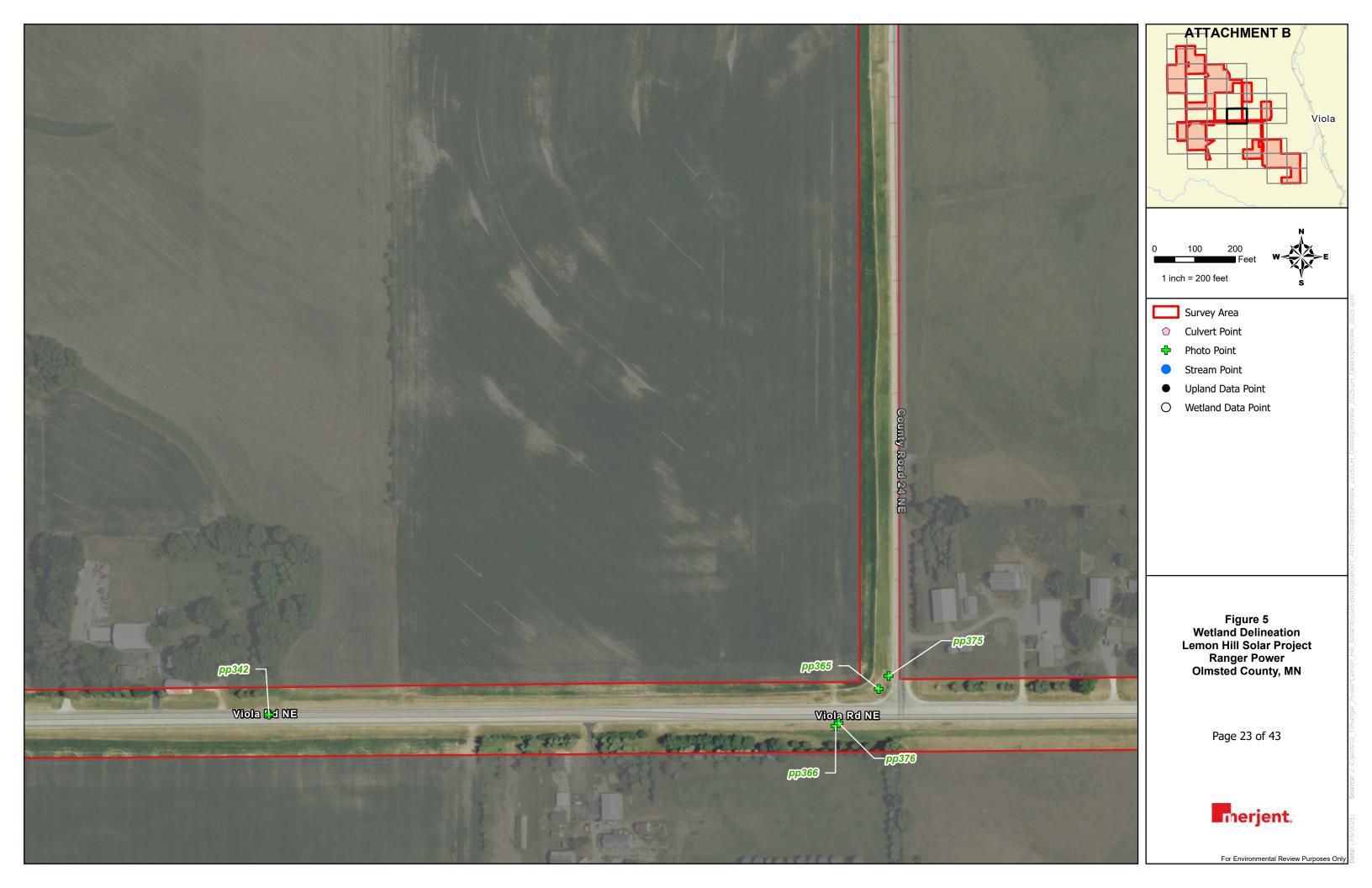
















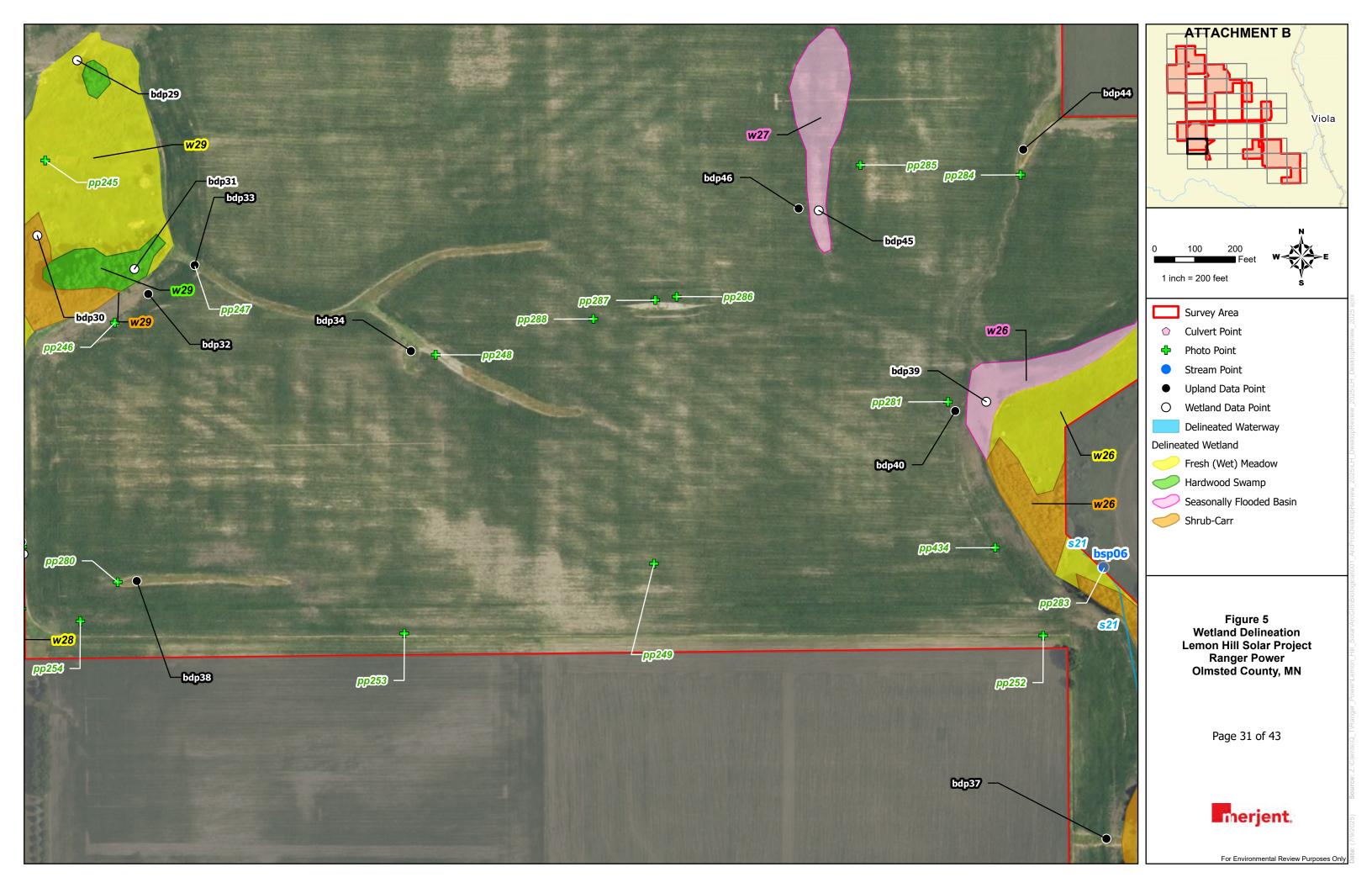


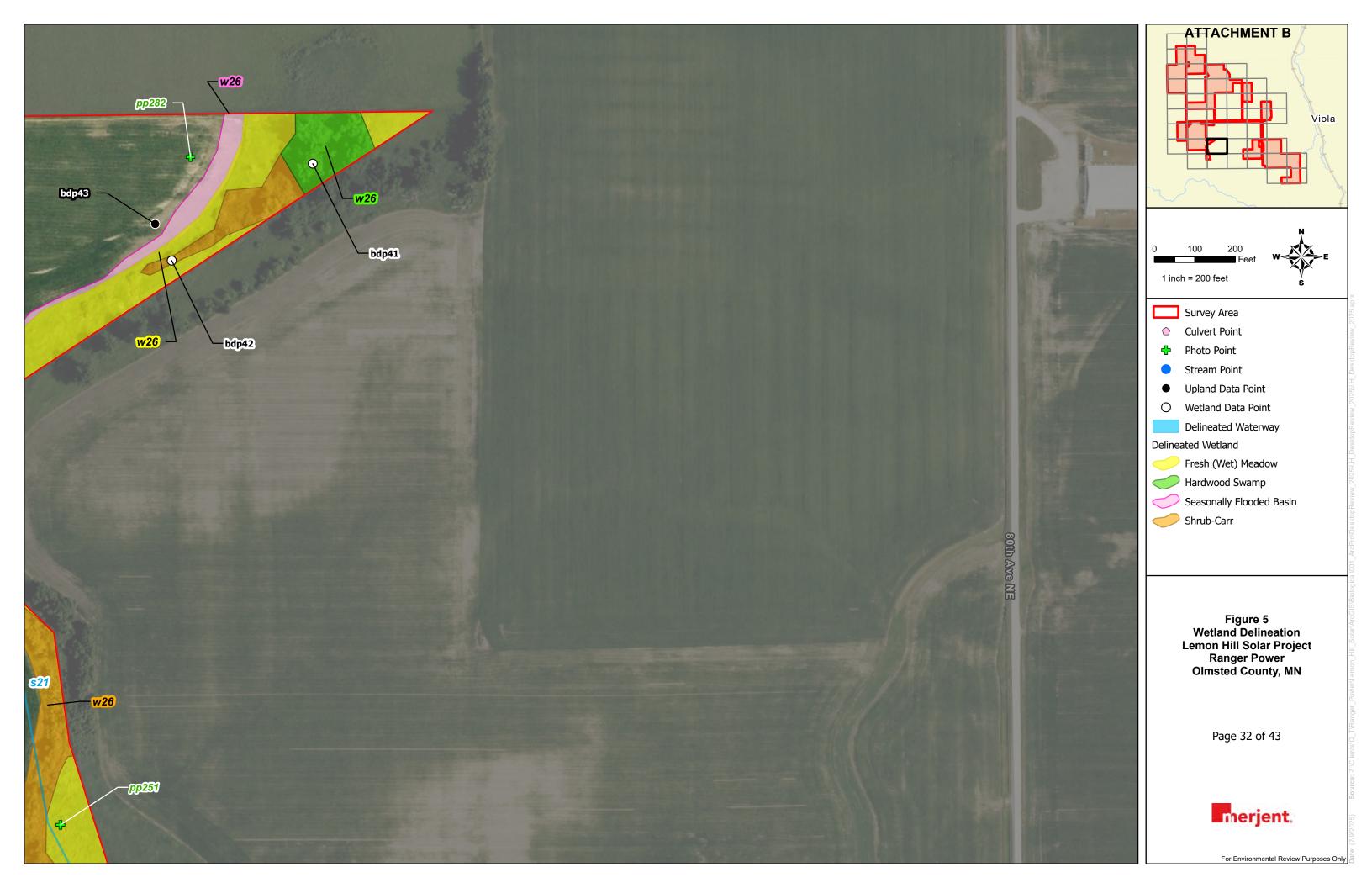


































Appendix A Wetland Determination Data Forms – Midwest Region

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power	City/Co		:: MN Sampling Point: adp01
Investigator(s): Maddie Humphrey	Sect		
			ef (concave, convex, none): none
			Datum: WGS 84
Soil Map Unit Name: 477B: Littleton silt loam, 1 to 4 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?		(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly		_ 	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally prol		7 to Holling C	plain any answers in Remarks.)
		(,
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	✓		
Hydric Soil Present? Yes 🔽 No		Is the Sampled Area within a Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate repo Data point in a recently planted soybean field at ws01, area is slope		eadow located northeast	
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1		·	Number of Dominant Species That
2.			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4			Across All Strata: 0 (B)
5	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 0 x1 = 0
5.			FAC species 0 x1 = 0
J	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8 9			supporting data in Remarks or on a separate
10.			sheet)
	0%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybean present	_		

Sample Point: adp01

SOIL

	cription: (Describe Matrix	to the dep		ument the Redox Fea		or confirm	n the absend	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-11	10YR - 2/1	100	/				SiL	
11-24	2.5Y - 5/2	90	10YR-6/8	10		М	SiL	
11 24	2.31 3/2		10111 0/0			141		
						-	= -	
				-			_	
							_	
							_	
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	1S=Maske	d Sand Grai	ns.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) une	defined		-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef	ined		y Redox (Dark Surface (S7)
	listi (A3) undefined		··	ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1) Matrix (F2)			Very Shallow Dark Surface (TF12)
	d Layers (A5) luck (A10)			eted Matrix	` '			Other (Explain in Remarks)
	ed Below Dark Surfa	ce (A11)		x Dark Su				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	Oark Surface (A12)	,			Surface (F7))		problematic.
Sandy	Mucky Mineral (S1)		Redo	x Depress	ions (F8)			
5 cm M	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)):						
Type:						Нус	dric Soil Pre	esent? Yes <u>✓</u> No
Depth	(inches): <u></u>							
IYDROLO								
-	drology Indicators		d: abook all that an	ndu/)			-	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	cators (minimum of water (A1)	one require		stained le	aves (B9)			Drainage patterns (B10)
	ater table (A2)			c fauna (E	, ,		-	Dry-season water table (C2)
Saturat	ion (A3)		True a	quatic pla	nts (B14)		- -	Crayfish burrows (C8)
Water r	marks (B1)		Hydro	gen sulfide	e odor (C1)		-	✓ Saturation visible on aerial imagery (C9)
Sedime	ent deposits (B2)			•	heres along		ots (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	•	-	Geomorphic position (D2)
	nat or crust (B4)				iction in tille	a solis (Ci	6)	FAC-neutral test (D5)
	posits (B5) ion visible on aerial	imagery (R		nuck surfa or well d				
	ly vegetated concav	• , ,	, <u>—</u>		n Remarks)			
Field Obse	rvations:							
Surface Wa	ter Present?	Y	es No <u></u>	Depth (inc	:hes): <u></u>			
Water Table	Present?	Y	es No	Depth (inc	:hes): <u></u>	We	tland Hydro	ology Present? Yes No _ 🗸
Saturation F	Present? pillary fringe)	Y	es No _ 🗸	Depth (inc	:hes): <u></u>			
	ecorded Data (strear	n dalido m	onitoring woll agris	al photos	provious ins	noctions)	if available:	
Describe IX	corded Data (Stream	ii gauge, iii	ormoring well, dene	a priotos, i	previous iris	pections),	ii available.	
Remarks:								
remarks.								

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power				:: MN Sampling Point: adp02
Investigator(s): Maddie Humphrey				
				ef (concave, convex, none): concave
· · · · · · · · · · · · · · · · · · ·		Long: -92.	33608	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es , No	
Are Vegetation , Soil , or Hydrology Significantly			<u> </u>	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro				plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	<u> </u>			
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes No _ ✓
Wetland Hydrology Present? Yes No				
Forested area in NWI VEGETATION - Use scientific names of plants.				
The Charles (Plate in 200 ft (0.4 m) and in)		Dominant		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)	100%	Species?	Status FAC	
Acer negundo , Ash-Leaf Maple			FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3.4.				Total Number of Dominant Species Across All Strata: 4 (B)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	100%	= Total Cov	ver	
Acer negundo , Ash-Leaf Maple	20%	yes	FAC	Prevalence Index worksheet:
2.		<u> </u>	TAC	Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species 10 x1 = 20
5.				FAC species145 x1 =435
	20%	= Total Cov	ver	FACU species 130 x1 = 520
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadra	ıt)	UPL species0 x1 =0
1. Parthenocissus quinquefolia, Virginia-Creeper	60%	yes	FACU	Column Totals: $285 \times 1 = 975 \times 10^{-1}$ (B)
2. Glechoma hederacea, Groundivy	40%	yes	FACU	Prevalence Index = B/A = 3.421
3. Solanum dulcamara, Climbing Nightshade	20%	no	FAC	Hydrophytic Vegetation Indicators:
4. Rubus idaeus, Common Red Raspberry	15%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Solidago gigantea, Late Goldenrod	10%	no	FACW	2 - Dominance Test is > 50%
6. <u>Taraxacum officinale</u> , Common Dandelion	10%	no	FACU	3 - Prevalence Index is <= 3.0 ¹
7. Ribes cynosbati, Eastern Prickly Gooseberry	5%	no	FAC	4 - Morphological Adaptations ¹ (Provide
Arctium minus, Lesser Burrdock 9	5%	no	FACU	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separatesheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cov	ver	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			-	Hydrophytic
2	0%	= Total Cov	ver	Vegetation Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.)				

	cription: (Describe to Matrix	to the deptr		u ment the Redox Feati		r confirm	the abser	nce of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0-17	10YR - 2/1	100	/				SiL		
17-34	10YR - 2/1	95	5YR-3/4	5	C	<u>M</u>	SiCL	_ =	
pe: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	1S=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:	dofinod	Cond	v Claved N	Actrix (CA)			Indicators for Problematic Hydric Soil	s ³ :
-	ol (or Histel) (A1) und Epipedon (A2) undefi			y Gleyed M y Redox (S				Coast Prairie Redox (A16)	
_	Histi (A3) undefined	ileu	·	ped Matrix (Dark Surface (S7)	
_	en Sulfide (A4)			y Mucky M	` ,			Iron-Manganese Masses (F12)	
- ' '	ed Layers (A5)			y Gleyed N				Very Shallow Dark Surface (TF12)	
	fuck (A10)			eted Matrix				Other (Explain in Remarks)	
_	ed Below Dark Surfac	re (A11)		x Dark Sur	` '			³ Indicators of hydrophytic vegetation hydrology must be present, unless	n and we
-	Dark Surface (A12)	,c (AII)			Surface (F7)			problematic.	uistuibe
_	Mucky Mineral (S1)			x Depressi					
_	fucky Peat or Peat (S	33)		K Depressi	0110 (1 0)				
-	Layer (if observed)								
Type:	<u> </u>					Hyd	lric Soil Pı	resent? Yes	No _
	(inches): <u></u>								
Depth marks:									
Depth marks:	DGY					_		Secondary Indicators (minimum of two rec	uired)
Depth marks: DROLC	DGY vdrology Indicators:		; check all that ap	uply)		_		Secondary Indicators (minimum of two rec Surface soil cracks (B6)	juired)
Depth marks: DROLO etland Hy mary Indi	DGY			oply) -stained lea	aves (B9)				luired)
Depth marks: DROLO ttland Hy mary Indi _ Surface	OGY vdrology Indicators: icators (minimum of c		Water-		, ,			Surface soil cracks (B6) Drainage patterns (B10)	uired)
Depth marks: DROLC tland Hy mary Indi Surface High w	OGY /drology Indicators: icators (minimum of ce water (A1)		Water- Aquati	-stained lea	13)			Surface soil cracks (B6)	luired)
Depth marks: DROLC tland Hy mary Indi _ Surface _ High w Saturat	OGY vdrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquati True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r	oddy Indicators: Identifications: Identifications (minimum of december (A1) Identification (A2) Identification (A3)		Water- Aquati True a Hydrog	-stained lea ic fauna (Bi aquatic plan gen sulfide	13) nts (B14)	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth marks: DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydroq Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C	
DROLO Control Contr	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water-Aquati True a Hydrog Oxidiz	estained lead ic fauna (Bana aquatic plana gen sulfide ded rhizosplance of redu	13) nts (B14) odor (C1)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1)	
DROLO DROLO DROLO Utland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquati True a Hydro Oxidiz Preser Recen	estained lead ic fauna (Bana aquatic plana gen sulfide ded rhizosplance of redu	nts (B14) odor (C1) heres along aced iron (C	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	pogy Idrology Indicators: Idea to a control of the control of th	one required	Water- Aquati True a Hydro Oxidiz Preser Recen	stained leadic fauna (Biaquatic planagen sulfide ed rhizosplanae of reductiron reductiron surface surface surface surface surface surface surface	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth marks: DROLC tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin m Gauge	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduct	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order variable (A2) icators (minimum of of ewater (A1) atter table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial in ly vegetated concave	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge B) Other	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLO Petland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order variable (A2) control (A3) control (B4) control (B4	imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu ti iron reduct nuck surfact e or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)
Depth marks: DROLC etland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indicators:	imagery (B7) e surface (B8 Yes Yes	Water- Aquati	stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron redunuck surface or well da (Explain in Depth (inched)	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
Depth marks: DROLO etland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indicators:	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron redunuck surface or well da (Explain in Depth (inched)	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)
Depth marks: DROLO etland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse eld Obset rface Water Table turation F cludes ca	pogy Indicators:	imagery (B7) e surface (B8) Yes Yes	Water-	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	s)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)
Depth marks: DROLO etland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse eld Obset rface Water Table turation F cludes ca	order various incators: incators (minimum of order water (A1) atter table (A2) incomposits (B1) and or crust (B4) posits (B5) and or crust (B4) posits (B5) attor visible on aerial in ly vegetated concave trustions: ter Present? Present? Present? pullary fringe)	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge B) Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	s)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)
Depth marks: DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Water Table turation Feludes ca	order various incators: incators (minimum of order water (A1) atter table (A2) incomposits (B1) and or crust (B4) posits (B5) and or crust (B4) posits (B5) attor visible on aerial in ly vegetated concave trustions: ter Present? Present? Present? pullary fringe)	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge B) Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	s)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)
Depth marks: DROLO etland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse eld Obset rface Water Table turation F cludes ca	order various incators: incators (minimum of order water (A1) atter table (A2) incomposits (B1) and or crust (B4) posits (B5) and or crust (B4) posits (B5) attor visible on aerial in ly vegetated concave trustions: ter Present? Present? Present? pullary fringe)	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge B) Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	s)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	C9)

Project/Site: Lemon Hill	City/Co.	unt <i>r:</i> Farming	ton/Olmste	ed County	Sampling Date: '	2024-05-28
Applicant/Owner: Ranger Power		·			Sampling Date: 1	
Investigator(s): Maddie Humphrey						ацроо
				ef (concave, convex,		
Slope(%): 0-2 Lat: 44.09295				•		GS 84
Soil Map Unit Name: 468: Otter silt loam, channeled					cation: PEM1B	
Are climatic / hydrologic conditions on the site typical for this tim	e of year?	Yes	, No		uin in Remarks.)	
	cantly disturbed?	,		 `` .	•	
	ly problematic?			Circumstances" prese plain any answers ir	_ <u></u>	<u></u>
	ly problematio.	(ocaca, cx	Jiam any anowers in	Tromano.)	
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point l	ocation	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes ✓	No					
, , ,	No	Is the San within a W		1	Ves	✓ No
Wetland Hydrology Present? Yes _ 🗸	No	within a vi	etiana:		163	<u> </u>
Remarks: (Explain alternative procedures here or in a separate	e report.)					
Meadow located west of stream.						
VEGETATION - Use scientific names of plants.						
		Dominant I		Dominones Tost	Morkoboot	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test		
1. 2.				Number of Domina Are OBL, FACW, of		<u>2</u> (A)
3.					-	(()
4.				Total Number of D Across All Strata:	ominant Species	<u>2</u> (B)
5.				Percent of Domina	ant Species That	
	0%	= Total Cove	r	Are OBL, FACW,		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1				Total % Cov	ver of: M	ultiply by:
2				OBL species	0 x1 =	
3				· ·	120 x1 =	
4				FAC species	0 x1 =	
5				FACU species	0 x1 =	
Hankassana Chrahima (Diah sina) E ft (1 E m) yankina OD 2 20 km		= Total Cove	r	UPL species	0 x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 1. Phalaris arundinacea, Reed Canary Grass		, , ,	FACW	Column Totals:	120 x1 =	240 (B)
Laportea canadensis, Canadian Wood-Nettle	30%		FACW	Prevale	ence Index = B/A =	、,
Impatiens capensis, Spotted Touch-Me-Not			FACW	Hydrophytic Veg	etation Indicators:	
4			17.011	, , , ,		
5.					st for Hydrophytic Ve	egetation
6.				<u>✓</u> 2 - Dominano		
7					ce Index is <= 3.0 ¹	
8					gical Adaptations ¹ (I ata in Remarks or o	
9				sheet)	ata iii remanes or or	ii a separate
10				PROBLEMAT	TIC Hydrophytic Veg	etation ¹ (Explain)
	120%	= Total Cove	r	¹ Indicators of	f hydric soil and wetl	land hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					esent, unless disturbe	
1.				Hydrophytic		
2		- Total Cova		Vegetation	V/-	oo 🗸 No
		= Total Cove	1	Present?	Y€	es No
Remarks: (Include photo numbers here or on a separate sheet	í.)					

Sample Point: adp03

	scription: (Describe Matrix	to the dep		ument the Redox Feat		r confirm	the absence	e of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR - 2/1	100	/				SiL	
14-36	10YR - 2/1	95	5YR-3/4	5	C	M	SiL	
								Olavid O.F.N.
36-40	2.5/	100	/				SiL	Gley 1 2.5 N
				-				·
	·				·	-	<u> </u>	
	·				·	-	<u> </u>	
¹ Type: C=C	Concentration, D=Dep	letion, RM=	Reduced Matrix, M	 IS=Maske	d Sand Grain	ns. 2	Location: PL	=Pore Lining, M=Matrix.
Hydric Soil	I Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	ol (or Histel) (A1) und	defined	Sandy	y Gleyed I	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	Epipedon (A2) undef	ined	Sandy	y Redox (S5)		•	Dark Surface (S7)
Black H	Histi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	gen Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loam	y Gleyed	Matrix (F2)			Other (Explain in Remarks)
	/luck (A10)			eted Matrix				³ Indicators of hydrophytic vegetation and w
	ed Below Dark Surfa	ce (A11)		x Dark Su	` ,			hydrology must be present, unless disturbe problematic.
	Dark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	C3)	Redo:	x Depress	ions (F8)			
	Mucky Peat or Peat (1		
	Layer (if observed)):						
Type:	<u></u> (inches): <u></u>					нус	dric Soil Pres	sent? Yes <u>✓</u> No
HYDROLC	OGY							
_	ydrology Indicators:						<u>S</u>	econdary Indicators (minimum of two required)
	licators (minimum of o	one require	,	oply) -stained le	avoc (P0)			Surface soil cracks (B6) Drainage patterns (B10)
	vater table (A2)			c fauna (E	` '		_	Dry-season water table (C2)
	tion (A3)			iquatic pla	,		_	Crayfish burrows (C8)
	marks (B1)				odor (C1)		_	Saturation visible on aerial imagery (C9)
	ent deposits (B2)			-	heres along	living roo	ts (C3)	Stunted or stressed plants (D1)
Drift de	eposits (B3)		Preser	nce of red	uced iron (C	4)		Geomorphic position (D2)
Algal m	nat or crust (B4)		Recen	t iron redu	ction in tilled	d soils (Ce	6) <u> </u>	FAC-neutral test (D5)
Iron de	eposits (B5)		Thin m	nuck surfa	ce (C7)			
Inundat	tion visible on aerial	imagery (B	7) Gauge	or well d	ata (D9)			
Sparse	ely vegetated concave	e surface (E	38) Other	(Explain ir	Remarks)			
Field Obse	rvations:							
Surface Wa	iter Present?	Ye	es No	Depth (inc	:hes): <u></u>	_		
Water Table	e Present?	Ye	es No	Depth (inc	:hes): <u></u>	We	tland Hydrol	ogy Present? Yes _ ✓ No
Saturation F		Ye	es No	Depth (inc	:hes): <u></u>	_		
	apillary fringe)							
Describe Re	ecorded Data (strean	n gauge, m	onitoring well, aeria	al photos,	orevious insp	pections),	if available:	
D = = = = -/								
Remarks:								
Remarks:								
Remarks:								

SOIL

	City/Ct	Junty. <u>r arriin</u>	igtori/Oirist	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: adp04
Investigator(s): Maddie Humphrey	Sect	tion, Townshi	ip, Range: S	S12 T107N S013W
Lanform(hillslope, terrace, etc): Depression			Local reli	ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.09273</u>		Long: -92.	33574	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for	this time of year?	Ye	es 🔎 N	o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology	Significantly disturbed? naturally problematic?			Circumstances" present? Yes No
	, .	•		,
SUMMARY OF FINDINGS - Attach site ma	ap snowing sampi	ing point	location	s, transects, important features, etc.
	No No	Is the Sa	ampled Are	a
	s No	within a	Wetland?	Yes No
Remarks: (Explain alternative procedures here or in a				
Forested area in NWI adjacent stream.				
VEGETATION - Use scientific names of p	lants.			
		Dominant		Dominance Test Workshoot
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
Acer negundo , Ash-Leaf Maple		yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
3		-		Total Number of Dominant Species Across All Strata: 3 (B)
5.				Percent of Dominant Species That
	100%	= Total Cov	/er	Are OBL, FACW, or FAC: 66.667% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1.				Total % Cover of: Multiply by:
2				OBL species0 x1 =0
				FACW species 45 x1 = 90
5				FAC species 210 x1 = 630
5.	0%	= Total Cov	/er	FACU species 65 x1 = 260
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3				UPL species0 x1 =0
Geum canadense, White Avens	70%	yes	FAC	Column Totals: 320 x1 = 980 (B)
2. Glechoma hederacea, Groundivy	60%	yes	FACU	Prevalence Index = B/A = 3.063
Solidago gigantea, Late Goldenrod	40%	no	FACW	Hydrophytic Vegetation Indicators:
4. Viola sororia, Hooded Blue Violet	30%	no	FAC	
5. Hydrophyllum virginianum, Shawnee-Salad	10%	no	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Phalaris arundinacea, Reed Canary Grass	5%	no	FACW	✓ 2 - Dominance Test is > 50% 1
7. Arctium minus, Lesser Burrdock	5%	no	FACU	3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	220%	= Total Cov	/er	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Cov	/er	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separa	ite sheet.)			1
Other FACU plants outside the vegetation plot. Would	not pass FAC neutral an	ywhere adja	cent.	

ofile Description: (Describe	to the dent	h needed to doci	ıment the	indicator o	r confirm	the ahsen	nce of indicators)
Depth (Describe)	to the dept		ledox Feat		Confirm	ine absen	ce of mulcators.)
nches) Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-20 10YR - 2/1	100	/				SiL	
20-30 10YR - 2/1	95	5YR-3/4	5	С	М	SiL	
30-38 2.5/	100	/				SiL	Gley1 2.5N
pe: C=Concentration, D=Dep	letion, RM=	Reduced Matrix, M	 IS=Masked	 d Sand Grain	ns. 2	Location: P	 PL=Pore Lining, M=Matrix.
ric Soil Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (or Histel) (A1) un	defined		y Gleyed M				Coast Prairie Redox (A16)
Histic Epipedon (A2) under	fined		y Redox (S	•			Dark Surface (S7)
Black Histi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
_ Hydrogen Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratified Layers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)
2 cm Muck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and v
Depleted Below Dark Surfa	ce (A11)	Redo	x Dark Sur	face (F6)			hydrology must be present, unless disturb
Thick Dark Surface (A12)		Deple	eted Dark S	Surface (F7)			problematic.
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redo	x Depressi	ons (F8)			
trictive Layer (if observed							
Туре:					Hyd	ric Soil Pr	esent? Yes <u>✓</u> No
Depth (inches):					_		
emarks:							
marks:							
DROLOGY							
PROLOGY tland Hydrology Indicators		d, abook all that an	ant A				Secondary Indicators (minimum of two required)
DROLOGY tland Hydrology Indicators nary Indicators (minimum of				nucc (PO)			Surface soil cracks (B6)
PROLOGY tland Hydrology Indicators nary Indicators (minimum of _ Surface water (A1)		Water-	stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)
PROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2)		Water- Aquati	stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
PROLOGY Itland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquati True a	stained lea c fauna (B quatic plar	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
PROLOGY Iland Hydrology Indicators nary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
PROLOGY Iland Hydrology Indicators nary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
ROLOGY Iland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water-Aquati True a Hydroq Oxidiz	estained leater control fauna (Buquatic planger sulfider ed rhizosplance of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
PROLOGY tland Hydrology Indicators nary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water- Aquati True a Hydrog Oxidiz Preser	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (Coction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
ROLOGY cland Hydrology Indicators nary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	one required	Water- Aquati True a Hydrog Oxidiz Preseg Recen Thin n	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	nts (B14) odor (C1) heres along uced iron (C- ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
ROLOGY land Hydrology Indicators eary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavidd Observations:	one required	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge 8) Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavild Observations: face Water Present?	one required imagery (B7 e surface (B	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surface or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavidations: face Water Present? ter Table Present?	imagery (B7 e surface (B Ye	Water- Aquati	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavidate (March Concavidate) Indicate Water Present? In Table Present?	imagery (B7 e surface (B Ye	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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citand Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavild Observations: rface Water Present? ter Table Present? turation Present? cludes capillary fringe) scribe Recorded Data (strear	imagery (B7 e surface (B Ye Ye	Water-	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power			State	
Investigator(s): Maddie Humphrey	Sect	tion, Townsh	ip, Range: S	S12 T107N S013W
Lanform(hillslope, terrace, etc): Depression			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.09295		Long: -92.	33491	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?		<u> </u>	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro		, ,		plain any answers in Remarks.)
	5.0	(pain any anonoro in remainer,
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	a Yes_ ✓ No
Wetland Hydrology Present? Yes _ No				
Remarks: (Explain alternative procedures here or in a separate report At edge of meadow, some tree cover.	ort.)			
The dage of modulow, some nee cover.				
VEGETATION - Use scientific names of plants.				
VECETATION OSC SOICHAING HAINES OF PIANES.	Aheoluta	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
Acer negundo , Ash-Leaf Maple	30%	yes	FAC	Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4				Across All Strata: 2 (B)
5	30%	= Total Cov		Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	30%	- Iolai Cov	vei	
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species 125
5				FAC species30
	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadra	it)	UPL species0 x1 =0
1. Phalaris arundinacea, Reed Canary Grass	95%	yes	FACW	Column Totals: $\underline{155}$ x1 = $\underline{340}$ (B)
2. Impatiens capensis, Spotted Touch-Me-Not	20%	no	FACW	Prevalence Index = B/A = 2.194
3. <u>Solidago gigantea</u> , Late Goldenrod	10%	no	FACW	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate
9				sheet)
10.		= Total Cov	/er	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	/er	Vegetation Present? Yes ✓ No
Demorker (Include phote purphers have a construct of the		10101 001		163 <u>- 100</u>
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	Matrix		F	Redox Feati					
inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	<u> </u>	emarks
0-39	10YR - 2/1	100	/				SiL		
							-		
ype: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, M	 MS=Masked	Sand Grai	ns. ² I	 Location: F	PL=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problema	tic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox	(A16)
_	pipedon (A2) undefi	ned		y Redox (S	•			Dark Surface (S7)	
	isti (A3) undefined			oed Matrix (Iron-Manganese Mas	sses (F12)
	en Sulfide (A4)			ıy Mucky M				Very Shallow Dark S	urface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Re	marks)
	uck (A10)			eted Matrix					hytic vegetation and wet
_	d Below Dark Surfac	e (A11)		x Dark Sur				hydrology must be problematic.	present, unless disturbe
_	ark Surface (A12)				Surface (F7)			рговієтнанс.	
	Mucky Mineral (S1) ucky Peat or Peat (S	33)	Redo	x Depressi	ons (F8)				
	Layer (if observed):	-							
Type:	<u> </u>					Hyd	ric Soil Pı	resent?	Yes _ 🗸 No _
Depth ((inches): <u></u> iric soil is present du	e to presend	e of hydrophytic	vegetation	and hydrold	ogy indicato	ors.		
Depth (marks: sume hyd	ric soil is present du	e to presend	e of hydrophytic	vegetation	and hydrolo	gy indicato	ors.		
Depth (marks: sume hyd	ric soil is present du	e to presenc	e of hydrophytic	vegetation	and hydrold	ogy indicato	ors.	Secondary Indicators (minir	mum of two required)
Depth (marks: sume hyd	ric soil is present du			-	and hydrold	gy indicato	ors.	Secondary Indicators (minii Surface soil cracks (Be	
Depth (marks: sume hyd DROLO etland Hy mary India	GY drology Indicators:		check all that ap	-		gy indicato	ors.		6)
Depth (marks: sume hyde) DROLO etland Hymary India Surface	GY drology Indicators: cators (minimum of c		check all that ap	oply)	aves (B9)	ogy indicato	ors.	Surface soil cracks (Be	5) 0)
Depth (marks: sume hyde) DROLO etland Hymary India Surface	GY drology Indicators: cators (minimum of country (A1) ater table (A2)		check all that ap Water- Aquati	oply) -stained lea	aves (B9)	ogy indicate	ors.	Surface soil cracks (Bo	5) 0)
Depth (marks: sume hydelic hyd	GY drology Indicators: cators (minimum of country (A1) ater table (A2)		check all that ap Water Aquati True a	oply) -stained lea ic fauna (B:	aves (B9) 13) ats (B14)	gy indicato	ors.	Surface soil cracks (Bi Drainage patterns (B1) Dry-season water table	5) D) e (C2)
Depth (marks: sume hydeling) DROLO etland Hy mary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of compared (A1) ater table (A2) on (A3)		check all that ap Water- Aquati True a	oply) -stained lea ic fauna (B: aquatic plan gen sulfide	aves (B9) 13) ats (B14)			Surface soil cracks (Bd Drainage patterns (B1d Dry-season water table Crayfish burrows (C8)	6) 0) e (C2) erial imagery (C9)
Depth (marks: sume hydeling by both processed by	GY drology Indicators: cators (minimum of comparer (A1) ater table (A2) on (A3) marks (B1)		check all that ap Water- Aquati True a Hydro	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl	aves (B9) 13) ots (B14) odor (C1)	living roots		Surface soil cracks (Bt Drainage patterns (B1t Dry-season water table Crayfish burrows (C8) Saturation visible on a	e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hydeling properties of the hy	GY drology Indicators: cators (minimum of compater (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		check all that ap Water- Aquati True a Hydrod Oxidiz Presel	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu	aves (B9) 13) ats (B14) odor (C1) neres along	living roots	s (C3)	Surface soil cracks (Bt Drainage patterns (B1t Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla	6) D) e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hyd DROLO etland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m	GY drology Indicators: cators (minimum of compater (A1) atter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		check all that ap Water Aquati True a Hydro Oxidiz Preset Recen	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu	aves (B9) 13) its (B14) odor (C1) neres along iced iron (C	living roots	s (C3)	Surface soil cracks (Bi Drainage patterns (B1i Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (i	e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hyd DROLO ttland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der	GY drology Indicators: cators (minimum of compater (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required;	check all that ap Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu it iron redu	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C ction in tilled	living roots	s (C3)	Surface soil cracks (Bi Drainage patterns (B1i Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (i	e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hyden	GY drology Indicators: cators (minimum of compared to the cators (minimum) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required; magery (B7)	check all that ap Water- Aquati True a Hydro Oxidiz Presee Recen Thin n Gauge	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu it iron redu nuck surfac	aves (B9) 13) ots (B14) odor (C1) neres along aced iron (C ction in tilled	living roots	s (C3)	Surface soil cracks (Bi Drainage patterns (B1i Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (i	e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hyd DROLO etland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel	GY drology Indicators: cators (minimum of compared to the cators (minimum) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave	one required; magery (B7) surface (B8	check all that ap Water- Aquati True a Hydron Oxidiz Presen Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu at iron redu nuck surfac e or well da (Explain in	aves (B9) 13) odor (C1) neres along iced iron (C ction in tilled ie (C7) ita (D9) Remarks)	living roots	s (C3)	Surface soil cracks (Bi Drainage patterns (B1i Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (i	e (C2) erial imagery (C9) ants (D1)
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DROLO Petland Hy mary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron der Inundati Sparsel	GY drology Indicators: cators (minimum of compared to the cators (minimum of cators	magery (B7) surface (B8	check all that ap Water- Aquati True a Hydrog Oxidiz Preset Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu at iron redu nuck surface or well da (Explain in Depth (incl	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C ction in tilled ace (C7) ata (D9) Remarks) ares): nes): 36	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (Bi Drainage patterns (B1i Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (i	6) D) e (C2) erial imagery (C9) ants (D1)
Depth (marks: sume hydelection properties) DROLO Etland Hy mary India Surface High was Saturati Water n Sedime Drift delection properties I londer in the sediment of the se	GY drology Indicators: cators (minimum of compared to the cators (minimum of cators	magery (B7) surface (B8	check all that ap Water- Aquati True a Hydrog Oxidiz Preset Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu at iron redu nuck surfac e or well da (Explain in	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C ction in tilled ace (C7) ata (D9) Remarks) ares): nes): 36	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (Bit Drainage patterns (B1it Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed play Geomorphic position (if FAC-neutral test (D5)	6) D) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: sume hyd DROLO etland Hy mary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel eld Obser rface Wat ster Table turation P	GY drology Indicators: cators (minimum of compared to the cators (minimum of cators	magery (B7) surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge) Other No No	oply) -stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron reduction well da (Explain in Depth (inclepth (in	aves (B9) 13) uts (B14) odor (C1) neres along uced iron (C ction in tilled te (C7) ta (D9) Remarks) nes): nes): 36 nes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (But Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed play Geomorphic position (US) FAC-neutral test (D5)	6) D) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: sume hyd DROLO etland Hy mary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel eld Obser rface Wat titer Table turation P	GY drology Indicators: cators (minimum of compared to the cators (minimum of cators (mi	magery (B7) surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge) Other No No	oply) -stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron reduction well da (Explain in Depth (inclepth (in	aves (B9) 13) uts (B14) odor (C1) neres along uced iron (C ction in tilled te (C7) ta (D9) Remarks) nes): nes): 36 nes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (But Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed play Geomorphic position (US) FAC-neutral test (D5)	6) D) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: sume hyd DROLO etland Hy mary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel eld Obser rface Wat titer Table turation P	GY drology Indicators: cators (minimum of compared to the cators (minimum of cators (mi	magery (B7) surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge) Other No No	oply) -stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron reduction well da (Explain in Depth (inclepth (in	aves (B9) 13) uts (B14) odor (C1) neres along uced iron (C ction in tilled te (C7) ta (D9) Remarks) nes): nes): 36 nes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (But Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed play Geomorphic position (US) FAC-neutral test (D5)	6) D) e (C2) erial imagery (C9) ants (D1) D2)

Project/Site: Lemon Hill	City/Cou	unty: Farmington/Olmste	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power		State	:: MN Sampling Point: adp06
Investigator(s): Maddie Humphrey			
Lanform(hillslope, terrace, etc): Sideslope			ef (concave, convex, none): none
Slope(%): <u>3-7</u> Lat: <u>44.09297</u>		Long: -92.33491	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification:
Are climatic / hydrologic conditions on the site typical for thi	is time of year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Si	ignificantly disturbed?	Are "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology na	aturally problematic?		plain any answers in Remarks.)
_			
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point location	s, transects, important features, etc.
	No <u></u> ✓	In the Commissi Augus	
	✓ No	Is the Sampled Area within a Wetland?	Yes No _ 🗸
	No <u>✓</u>		
Remarks: (Explain alternative procedures here or in a sep Upslope adp05 approximately 1-foot.	parate report.)		
оробре шароз аррголишаету 1 тос.			
VEGETATION - Use scientific names of plan	nte		
VEGETATION - 030 Scientific flames of plan		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species
4			Across All Strata:2 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Capling/Charle Ctuature (Diet sing 15 ft (4 C as) and inc)	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species 0 x1 = 0
4.			FACW species 40 x1 = 80
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species <u>5</u> x1 = <u>20</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.20	8- by 3.28-ft square (1-	m²) quadrat)	UPL species
Pastinaca sativa , Wild parsnip	40%	yes UPL	Column Totals: $85 \times 1 = 300 \times 10^{-100}$ (B)
Impatiens capensis, Spotted Touch-Me-Not		yes FACW	Prevalence Index = B/A = 3.529
3. Solidago gigantea, Late Goldenrod		no FACW	Hydrophytic Vegetation Indicators:
4. Hackelia virginiana, Beggar's-Lice	5%	no FACU	1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	85%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2		- Total Cover	Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate	sheet.)		

Sample Point: adp06

rofile Description: (Describ			Redox Feat				oc or maioacoroly	
Depth (inches) Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-35 10YR - 2/1	100	/				SiL		
Type: C=Concentration, D=De		Oodugad Matrix N		- Cond Croi	2,	ocation: D	 L=Pore Lining, M=Matrix.	
	spietion, Rivi=R	educed Mainx, M	15=IVIASKEU	J Sanu Gran	115. L	Location. P		
ydric Soil Indicators: Histosol (or Histel) (A1) u	ndefined	Sand	y Gleyed M	Aatriv (SA)			Indicators for Problemati	-
Histic Epipedon (A2) und			y Redox (S				Coast Prairie Redox (Dark Surface (S7)	A16)
Black Histi (A3) undefine			oed Matrix (•			Iron-Manganese Mass	ses (F12)
Hydrogen Sulfide (A4)		Loam	ny Mucky M	lineral (F1)			Very Shallow Dark Su	` '
Stratified Layers (A5)		Loam	ny Gleyed N	Matrix (F2)			Other (Explain in Rem	
2 cm Muck (A10)		Deple	eted Matrix	(F3)			3Indicators of hydroph	nytic vegetation and wetla
Depleted Below Dark Sur			x Dark Sur	` '			hydrology must be p problematic.	resent, unless disturbed
✓ Thick Dark Surface (A12)				Surface (F7)			problematic.	
Sandy Mucky Mineral (S1 5 cm Mucky Peat or Peat	•	Redox	x Depressi	ons (F8)				
	-							
estrictive Layer (if observe	a):				Llvedi	io Coil Dr	+2	Voc. / No
T					Hyai	ric Soil Pre	esent?	Yes 🔽 No
Type: Depth (inches): emarks: epleted layer coming in at th	e bottom of the	e last bucket. Not	able to dig	g dipper to c	color deplet	ed layer.		
Depth (inches): emarks: epleted layer coming in at th	e bottom of the	e last bucket. Not	able to dig	g dipper to c	color deplet	ed layer.		
Depth (inches): emarks: epleted layer coming in at th		e last bucket. Not	able to diç	g dipper to c	color deplet		Secondary Indicators (minim	num of two required)
Depth (inches): emarks: epleted layer coming in at th	rs:			g dipper to c	color deplet		Secondary Indicators (minim Surface soil cracks (B6	, ,
Depth (inches): emarks: eppleted layer coming in at the	rs:	; check all that ap			color deplet		, ,)
Depth (inches): emarks: epleted layer coming in at the /DROLOGY /etland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2)	rs:	; check all that ap Water- Aquati	oply) -stained lea ic fauna (B:	aves (B9)	color deplet		Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table))
Depth (inches): emarks: epleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)	rs:	; check all that ap Water- Aquati True a	oply) -stained lea ic fauna (B: aquatic plan	aves (B9) 13) nts (B14)	color deplet		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8))) (C2)
Depth (inches): demarks: depleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	rs:	; check all that ap Water- Aquati True a Hydrog	oply) -stained lea ic fauna (B: aquatic plan gen sulfide	aves (B9) 13) nts (B14) odor (C1)		<u>\$</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae)) (C2) erial imagery (C9)
Depth (inches): demarks: depleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	rs:	; check all that ap Water- Aquati True a Hydrog Oxidize	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ied rhizospl	aves (B9) 13) nts (B14) odor (C1) heres along	living roots	<u>\$</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	(C2) erial imagery (C9) nts (D1)
Depth (inches): demarks: depleted layer coming in at the Dep	rs:	; check all that ap — Water- Aquati — True a — Hydrog — Oxidize	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu	aves (B9) 13) hts (B14) odor (C1) heres along uced iron (C.	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): demarks: depleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	rs:	; check all that ap — Water- — Aquati- — True a — Hydroç — Oxidizo — Preser — Recen	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu at iron redu	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	(C2) erial imagery (C9) nts (D1)
Depth (inches): emarks: eepleted layer coming in at the "DROLOGY Tetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	rs: of one required;	; check all that ap Water- Aquatir True a Hydrog Oxidizor Preser Recen Thin m	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (Citon in tilled	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): emarks: eepleted layer coming in at the "DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	rs: If one required; al imagery (B7)	; check all that ap Water- Aquati True a Hydroq Oxidize Preser Recen Thin m Gauge	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu nt iron redu nuck surfac	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C- ction in tilled ce (C7) ata (D9)	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): emarks: epleted layer coming in at the "DROLOGY /etland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria	rs: If one required; al imagery (B7)	; check all that ap Water- Aquati True a Hydroq Oxidize Preser Recen Thin m Gauge	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu nt iron redu nuck surfac	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C- ction in tilled ce (C7) ata (D9)	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): remarks: repleted layer coming in at the r	rs: of one required; al imagery (B7) ave surface (B8)	; check all that ap Water- Aquati- True a Hydrog Oxidize Preser Recen Thin m Gauge Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu nt iron redu nuck surfac e or well da (Explain in	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (Citon in tilled ice (C7) ata (D9) Remarks)	living roots 4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): emarks: epleted layer coming in at the /DROLOGY /etland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated conca ield Observations: urface Water Present? //ater Table Present?	rs: If one required; al imagery (B7) Ive surface (B8) Yes Yes	; check all that ap Water- Aquatir True a Hydrog Oxidizer Preser Recen Thin m Gauge Other No No No	eply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu nt iron redu nuck surfac e or well da (Explain in Depth (incl	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes):	living roots 4) d soils (C6)	S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) erial imagery (C9) nts (D1)
Depth (inches): emarks: epleted layer coming in at the /DROLOGY /etland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concatield Observations: urface Water Present? //ater Table Present? aturation Present?	rs: If one required; al imagery (B7) Ive surface (B8) Yes Yes	; check all that ap Water- Aquati- True a Hydrog Oxidize Preser Recen Thin m Gauge Other	eply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizospl nce of redu nt iron redu nuck surfac e or well da (Explain in Depth (incl	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes):	living roots 4) d soils (C6)	S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) erial imagery (C9) ents (D1)
Depth (inches): emarks: epleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concative includes capillary fringe)	es: of one required; al imagery (B7) eve surface (B8) Yes Yes	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	oply) -stained leadic fauna (Biaquatic planagen sulfide lead rhizosphance of redunt iron reduction well dat (Explain in Depth (inclepth	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) erial imagery (C9) ents (D1)
Depth (inches): emarks: epleted layer coming in at the /DROLOGY /etland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concatield Observations: urface Water Present? //ater Table Present? aturation Present?	es: of one required; al imagery (B7) eve surface (B8) Yes Yes	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	oply) -stained leadic fauna (Biaquatic planagen sulfide lead rhizosphance of redunt iron reduction well dat (Explain in Depth (inclepth	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) erial imagery (C9) ents (D1)
Depth (inches): emarks: epleted layer coming in at the DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concative includes capillary fringe)	es: of one required; al imagery (B7) eve surface (B8) Yes Yes	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	oply) -stained leadic fauna (Biaquatic planagen sulfide lead rhizosphance of redunt iron reduction well dat (Explain in Depth (inclepth	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) erial imagery (C9) ents (D1)
Depth (inches): remarks: repleted layer coming in at the remarks: repleted layer coming in at the remarks (repleted layer (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concantel in the resent repleted layer resent? relater Table Present?	es: of one required; al imagery (B7) eve surface (B8) Yes Yes	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	oply) -stained leadic fauna (Biaquatic planagen sulfide lead rhizosphance of redunt iron reduction well dat (Explain in Depth (inclepth	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 33	living roots 4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) erial imagery (C9) ents (D1)

SOIL

Project/Site: Lemon Hill		City/Co	ountv: Farmi	ngton/Olmste	ed County	Sampling Date: 2	024-05-29
Applicant/Owner: Ranger Power		0,, 0.0				Sampling Point: a	
Investigator(s): Maddie Humphrey		Sect					-
Lanform(hillslope, terrace, etc): Slough					ef (concave, convex,		
Slope(%): 3-7 Lat: 44.08968			Long: -92	.33486		Datum: WC	GS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			_		NWI classific	cation: PEM1B	
Are climatic / hydrologic conditions on the site typical fo	or this time of y	ear?	Y	es , No	(If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology	Significantly	disturbed?			 Circumstances" pres	ent? Yes No	
Are Vegetation , Soil , or Hydrology	_				plain any answers ir		
	-		`	,	,	,	
SUMMARY OF FINDINGS - Attach site m	ap showin	g sampli	ing point	location	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Y	es <u>✓</u> No						
	'es No			ampled Area Wetland?	ı	Yes	No 🗸
Wetland Hydrology Present?	es No						
Remarks: (Explain alternative procedures here or in a		ort.)					
Side slope directly above toeslope between forest and	ı meadow.						
VEGETATION - Use scientific names of p	olants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)			Dominant Species?		Dominance Test	Worksheet	
1				Status			
2.					Number of Domina Are OBL, FACW,		<u>2</u> (A)
3.					Total Number of D	Ominant Species	
4.					Across All Strata:	-	2 (B)
5					Percent of Domina		
		0%	= Total Co	ver	Are OBL, FACW,	or FAC:	100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)					Prevalence Index	worksheet:	
1.					Total % Cov	ver of: Mu	ultiply by:
2.					OBL species	0 x1 =	
3					FACW species	25 x1 =	50
4 5.					FAC species	<u>80</u> x1 =	240
· -		0%	= Total Co	ver	FACU species	<u> </u>	40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR	3.28- by 3.28-				UPL species	5 x1 =	25
Poa pratensis, Kentucky Blue Grass	•	80%	yes	FAC	Column Totals:	<u>120</u> x1 =	<u>355</u> (B)
2. Urtica dioica, Stinging Nettle		25%	yes	FACW	Prevale	ence Index = B/A =	2.958
3. Cirsium arvense, Canadian Thistle		10%	no	FACU	Hydrophytic Veg	etation Indicators:	
4. Pastinaca sativa, Wild parsnip		5%	no	UPL			actation
5					1 - Rapid Tes	st for Hydrophytic Ve	getation
6							
7						ce Index is <= 3.0 ¹	
8					4 - Morpholo supporting da	gical Adaptations ¹ (F ata in Remarks or or	Provide n a separate
9					sheet)		•
10					PROBLEMAT	TIC Hydrophytic Vege	etation ¹ (Explain)
We also Mark Object on (Diet also 200 ft (O.1 as) and live)		120%	= Total Co	ver		f hydric soil and wetla	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					must be pre	esent, unless disturbe	ed or problematic.
1. 2.					Hydrophytic		
2.		0%	= Total Co	ver	Vegetation Present?	Ye	s <u> </u>
Daniel de Marie de la laction de la company	-414)	<u> </u>	10141 00	V C I	110001111		
Remarks: (Include photo numbers here or on a separ	ate sheet.)						

SOIL Sample Point: adp07

_	• Matrix	to the dopti.		lox Featı	ıres			ee of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-15	10YR - 3/3	100	/	70	Туре	LUC	SiL	remans
0-15	101R - 3/3	100	/				SIL	
								-
								-
¹ Type: C=Co	oncentration, D=Dep	 letion, RM=R	educed Matrix, MS	=Masked	Sand Grain	s. ² l	Location: Pl	 =Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
_	I (or Histel) (A1) und	lefined	Sandy (Gleyed M	latrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undefi	ined	Sandy I	Redox (S	5)			Dark Surface (S7)
Black H	listi (A3) undefined		Stripped	d Matrix ((S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loamy	Mucky M	ineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	Gleyed N	Matrix (F2)			Other (Explain in Remarks)
2 cm M	luck (A10)		Deplete	d Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
	ed Below Dark Surfac	ce (A11)			face (F6)			hydrology must be present, unless disturbed or
	ark Surface (A12)		 :		urface (F7)			problematic.
	Mucky Mineral (S1)		Redox I	Depression	ons (F8)			
5 cm M	lucky Peat or Peat (S	53)						
Restrictive	Layer (if observed)	:						
Type:	<u></u>					_ Hyd	ric Soil Pre	esent? Yes No
Depth ((inches): <u></u>							
HYDROLO	GY							
_	drology Indicators:							No a consideration of the state
	cators (minimum of o	one required;	check all that appl				<u>s</u>	Secondary Indicators (minimum of two required)
	water (A1)						<u> </u>	Surface soil cracks (B6)
	ater table (A2)			ained lea	ives (B9)			Surface soil cracks (B6) Drainage patterns (B10)
	ion (A2)		Aquatic	ained lea fauna (B:	13)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
,	ion (A3)		Aquatic	ained lea fauna (B: ıatic plan	13) ts (B14)		- - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Water n	marks (B1)		Aquatic True aqu Hydroge	ained lea fauna (Bí natic plan n sulfide	13) ts (B14) odor (C1)	iving root	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Water n	narks (B1) ent deposits (B2)		Aquatic True aqu Hydroge Oxidized	ained lea fauna (B: ıatic plan n sulfide rhizosph	13) ts (B14) odor (C1) neres along I	-	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Water n Sedime Drift de	narks (B1) Int deposits (B2) posits (B3)		Aquatic True aqu Hydroge Oxidized	ained lea fauna (B: natic plan n sulfide rhizosph e of redu	ts (B14) odor (C1) neres along I ced iron (C4	.)	- - - s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Water n Sedime Drift de	narks (B1) int deposits (B2) posits (B3) iat or crust (B4)		Aquatic True aqu Hydroge Oxidized Presence Recent i	ained lea fauna (B: natic plan n sulfide rhizosph e of redu	ts (B14) odor (C1) neres along I ced iron (C4	.)	- - - s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Water n Sedime Drift dep Algal m	narks (B1) Int deposits (B2) posits (B3)	imagery (B7)	Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu	ained lea fauna (B: natic plan n sulfide rhizosph e of redu	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7)	.)	- - - s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Water n Sedime Drift dej Algal m Iron dej	narks (B1) Int deposits (B2) Int deposits (B3) Int or crust (B4) Int or crust (B5)		Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c	ained lea fauna (B: natic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7)	.)	- - - s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Water n Sedime Drift dej Algal m Iron dej	narks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in		Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c	ained lea fauna (B: natic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9)	.)	- - - s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave vations: ier Present?	e surface (B8 Yes Yes	Aquatic True aqu Hydroge Oxidized Presenci Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Field Obser Surface Wat Water Table Saturation P	marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: ter Present? Present?	e surface (B8 Yes Yes	Aquatic True aqu Hydroge Oxidized Presenci Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Water n Sedime Drift de Algal m Iron der Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca	marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: ter Present? Present?	yes Yes Yes Yes	Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in epth (inche epth (inche	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	wetl	s (C3) -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Water n Sedime Drift de Algal m Iron der Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca	marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial if y vegetated concave rvations: ter Present? Present? Present? pillary fringe)	yes Yes Yes Yes	Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in epth (inche epth (inche	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	wetl	s (C3) -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes cap	marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial if y vegetated concave rvations: ter Present? Present? Present? pillary fringe)	yes Yes Yes Yes	Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in epth (inche epth (inche	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	wetl	s (C3) -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes cap	marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial if y vegetated concave rvations: ter Present? Present? Present? pillary fringe)	yes Yes Yes Yes	Aquatic True aqu Hydroge Oxidized Presence Recent i Thin mu Gauge c Other (E	ained lea fauna (B: latic plan n sulfide rhizosph e of redu ron reduc ck surfac r well da xplain in epth (inche epth (inche	ts (B14) odor (C1) neres along I ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	wetl	s (C3) -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Cr	ounty: Farmi	naton/Olmst	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	0.1,700			e: MN Sampling Point: adp08
Investigator(s): Maddie Humphrey	Sect			
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08975				· ·
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es , No	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro		, ,		plain any answers in Remarks.)
	biematio.	(1	i necucu, ex	plant any anowers in remains.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	a Yes ✔ No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate repositing nettle dominant depression adjacent Kentucky blue grass d		pression.		
VEGETATION - Use scientific names of plants.	^ h = = l · · + =	Dominont	la dia atau	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test Worksheet
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4				Across All Strata:2 (B)
5	0%	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2	· · · · · · · · · · · · · · · · · · ·			OBL species0 x1 =0
3				FACW species 50 x1 = 100
5.				FAC species60 x1 =180
<u> </u>	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Poa pratensis, Kentucky Blue Grass	60%	yes	FAC	Column Totals: <u>110</u> x1 = <u>280</u> (B)
2. Urtica dioica, Stinging Nettle	50%	yes	FACW	Prevalence Index = B/A = 2.545
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10		= Total Cov		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			vei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2.				Hydrophytic
2.	0%	= Total Co	ver	Vegetation Present? YesNo
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	cription: (Describe Matrix		R	Redox Feati	ures				
inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Rer	marks
0-5	10YR - 3/2	100	/				SiL		
5-13	10YR - 3/2	95	5YR-4/6	5	C	M	SiL		
ype: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	IS=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
_ Histoso _ Histic E _ Black F	Indicators: I (or Histel) (A1) underipipedon (A2) undefilisti (A3) undefined en Sulfide (A4)		Sandy Stripp	y Gleyed M y Redox (S ped Matrix (y Mucky M	65)			Indicators for Problematic Coast Prairie Redox (A Dark Surface (S7) Iron-Manganese Mass Very Shallow Dark Sur	A16) es (F12)
_ 2 cm M	d Layers (A5) luck (A10) ed Below Dark Surfac	ce (A11)	Deple	y Gleyed N eted Matrix x Dark Sur	(F3)			Other (Explain in Rem 3Indicators of hydroph hydrology must be pi	arks)
Sandy I	eark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (S	S3)		eted Dark S x Depressi	Surface (F7) ons (F8)			problematic.	
strictive	Layer (if observed)	:							
Type:	 (inches):					Hyd	ric Soil Pi	resent?	Yes _ V _ No _
Type: Depth of marks:						Hyd	ric Soil Pi	resent?	YesNo _
Type: Depth						Hyd	ric Soil Pi	Secondary Indicators (minim	
Type: Depth on the properties of the properties	PGY drology Indicators: cators (minimum of o					Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6)	um of two required)
Type: Depth of the properties	drology Indicators: cators (minimum of o		Water-	stained lea	, ,	Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10)	um of two required)
Type: Depth marks: DROLO tland Hy mary Indi Surface High wa	oGY rdrology Indicators: cators (minimum of of water (A1) ater table (A2)		Water- Aquati	stained lea c fauna (B	13)	Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	um of two required)
Type: Depth of the property of	order (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained lea c fauna (Ba quatic plan	13) nts (B14)	Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	um of two required) (C2)
Type: Depth marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r	oGY rdrology Indicators: cators (minimum of of water (A1) ater table (A2)		Water- Aquati True a Hydrog	stained lea c fauna (Ba quatic plan gen sulfide	13) nts (B14)			Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	um of two required) (C2) rial imagery (C9)
Type: Depth of the property of	ordrology Indicators: cators (minimum of of exwater (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living root		Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth marks: DROLO etland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de	order (A1) atter table (A2) ion (A3) marks (B1) int deposits (B2)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) not deposits (B2) posits (B3)		Water- Aquati True a Hydrog Oxidiz Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D:	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth marks: DROLO ttland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	exactors (minimum of of of exactors (minimum of of of exactors (minimum of	one required;	Water- Aquati True a Hydro Oxidiz Preser Recen Thin m Gauge	estained lea c fauna (B. aquatic plan gen sulfide ed rhizosph nce of redu it iron reduct	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D:	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	edrology Indicators: cators (minimum of of exators (Minimum of of of exators (Minimum of of of exators (Minimum of	one required; imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduct nuck surface or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D:	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table uration P	reactors (minimum of of exactors (Max)) and the deposits (Max) and the deposits (Max) posits (M	imagery (B7) e surface (B8) Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	estained lea c fauna (B: cquatic plan gen sulfide ed rhizosph nce of redu it iron reduct nuck surfact e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D:	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth of the property of	edrology Indicators: cators (minimum of of exators (minimum of of of exators (minimum of	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: aquatic plan gen sulfide ed rhizosphere of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3))	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ael Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1) 2)
Type: Depth of the property of	drology Indicators: cators (minimum of of extra table (A2) ion (A3) marks (B1) ion t deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in the contract of the cont	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: aquatic plan gen sulfide ed rhizosphere of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3))	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ael Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1) 2)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			: MN Sampling Point: adp09
Investigator(s): Maddie Humphrey	Secti	ion, Township, Range: S	i12 T107N S013W
Lanform(hillslope, terrace, etc): Sideslope		Local relie	ef (concave, convex, none): none
Slope(%): 0-2 Lat: 44.09063		Long: -92.33424	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 No	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	a camnli	ing point location	e transacte important faaturas atc
<u> </u>			s, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No		Is the Sampled Area	
Wetland Hydrology Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate report Directly above toeslope in reed canary grass dominated field VEGETATION - Use scientific names of plants.	rt.)		
		Dominant Indicator Species? Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species? Status	Number of Dominant Species That
2			Are OBL, FACW, or FAC: 1 (A)
3			Total Number of Dominant Species Across All Strata: 2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2 3			OBL species0 x1 =0
4			FACW species <u>95</u> x1 = <u>190</u>
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species 30 x1 = 120
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	95%	yes FACW	Column Totals: $\underline{125}$ x1 = $\underline{310}$ (B)
2. <u>Cirsium arvense</u> , Canadian Thistle	30%	yes FACU	Prevalence Index = B/A =2.480
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No ✓
Remarks: (Include photo numbers here or on a separate sheet.)			

Sample Point: <u>adp09</u>

SOIL

Profile Desc	ription: (Describe Matrix	to the dept		ument the Redox Feat		r confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
			•		Турс			Nemans
0-13	10YR - 3/2	100	/				SiL	
							-	
			_					_
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	IS=Maske	d Sand Grai	ns. ²	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
	(or Histel) (A1) und			-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undefi	ined		y Redox (S	-			Dark Surface (S7)
	isti (A3) undefined			ed Matrix	(So) Mineral (F1)			Iron-Manganese Masses (F12)
	en Sulfide (A4) d Layers (A5)				Matrix (F2)			Very Shallow Dark Surface (TF12)
	uck (A10)		_	ted Matrix				Other (Explain in Remarks)
	d Below Dark Surfac	ce (A11)		x Dark Su	` '			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	ark Surface (A12)	50 (F.22)			Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depress	, ,			
	ucky Peat or Peat (S3)		·	. ,			
Restrictive	Layer (if observed)	:						
Туре:	<u></u>					Нус	dric Soil Pre	esent? Yes No _ ✓
Depth (inches): <u></u>							
HYDROLO	GY							
•	drology Indicators:						<u> </u>	Secondary Indicators (minimum of two required)
	cators (minimum of	one required			(= -)			Surface soil cracks (B6)
	water (A1)			stained le			-	Drainage patterns (B10)
	iter table (A2)			c fauna (E			-	Dry-season water table (C2)
Saturati	narks (B1)			quatic pla	e odor (C1)		-	Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
	nt deposits (B2)			_	heres along	living roo	its (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	•	(00)	Geomorphic position (D2)
	at or crust (B4)				iction in tille		6)	FAC-neutral test (D5)
	oosits (B5)			nuck surfa			-,	
	on visible on aerial	imagery (B7		or well da				
Sparsel	y vegetated concave	surface (B	8) Other	(Explain ir	n Remarks)			
Field Obser	vations:							
Surface Wat	er Present?	Ye	s No _ 🗸	Depth (inc	:hes): <u></u>			
Water Table	Present?	Ye	s No	Depth (inc	:hes): <u></u>	We	tland Hydro	ology Present? Yes No
Saturation P	resent?	Ye	s No	Depth (inc	:hes): <u></u>			
(includes cap	oillary fringe)							
Describe Re	corded Data (stream	n gauge, mo	onitoring well, aeria	ıl photos, _l	previous insp	pections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			State	: MN Sampling Point: adp10
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: S	12 T107N S013W
Lanform(hillslope, terrace, etc): Depression			Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.09063		Long: -92.	.33432	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	d, 0 to 2 per	rcent slopes	i <u> </u>	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es 🔎 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(II	f needed, ex	plain any answers in Remarks.)
	_			
SUMMARY OF FINDINGS - Attach site map showin	<u> </u>	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sa	ampled Area	
Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No			Wetland?	Yes _ 🗸 No
Remarks: (Explain alternative procedures here or in a separate repo				
Reed canary grass dominated depression. VEGETATION - Use scientific names of plants.				
		Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
3				Total Number of Dominant Species Across All Strata: 2 (B)
5.				, ()
	0%	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2. 3.				OBL species0 x1 =0
4.				FACW species 115
5				FAC species0 x1 =0
	0%	= Total Cov	ver	FACU species5 x1 =20
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	nt)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	90%	yes	FACW	Column Totals: 120 x1 = 250 (B)
2. Urtica dioica, Stinging Nettle	25%	yes	FACW	Prevalence Index = B/A =2.083
3. <u>Cirsium arvense</u> , Canadian Thistle	5%	no	FACU	Hydrophytic Vegetation Indicators:
4				 ✓ 1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9		-		sheet)
10.		= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: adp10

Profile Desc	cription: (Describe Matrix	to the dep		ment the		r confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-7	10YR - 3/2	100	/				SiL	
7-15	10YR - 3/2	95	5YR-4/6	5	С	М	SiL	
					·			
						1	-	
							_	-
¹ Type: C=Co	oncentration, D=Dep	 letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grair	ns.	Location: P	L=Pore Lining, M=Matrix.
Hydric Soil		•						
_	l (or Histel) (A1) und	lefined	Sandy	/ Gleyed N	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	pipedon (A2) undef			/ Redox (S				Dark Surface (S7)
Black H	isti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	d Below Dark Surfac	ce (A11)		C Dark Sui	` '			hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	20)	Redox	c Depressi	ions (F8)			
	ucky Peat or Peat (
	Layer (if observed)	:						
Type:	 (inches):					_ Hy	dric Soil Pr	esent? Yes 🗸 No
Remarks:	(iliciles)							
l								
HYDROLO	GY							
Wetland Hy	drology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one require						Surface soil cracks (B6)
	water (A1)			stained lea	` '			Drainage patterns (B10)
	ater table (A2)			c fauna (B	•			Dry-season water table (C2)
Saturati	narks (B1)			quatic plai	e odor (C1)			Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	living roo	nts (C3)	Stunted or stressed plants (D1)
	posits (B3)			-	uced iron (C	-	ns (00)	✓ Geomorphic position (D2)
	at or crust (B4)				ction in tilled	-	6)	✓ FAC-neutral test (D5)
	oosits (B5)			uck surfac		`	,	
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	surface (E	38) Other	(Explain in	Remarks)			
Field Obser	vations:							
Surface Wat		Y	es No	Depth (inc	hes):			
Water Table			es No			We	tland Hydro	ology Present? Yes <u>✓</u> No
Saturation P	resent?	Y	es No	Depth (inc	hes): <u></u>	_		
(includes ca	pillary fringe)							
Describe Re	corded Data (stream	n gauge, m	onitoring well, aeria	ا photos, ہ	orevious insp	ections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp11
Investigator(s): Maddie Humphrey	Secti	on, Township, Range: <u>S</u>	12 T107N S013W
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08739		Long: -92.33168	Datum: WGS 84
Soil Map Unit Name: 472C: Channahon loam, 6 to 12 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	disturbed?	· 	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g samplii	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		In the Complet Area	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate repo Sloped soybean field	ırt.)		
Sloped Soysball Hold			
VEGETATION - Use scientific names of plants.			
	Ahsolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover	,
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species $0 \times 1 = 0$
4			FACW species0 x1 =0
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species 5 x1 = 20
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			01 E species
Cirsium arvense, Canadian Thistle	5%	<u>yes</u> <u>FACU</u>	Column Totals: $\underline{5}$ x1 = $\underline{20}$ (B) Prevalence Index = B/A = 4.000
2			
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	5%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
	0%	= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybean			
Recently planted Soybean			

Profile Description: (Describe Matrix Depth			tedox Feati				,
(inches) Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12 10YR - 3/3	100 -	/				SiL	
							-
							_
Type: C=Concentration, D=Dep	letion, RM=Red	uced Matrix, M	IS=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.
ydric Soil Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
Histic Epipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)
Black Histi (A3) undefined			ed Matrix (` '			Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratified Layers (A5)			y Gleyed N				Other (Explain in Remarks)
2 cm Muck (A10)			eted Matrix				³ Indicators of hydrophytic vegetation and wet
Depleted Below Dark Surface	ce (A11)	Redox	x Dark Sur	face (F6)			hydrology must be present, unless disturbed
Thick Dark Surface (A12)		Deple	eted Dark S	Surface (F7))		problematic.
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (53)	Redox	x Depressi	ons (F8)			
Restrictive Layer (if observed)	•						
					Llvd		resent? Yes No
Type:					пуи	ric Soil P	resent:
Type: <u></u> Depth (inches): <u></u> Remarks:					Hyu	ric Soil Pi	resNo
Depth (inches): <u></u> Remarks:						ric Soil Pi	resNo
Depth (inches): Remarks: /DROLOGY						ric Soil Pi	
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicators:		neck all that an	nnlv)			ric Soil Pi	Secondary Indicators (minimum of two required)
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of			• • •	aves (B9)		ric Soil Pi	Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of a Surface water (A1)		Water-	stained lea	, ,		ric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of a Surface water (A1) High water table (A2)		Water- Aquati	stained lea c fauna (B	13)		ric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of many Indicators) Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquati True a	stained lea c fauna (Bi quatic plan	13) nts (B14)		ric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of a Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (Ba quatic plan gen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (inches): Remarks: Primary Indicators (minimum of a Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): Remarks: Primary Indicators (minimum of or surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water- Aquati True a Hydrog Oxidizo	stained leact fauna (Bandunatic pland gen sulfide ed rhizosphance of redu	13) hts (B14) odor (C1) heres along uced iron (C	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of oracle water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water- Aquati True a Hydrog Oxidize Preser Recen	estained lea c fauna (B. quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	13) nts (B14) odor (C1) heres along uced iron (C ction in tille	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	one required; ch	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reductuck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tille- te (C7)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): temarks: **TDROLOGY **Vetland Hydrology Indicators: rimary Indicators (minimum of a Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial	one required; ch	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reduct e or well da	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): demarks: POROLOGY Vetland Hydrology Indicators: Trimary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave	one required; ch	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reductuck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of oracle) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave	imagery (B7)	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of oracle) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave Field Observations: Surface Water Present?	imagery (B7) e surface (B8) Yes	Water- Aquation True a Hydrogon Oxidizon Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks)	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of or	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of a surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave (rield Observations: aurface Water Present? (Vater Table Present? (Vater Table Present?)	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquation True a Hydrogon Oxidizon Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of a surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave Field Observations: Furface Water Present? Vater Table Present? Field Union (Base of Concave of Con	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of fauna (B: aquatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tille te (C7) ata (D9) Remarks) hes): hes):	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of oracle) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave Field Observations: Surface Water Present?	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of fauna (B: aquatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tille te (C7) ata (D9) Remarks) hes): hes):	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of a surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concave Field Observations: Furface Water Present? Vater Table Present? Field Union (Base of Concave of Con	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of fauna (B: aquatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tille te (C7) ata (D9) Remarks) hes): hes):	living root :4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill Cit	County: Farmington/Olmsted County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	State: MN Sampling Point: adp12
Investigator(s): Maddie Humphrey	
	Local relief (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08676	Long: -92.33165 Datum: WGS 84
Soil Map Unit Name: 472C: Channahon loam, 6 to 12 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes , No (If no, explain in Remarks.)
Are Vegetation 🔪 , Soil , or Hydrology Significantly disturbe	d? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally problemati	
_	
SUMMARY OF FINDINGS - Attach site map showing san	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No Wetland Hydrology Present?	within a Wetland? Yes No _ <
Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate report.)	
Sloped soybean field.	
	e Dominant Indicator er Species? Status Dominance Test Worksheet
	<u> </u>
1	Arg OBL EACH or EAC:
3	Total Number of Dominant Species
4	
	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
3	OBL species 0 x1 = 0
4	FACW species0 x1 =0
5	FAC species0 x1 =0
0%	= Total Cover FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft square	
1	Column Totals: $0 \text{ x1} = 0 \text{ (B)}$
2	Prevalence Index = B/A = NaN
3	injure projection in an arrangement
4	1 - Rapid Test for Hydrophytic Vegetation
	2 - Dominance Test is > 50%
7	3 - Prevalence Index is <= 3.0 ¹
8	
9.	supporting data in Remarks or on a separate sheet)
10	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	= Total Cover
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	Hydrophytic
0%	Vegetation = Total Cover Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybean	

Depth	Matrix		R	edox Feati				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-12	10YR - 3/3	100	/				SiL	
								_
	oncentration, D=Deple	etion, RM=Re	educed Matrix, M	IS=Masked	Sand Grai	ns. ² I	Location: F	PL=Pore Lining, M=Matrix.
	Indicators: I (or Histel) (A1) unde	efined	Sandy	y Gleyed M	Matrix (S4)			Indicators for Problematic Hydric Soils ³ :
_	pipedon (A2) undefir			, Redox (S				Coast Prairie Redox (A16) Dark Surface (S7)
	listi (A3) undefined			ed Matrix (•			Iron-Manganese Masses (F12)
	en Sulfide (A4)			y Mucky M				Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
	uck (A10)		Deple	ted Matrix	(F3)			
 Deplete	d Below Dark Surface	e (A11)	Redox	x Dark Sur	face (F6)			³ Indicators of hydrophytic vegetation and we hydrology must be present, unless disturbe
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.
Sandy I	Mucky Mineral (S1)		Redox	x Depressi	ons (F8)			
_ 5 cm M	ucky Peat or Peat (S	3)						
	Layer (if observed):					l		
						нуа	ric Soil Pi	resent? Yes No _
•	(inches):							
Depth (_		
Depth of the Depth	GY							Secondary Indicators (minimum of two required)
Depth of the Depth		ne required;	check all that ap	ply)		_		Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth of the period of the per	GY drology Indicators:	ne required;		ply) stained lea	aves (B9)	_		
Depth of the property of the p	GY drology Indicators: cators (minimum of o	ne required;	Water-		, ,	_		Surface soil cracks (B6)
Depth of the property of the p	drology Indicators: cators (minimum of or water (A1) ater table (A2)	ne required;	Water- Aquati	stained lea	13)	_		Surface soil cracks (B6) Drainage patterns (B10)
DROLO etland Hy imary Indi Surface High wa Saturati	drology Indicators: cators (minimum of or water (A1) ater table (A2)	ne required;	Water- Aquati True a	stained lea c fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
DROLO etland Hy imary Indi _ Surface _ High wa _ Saturati _ Water r	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3)	ne required;	Water- Aquati True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14)	living roots		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
DROLO etland Hy imary Indi _ Surface _ High wa _ Saturati _ Water r _ Sedime	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1)	ne required;	Water- Aquati True a Hydroç Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) ats (B14) odor (C1)	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)	ne required;	Water- Aquati True a Hydroo Oxidize Preser	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) its (B14) odor (C1) neres along	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLO etland Hy imary Indi _ Surface _ High wa _ Saturati _ Water r _ Sedime _ Drift de _ Algal m	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3)	ne required;	Water- Aquati True a Hydrog Oxidize Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	nts (B14) odor (C1) neres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ats (B14) odor (C1) neres along iced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth of marks: DROLO etland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	nagery (B7)	Water- Aquati True a Hydroç Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reduce nuck surfac	ats (B14) odor (C1) neres along aced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave	nagery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc s or well da (Explain in	ats (B14) odor (C1) neres along aced iron (C ction in tilled be (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave rvations: er Present?	nagery (B7) surface (B8) Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da (Explain in	nts (B14) odor (C1) neres along iced iron (C ction in tilled ie (C7) ita (D9) Remarks)	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser ater Table	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: er Present? Present?	nagery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lead of fauna (B: quatic plan gen sulfide ed rhizosphance of reduct iron reduct surfact or well da (Explain in Depth (incl	nts (B14) odor (C1) neres along nced iron (C ction in tilled te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth of the commarks: DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser ater Table aturation P	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: er Present? Present?	nagery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lead of fauna (B: quatic plan gen sulfide ed rhizosphance of reduct iron reduct surfact or well da (Explain in Depth (incl	nts (B14) odor (C1) neres along nced iron (C ction in tilled te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat atter Table atturation P	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: er Present? Present?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat atter Table atturation P includes ca	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ter Present? Present? Present? present? present?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat atter Table atturation P	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ter Present? Present? Present? present? present?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmst	ed County	Sampling Date: 20%	24-05-29
Applicant/Owner: Ranger Power		State			
Investigator(s): Maddie Humphrey					
			ef (concave, convex,		
Slope(%): <u>0-2</u> Lat: <u>44.08574</u>		Long: -92.33071		Datum: WGS	8 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slo	pes, moderatel	y eroded	NWI classific	cation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes , N	o (If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Significan	itly disturbed?	Are "Normal (Circumstances" pres	ent? Yes , No	
Are Vegetation , Soil , or Hydrology naturally	problematic?		xplain any answers ir		_
					
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, in	nportant features	s, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> ١		Is the Sampled Area	•		
Hydric Soil Present? Yes Noticed Hydrology Present?		within a Wetland?	a	Yes _	No <u></u> ✓_
Wetland Hydrology Present? Yes <u>✓</u> ١					
Remarks: (Explain alternative procedures here or in a separate re Minute depression in agriculture field, not cropped.	eport.)				
agricultural depression in agricultural india, not di appear					
VEGETATION - Use scientific names of plants.					
Tee solution and see solution in announce of planter	Ahsolute	Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet	
1			Number of Domina		_
2			Are OBL, FACW,	or FAC:	2 (A)
3			Total Number of D Across All Strata:		2 (B)
4			Percent of Domina		<u></u> (D)
		= Total Cover	Are OBL, FACW,		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index	worksheet:	
1			Total % Cov	ver of: Multi	inly by:
2			OBL species	0 x1 =	
3			FACW species	35 x1 =	
4			FAC species	70 x1 =	
5	006	= Total Cover	FACU species	15 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.			UPL species	0 x1 =	0
Poa pratensis, Kentucky Blue Grass	50%	yes FAC	Column Totals:	120 x1 =	340 (B)
Phalaris arundinacea, Reed Canary Grass	30%	yes FACW	Prevale	ence Index = B/A = _	2.833
3. Ambrosia trifida, Great Ragweed		no FAC	Hydrophytic Veg	etation Indicators:	
4. Solidago altissima, Tall Goldenrod		no FACU			
5. Taraxacum officinale, Common Dandelion	5 0.4	no FACU	l —	st for Hydrophytic Vege	etation
6. Urtica dioica, Stinging Nettle	-	no FACW		ce Test is > 50%	
7.				ce Index is <= 3.0 ¹	
8			4 - Morpholo	gical Adaptations ¹ (Pro ata in Remarks or on a	ovide
9			sheet)	ata iii Nemarks or on e	a separate
10			PROBLEMAT	TIC Hydrophytic Vegeta	ation ¹ (Explain)
	120%	= Total Cover	¹ Indicators of	f hydric soil and wetlan	nd hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be pre	esent, unless disturbed	or problematic.
1. 2.			Hydrophytic		
2	0%	= Total Cover	Vegetation Present?	Yes	✓ No
Domarke: (Include phote numbers here as as a secreta short)		20701	1		
Remarks: (Include photo numbers here or on a separate sheet.)					

Depth -	Matrix			Redox Feat				nce of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	10YR - 3/3	100	/				SiL		
								- -	
								_	
								<u> </u>	
Type: C=Cond	entration, D=Dep	letion, RM=R	educed Matrix, M	 IS=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
ydric Soil Inc	licators:							Indicators for Problematic Hydric	Soils ³ :
	r Histel) (A1) un			y Gleyed M				Coast Prairie Redox (A16)	
	edon (A2) undef	ined		y Redox (S	-			Dark Surface (S7)	
	(A3) undefined			oed Matrix (` ,			Iron-Manganese Masses (F12)	
Hydrogen	Sulfide (A4)		Loam	ıy Mucky M	lineral (F1)			Very Shallow Dark Surface (TF:	12)
Stratified L	ayers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
2 cm Mucl	(A10)		Deple	eted Matrix	(F3)			³ Indicators of hydrophytic veget	ation and wetl
Depleted E	Below Dark Surfa	ce (A11)	Redo	x Dark Sur	face (F6)			hydrology must be present, un	less disturbed
Thick Dark	Surface (A12)		Deple	eted Dark S	Surface (F7)			problematic.	
	cky Mineral (S1)	52)	Redo	x Depressi	ons (F8)				
_	y Peat or Peat (/er (if observed)								
Type:						Hyd	ric Soil Pı	resent? Ye	es No
Depth (inc	hes): <u></u>								
emarks:									
emarks:	Υ							Secondary Indicators (minimum of two) required)
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Project/Site: Lemon Hill	City/Cou	untv: Farmington/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	_ 01197000		: MN Sampling Point: adp14
Investigator(s): Maddie Humphrey	Section		
			ef (concave, convex, none): none
· · · · · · · · · · · · · · · · · · ·		Long: -92.33281	Datum: WGS 84
Soil Map Unit Name: 472C: Channahon loam, 6 to 12 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar?		(If no, explain in Remarks.)
Are Vegetation 🔪 , Soil , or Hydrology Significantly di	sturbed?		circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally proble			plain any answers in Remarks.)
			•
SUMMARY OF FINDINGS - Attach site map showing	samplir	ng point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		In the Compled Area	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate report.			
At ws06 in a recently planted soybean field. VEGETATION - Use scientific names of plants.			
		Dominant Indicator	
(% Cover	Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2. 3.			
4.			Total Number of Dominant Species Across All Strata: 0 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species0 x1 =0
			FAC species0 x1 =0
5	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft			UPL species0 x1 =0
1			Column Totals: $0 x1 = 0 (B)$
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
10.			sheet)
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybean			

ofile Des	cription: (Describe t Matrix	to the depth		u <mark>ment the</mark> Redox Feati		r confirm	the absen	nce of indicators.)	
Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR - 3/3	100	/				SiL		
								- -	
pe: C=C	oncentration, D=Dep		 educed Matrix, M	MS=Masked	 I Sand Grai	 ns. ² l	 _ocation: F	PL=Pore Lining, M=Matrix.	
	Indicators:		·					Indicators for Problematic Hydric Soils ³	B:
	l (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)	
	Epipedon (A2) undefi	ned		y Redox (S	•			Dark Surface (S7)	
•	listi (A3) undefined			oed Matrix (Iron-Manganese Masses (F12)	
-	en Sulfide (A4)			y Mucky M				Very Shallow Dark Surface (TF12)	
_	d Layers (A5)			y Gleyed N	` '			Other (Explain in Remarks)	
_	luck (A10)	- (444)		eted Matrix	` '			³ Indicators of hydrophytic vegetation a	and we
	ed Below Dark Surface	;e (A11)		x Dark Sur				hydrology must be present, unless d problematic.	isturbe
-	Oark Surface (A12)				Surface (F7)			p. co.c.	
-	Mucky Mineral (S1) lucky Peat or Peat (S	S3)	Redu	x Depression	ulis (F6)				
trictive	Layer (if observed)	:							
Type:	<u> </u>					Hyd	ric Soil Pr	resent? Yes	No _
Depth marks:	(inches): <u></u>					<u>_</u> _			
	(inches): <u></u>								
marks:	ogy								
marks: DROLO	DGY rdrology Indicators:		shook all that on	ant A				Secondary Indicators (minimum of two requi	ired)
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DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table	rectors (minimum of contents) ater table (A2) ater table (A2) ater table (A2) ater table (B3) ater tactors (B4) ater tactors (B4) posits (B5) ater tactors (B5) ater tactors (B5) ater tactors (B5) ater tactors (B6) ater table (A2) ater tab	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained leadic fauna (B: aquatic planagen sulfide ed rhizosphance of redunt iron reduction with surface or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) di soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2)))
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table uration F	rdrology Indicators: cators (minimum of or e water (A1) ater table (A2) ion (A3) marks (B1) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in dy vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained leadic fauna (B: aquatic planagen sulfide ed rhizosphance of redunt iron reduction with surface or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) di soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obsel face Wat ter Table uration F eludes ca	rectors (minimum of contents) ater table (A2) ater table (A2) ater table (A2) ater table (B3) ater tactors (B4) ater tactors (B4) posits (B5) ater tactors (B5) ater tactors (B5) ater tactors (B5) ater tactors (B6) ater table (A2) ater tab	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6) wetl	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel dd Obsel face Wat ter Table uration F ludes ca	rdrology Indicators: cators (minimum of context (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in the context (B4) posits (B5) ion visible on aerial in the context (B4) provided to the context (B4) pro	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6) wetl	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
PROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Water Table uration F ludes ca	rdrology Indicators: cators (minimum of context (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in the context (B4) posits (B5) ion visible on aerial in the context (B4) provided to the context (B4) pro	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6) wetl	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obsel face Wat ter Table uration F eludes ca	rdrology Indicators: cators (minimum of context (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in the context (B4) posits (B5) ion visible on aerial in the context (B4) provided to the context (B4) pro	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6) wetl	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power				: MN Sampling Point: adp15
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: S	12 T107N S013W
Lanform(hillslope, terrace, etc): Sideslope			Local relie	ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08697		Long: -92.	33426	Datum: WGS 84
Soil Map Unit Name: 472C: Channahon loam, 6 to 12 percent slopes				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(II	f needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	a campli	ina noint	location	e transacte important foatures etc
			location	s, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No			ampled Area	
Wetland Hydrology Present? Yes No		within a	Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate report At ws05 in recently planted soybean field. VEGETATION - Use scientific names of plants.	ort.)			
		Dominant Species?		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1.		Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That
	0%	= Total Cov	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. 2.				Total % Cover of: Multiply by:
3				OBL species0 x1 =0
4.		-		FACW species 0 x1 = 0
5				FAC species 20 x1 = 60
	0%	= Total Cov	ver	FACU species 10 x1 = 40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	it)	UPL species 0 x1 = 0
Poa pratensis, Kentucky Blue Grass	15%	yes	FAC	Column Totals: $30 \text{ x1} = 100 \text{ (B)}$
2. Acer negundo , Ash-Leaf Maple	5%	no	FAC	Prevalence Index = B/A = 3.333
Asclepias syriaca, Common Milkweed		no	FACU	Hydrophytic Vegetation Indicators:
4. Arctium minus, Lesser Burrdock	5%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.		-		
	30%	= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes✓_ No
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybeans.				

OIL								Sample Point: <u>ac</u>
Profile Des	cription: (Describe Matrix	to the depth		ument the Redox Feat		or confirm	the abse	nce of indicators.)
Depth						12	Taxatum	Damarka
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	
0-8	10YR - 3/3	100	/				SiL	
							-	
Tuno: C-C	oncentration, D=Dep	lation DM=D	aduand Matrix A		d Cond Croi	2 ₁		 PL=Pore Lining, M=Matrix.
	Indicators:	iletion, Rivi–Ri	educed Mairix, IV	IS-IVIASKEU	J Sanu Grai	IIIS. L	Lucation. I	
-	l (or Histel) (A1) un	defined	Sand	y Gleyed M	√atrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	pipedon (A2) undet			y Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)
2 cm M	luck (A10)		Deple	eted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetla
	ed Below Dark Surfa	ce (A11)		x Dark Sur				hydrology must be present, unless disturbed problematic.
	Park Surface (A12)				Surface (F7))		рговетанс.
	Mucky Mineral (S1) lucky Peat or Peat (S3)	Redo	x Depressi	ons (F8)			
_	Layer (if observed)	-						
Type:	Rock					Hydi	ric Soil P	resent? Yes No
Depth	(inches): <u>8</u>							
YDROLO	GY							
_	drology Indicators							Secondary Indicators (minimum of two required)
	cators (minimum of	one required;		oply) -stained lea				Surface soil cracks (B6)
	e water (A1) ater table (A2)			ic fauna (B	` ,			Drainage patterns (B10) Dry-season water table (C2)
_ `	ion (A3)		·	aquatic plar				Crayfish burrows (C8)
	narks (B1)			gen sulfide				✓ Saturation visible on aerial imagery (C9)
	ent deposits (B2)			-	heres along	living roots	s (C3)	Stunted or stressed plants (D1)
	posits (B3)		Prese	nce of redu	uced iron (C	(4)		Geomorphic position (D2)
Algal m	at or crust (B4)				ction in tille)	FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	nuck surfac	ce (C7)			
Inundat	ion visible on aerial	imagery (B7)	Gauge	e or well da	ata (D9)			
Sparsel	ly vegetated concav	e surface (B8)	Other	(Explain in	Remarks)			
ield Obser	rvations:							
	ter Present?	Yes		Depth (incl		— I		
Water Table			No			Wetl	and Hydi	rology Present? Yes No•
Saturation P includes ca	resent? pillary fringe)	Yes	No	Depth (Inci	nes): <u></u>			
	ecorded Data (strear	n gauge, mon	itoring well, aeria	al photos, p	orevious ins	pections), if	f available):
Remarks:								

Project/Site: Lemon Hill	Citv/Co	ounty: Farming	aton/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			State	
Investigator(s): Maddie Humphrey	Sect			
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08261		_ Long: -92.3	3708	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes		NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes	No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are	"Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
_				
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point l ⊤	ocation	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the San	noled Area	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		within a W		Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate repo				
Depressional swale adjacent 58th St NE.	,			
VEGETATION - Use scientific names of plants.				
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant I Species?	Indicator Status	Dominance Test Worksheet
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That
	0%	= Total Cove	r	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
3.				OBL species 0 x1 = 0
4.				FACW species 5 x1 = 10
5				FAC species <u>95</u> x1 = <u>285</u>
	0%	= Total Cove	er	FACU species 2 x1 = 8
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)		UPL species <u>5</u> x1 = <u>25</u>
Poa pratensis, Kentucky Blue Grass	95%	yes	FAC	Column Totals: 107
2. <u>Pastinaca sativa</u> , Wild parsnip		no	UPL	Prevalence Index = B/A = 3.065
3. <u>Phalaris arundinacea</u> , Reed Canary Grass			FACW	Hydrophytic Vegetation Indicators:
4. <u>Cirsium arvense</u> , Canadian Thistle			FACU	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7. 8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	107%	= Total Cove	r	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				Hydrophytic Vegetation
	0%	= Total Cove	r	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Wild parsnip				

ofile Des	cription: (Describe t Matrix	to the depth		<mark>ument the</mark> Redox Featı		r confirm	the absen	ce of indicators.)	
Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	arks
0-12	10YR - 3/2	100	/				SiL		
pe: C=C	oncentration, D=Depl	 letion, RM=R	 educed Matrix, N	MS=Masked	 I Sand Grai	 ns. ² I	 Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problematic	Hydric Soils ³ :
•	ol (or Histel) (A1) und			ly Gleyed M				Coast Prairie Redox (A.	16)
-	Epipedon (A2) undefi	ned		ly Redox (S	•			Dark Surface (S7)	
_	Histi (A3) undefined			oed Matrix (Iron-Manganese Masse	s (F12)
-	en Sulfide (A4)			ny Mucky M				Very Shallow Dark Surfa	ace (TF12)
_	ed Layers (A5)			ny Gleyed N	` '			Other (Explain in Rema	rks)
_	luck (A10)	(0.4.4)		eted Matrix	` '			³ Indicators of hydrophyt	ic vegetation and we
	ed Below Dark Surfac	;e (A11)		ox Dark Sur				hydrology must be pre problematic.	sent, unless disturbe
-	Oark Surface (A12)				Surface (F7)			F	
-	Mucky Mineral (S1) lucky Peat or Peat (S	33)	Redu	x Depression	ulis (F6)				
trictive	Layer (if observed):	:							
Type:						Hyd	ric Soil Pr	esent?	Yes No _
Depth marks:	(inches):								
•	(inches): <u></u>								
marks:	OGY					_			
marks: DROLO	DGY rdrology Indicators:		cheek all that or	anh)				Secondary Indicators (minimu	m of two required)
PROLO	OGY vdrology Indicators:				aves (RQ)			Surface soil cracks (B6)	m of two required)
PROLO tland Hy mary Indi _Surface	OGY rdrology Indicators: icators (minimum of ce water (A1)		Water	-stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	
PROLO tland Hy nary Indi Surface High wa	ody rdrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water Aquat	-stained lea ic fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (0	
PROLO tland Hy mary Indi Surface High wa Saturat	oddy Indicators: Ideators (minimum of compared (A1) Indicators (A2) Indicators (A3)		Water Aquati True a	-stained lea ic fauna (B: aquatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	C2)
PROLO tland Hy nary Indi Surface High wa Saturat Water r	ordrology Indicators: icators (minimum of compared (A1) atter table (A2) ion (A3) marks (B1)		Water-Aquati True a Hydro	-stained lea ic fauna (Ba aquatic plan gen sulfide	13) nts (B14) odor (C1)	living roots		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aeria	C2) al imagery (C9)
PROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water Aquati True a Hydro Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeria	C2) al imagery (C9) s (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water Aquati True a Hydro Oxidiz Prese	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Comparison of the comparison of the compariso	C2) al imagery (C9) s (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water Aquati True a Hydro Oxidiz Prese	r-stained lea ic fauna (B. aquatic plan gen sulfide zed rhizosph nce of redu nt iron reduc	nts (B14) odor (C1) heres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeria	C2) al imagery (C9) s (D1)
PROLO Iland Hy nary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	ordrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required;	Water Aquati True a Hydro Oxidiz Prese Recer	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Comparison of the comparison of the compariso	C2) al imagery (C9) s (D1)
PROLO Island Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required;	Water Aquati True a Hydro Oxidiz Presei Recer Thin n	r-stained leadic fauna (B: aquatic planagen sulfide ted rhizosphance of reduction reduction reduction reduction reduction facility and surfaction reduction facility	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Comparison of the comparison of the compariso	C2) al imagery (C9) s (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	pogy Indicators: Ideators (minimum of context) Ideators (minimum of context) Ideator (A1) Ideator (A2) Ideator (A3) Ideator (A3) Ideator (B4) Ideator (B4) Ideator (B4) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B6) Ideat	one required;	Water Aquati True a Hydro Oxidiz Presei Recer Thin n	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu nt iron reduc muck surfac e or well da	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Comparison of the comparison of the compariso	C2) al imagery (C9) s (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	pogy Indicators: Ideators (minimum of content of conte	imagery (B7) e surface (B8	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge) No	-stained lea ic fauna (B: aquatic plan gen sulfide ced rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table	pogy Indrology Indicators: Ideators (minimum of of extra table (A2) Ideator (A3) Indrology Indicators: Ideators (minimum of of extra table (A2) Ideator (A3) Ideator (A3) Ideator (B4) Ideator (B4) Ideator (B4) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B6) Ide	imagery (B7) e surface (B8 Yes Yes	Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Comparison of the comparison of the compariso	C2) al imagery (C9) s (D1)
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Project/Site: Lemon Hill	City/Co	unty: Farmi	naton/Olmst	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	0.0,700	-		e: MN Sampling Point: adp17
Investigator(s): Maddie Humphrey	Secti			
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08552				• • • • • • • • • • • • • • • • • • • •
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of ye	ar?	Y	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly d	isturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally probl	lematic?			plain any answers in Remarks.)
<u> </u>				
SUMMARY OF FINDINGS - Attach site map showing	sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No _		lo the Co	ampled Area	
Hydric Soil Present? Yes ✓ No _			ampled Area Wetland?	Yes_ ✓ No
Wetland Hydrology Present? Yes No Remarks: (Explain alternative procedures here or in a separate report				
Depression adjacent stream wetland fringe	,			
VEGETATION - Use scientific names of plants.				
		Dominant Species?		Dominance Test Worksheet
1.				Number of Dominant Species That
2				Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species
4				Across All Strata:1 (B)
5	0%	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species10 x1 =10
3				FACW species85 x1 =170
5.				FAC species0 x1 =0
	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft	square (1	-m²) quadra	ıt)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	80%	yes	FACW	Column Totals: $95 \times 1 = 180 $ (B)
2. Angelica atropurpurea, Purple-Stem Angelica	10%	no	OBL	Prevalence Index = B/A = 1.895
3. Impatiens capensis, Spotted Touch-Me-Not	5%	no	FACW	Hydrophytic Vegetation Indicators:
4				✓ 1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
10.				sheet)
		= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				<u></u>

SOIL Sample Point: adp17

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-19	10YR - 2/1	100	/				SiL	
19-26	2.5/	100	/				SiL	Gley 1 2.5 N
Type: C=C	concentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grair	ns. 2	Location: PL	=Pore Lining, M=Matrix.
-	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	ol (or Histel) (A1) un o	defined		y Gleyed N				Coast Prairie Redox (A16)
	Epipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)
	Histi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
_ ′ ′	gen Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)
_	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)
_	Muck (A10)	(0.4.4)		ted Matrix				³ Indicators of hydrophytic vegetation and wetlar
_ ·	ed Below Dark Surfa	ce (AII)		x Dark Sur				hydrology must be present, unless disturbed of problematic.
	Dark Surface (A12)				Surface (F7)			p. 100.100.
	Mucky Mineral (S1) Mucky Peat or Peat (53)	Redo.	x Depressi	ulis (Fö)			
	Layer (if observed)							
Type:		•				Hvd	ric Soil Pres	sent? Yes ✓ No
						_ ,.		
Deptn Remarks:	(inches): <u></u>					_		
						_		
Pemarks:	OGY ydrology Indicators:						<u>s</u>	econdary Indicators (minimum of two required)
rimary Ind	OGY ydrology Indicators: icators (minimum of			• • •		_	<u>s</u>	Surface soil cracks (B6)
Pemarks: /DROLC Vetland Hy Primary Ind Surface	OGY ydrology Indicators: icators (minimum of of the water (A1)		Water-	stained lea	` ,		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)
Pemarks: POROLO Vetland Hy Primary Ind Surface High w	OGY ydrology Indicators: icators (minimum of ee water (A1) rater table (A2)		Water- Aquati	stained lea c fauna (B	13)	_	<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Pemarks: Primary Ind Surface High w Saturat	ody ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3)		Water- Aquati True a	stained lea c fauna (B quatic plar	13) nts (B14)	_	<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Pemarks: Property Ind Surface High w Saturat Water I	ydrology Indicators: icators (minimum of e e water (A1) rater table (A2) tion (A3) marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Pemarks: Primary Ind Surface High w Saturat Water I Sedime	orgy Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroţ Oxidiz	estained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Ind Surface High w Saturat Water I Sedime	ydrology Indicators: icators (minimum of e e water (A1) rater table (A2) tion (A3) marks (B1)		Water-Aquati True a Hydrog Oxidiz	stained lead c fauna (Buquatic plan gen sulfide ed rhizosparce of reduces	13) nts (B14) odor (C1)	1)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
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Pemarks: Primary Ind Surface High w Saturat Water I Sedime Algal m Iron de	ody ydrology Indicators: icators (minimum of ele water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen	estained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	1)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Pemarks: Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surface e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	1)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Pemarks: Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de	pogy ydrology Indicators: icators (minimum of ele water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surface e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	1)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Verland Hy rimary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inunda: Sparse	pogy ydrology Indicators: icators (minimum of ele water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave	one required imagery (B7 e surface (B	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	1)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Verland Hy rimary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inunda: Sparse	pogy ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: tter Present?	imagery (B7	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge 8) Other	estained lead of care fauna (Buguatic plan gen sulfide ged rhizospince of redutiron redunuck surface or well da (Explain in Depth (inc	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	1) C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Permarks: Property of the pro	pdrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present?	imagery (B7 e surface (B Ye Ye	Water- Aquati — True a — Hydroq Oxidiz — Preser — Recen — Thin m Other S No S No No No	stained lead of a control of a	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inunda: Sparse Surface Wa Vater Table Saturation F Includes ca	pogy ydrology Indicators: icators (minimum of ele water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present? expillary fringe)	imagery (B7 e surface (B Ye Ye		stained lead of a control of a	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp18
Investigator(s): Maddie Humphrey	Secti	ion, Township, Range: S	12 T107N S013W
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08554			Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)
——————————————————————————————————————	bicinatic:	(ii fiecaca, ex	plant any answers in remarks.
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No		Is the Sampled Area	
Hydric Soil Present? Yes <u>✓</u> No		within a Wetland?	Yes No 🗸
Wetland Hydrology Present? Yes No	<u> </u>		
Side slope above wetland fringe VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species
5			Across All Strata: 1 (B) Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of:Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5			FAC species <u>95</u> x1 = <u>285</u>
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species 0 x1 = 0
Poa pratensis, Kentucky Blue Grass	95%	yes FAC	Column Totals: $95 \text{ x1} = 285 \text{ (B)}$
2			Prevalence Index = B/A = 3.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7			
8		·	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10		Tatal Oanan	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	cription: (Describe t Matrix			Redox Feat			ane absent	o or maioatorsiy	
nches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Ren	narks
)-12		100	/				SiL	Gley 1 2.5 N	
								-	
oe: C=C	concentration, D=Depl	etion, RM=R	educed Matrix, M	1S=Masked	Sand Grai	ns. ² l	Location: PL	=Pore Lining, M=Matrix.	
	Indicators:			01 11				Indicators for Problematic	Hydric Soils ³ :
	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A	16)
	Epipedon (A2) undefi	nea		y Redox (S	-			Dark Surface (S7)	
•	Histi (A3) undefined gen Sulfide (A4)			oed Matrix (ny Mucky M	•			Iron-Manganese Masse	. ,
. , ,	ed Layers (A5)			iy Mucky M iy Gleyed N	` '			Very Shallow Dark Surf	
	Muck (A10)			eted Matrix	` '			Other (Explain in Rema	•
•	ed Below Dark Surfac	`e (A11)		x Dark Sur	` '			³ Indicators of hydrophy hydrology must be pre	rtic vegetation and we
	Dark Surface (A12)	(, (, , , , , , , , , , , , , , , , , ,			Surface (F7)			problematic.	coont, amess distance
•	Mucky Mineral (S1)			x Depression					
	Mucky Peat or Peat (S	S3)			- (- /				
trictive	Layer (if observed):	:							
Type:						Hyd	ric Soil Pre	sent?	Yes _ 🗸 No _
Donth	(inchoc):								
Depth marks:	(inches): <u></u>								
marks:									
narks:	DGY							Secondary Indicators (minimu	um of two required)
PROLC	OGY ydrology Indicators:		check all that an	nnlvì			<u>s</u>	Secondary Indicators (minimu Surface soil cracks (B6)	ım of two required)
PROLO	DGY				aves (B9)		<u>s</u>	Surface soil cracks (B6)	ım of two required)
PROLO tland Hy nary Indi Surface	OGY ydrology Indicators: icators (minimum of c		Water-	-stained lea	. ,		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)	
PROLO Iland Hy nary Indi Surface High wa	OGY ydrology Indicators: icators (minimum of ce water (A1)		Water- Aquati		13)		<u>§</u>	Surface soil cracks (B6)	
PROLC tland Hy mary Indi Surface High w Saturat	OGY ydrology Indicators: icators (minimum of ce water (A1) rater table (A2)		Water- Aquati True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
PROLO Itland Hy mary Indi Surface High w Saturat Water r	oddy ydrology Indicators: icators (minimum of ce e water (A1) rater table (A2) tion (A3)		Water- Aquati True a Hydrog	-stained lea ic fauna (Ba aquatic plan gen sulfide	13) nts (B14)	living roots	= - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8)	C2) ial imagery (C9)
PROLO Itland Hy mary Indi Surface High w Saturat Water r Sedime	oddy ydrology Indicators: icators (minimum of compared to the water (A1) reater table (A2) tion (A3) marks (B1)		Water- Aquati True a Hydroq Oxidiz	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph	13) nts (B14) odor (C1)	•	= - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri	C2) ial imagery (C9) ts (D1)
PROLO tland Hy nary Indi Surface High w Saturat Water r Sedime	orgy ydrology Indicators: icators (minimum of compared (A1) rater table (A2) tition (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroo Oxidiz Preser	estained leadic fauna (B. aquatic planagen sulfide led rhizosphane of redu	13) nts (B14) odor (C1) heres along	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan	C2) ial imagery (C9) ts (D1)
PROLO tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m	ody ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquati True a Hydro Oxidiz Preser Recen	estained leadic fauna (B. aquatic planagen sulfide led rhizosphane of redu	nts (B14) odor (C1) heres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) ial imagery (C9) ts (D1)
PROLO Iland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	or ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required;	Water- Aquati True a Hydro Oxidiz Preser Recen Thin m	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduc	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) ial imagery (C9) ts (D1)
PROLCIANT INTERPOLATION INTO THE PROLCIANT INTO THE PROCIANT INTO THE PROLCIANT INTO THE	ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required;	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu it iron reduct	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) ial imagery (C9) ts (D1)
PROLO Iland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in the programment of the posits (B5) exposits (B5) tion visible on aerial in the programment of the programment of the posits (B5) exposits (B5)	imagery (B7)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduct nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) ial imagery (C9) ts (D1)
PROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pdGY pdrology Indicators: icators (minimum of content	imagery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plant gen sulfide ed rhizosph nce of redu at iron reduct nuck surfact or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) fial imagery (C9) ts (D1)
PROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obsel face Water Table	pdrology Indicators: icators (minimum of content of con	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No	stained leadic fauna (B: aquatic planagen sulfide ed rhizosphance of redunt iron reduction with surface or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) ial imagery (C9) ts (D1)
PROLO tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse dd Obser face Water Table uration F	pogy ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial i ely vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic planagen sulfide ed rhizosphance of redunt iron reduction with surface or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) fial imagery (C9) ts (D1)
PROLC tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obsel face Water Table uration F	pdrology Indicators: icators (minimum of content of con	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge) Other No ✓ No ✓	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3) - - s (C3) -)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) fial imagery (C9) ts (D1)
PROLO Idand Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obser face Water Table uration F ludes ca	pdGY pdrology Indicators: icators (minimum of context) e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) mat or crust (B4) eposits (B5) tion visible on aerial in ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge) Other No ✓ No ✓	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3) - - s (C3) -)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) fial imagery (C9) ts (D1)
PROLC tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obsel face Water Table uration F	pdGY pdrology Indicators: icators (minimum of context) e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) mat or crust (B4) eposits (B5) tion visible on aerial in ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge) Other No ✓ No ✓	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphence of reduction reducti	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3) - - s (C3) -)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) fial imagery (C9) ts (D1)

Project/Site: Lemon Hill	Citv/Co	untv: Olmst	ed County	Sa	ampling Date: 20)24-05-29
Applicant/Owner: Ranger Power				: <u>MN</u> Sa		
Investigator(s): Maddie Humphrey					pg	•
				ef (concave, convex, none	e): concave	
Slope(%): 3-7 Lat: 44.08624		Long: -92.	33713	Datum: WGS 84		
Soil Map Unit Name: 468: Otter silt loam, channeled		С				
Are climatic / hydrologic conditions on the site typical for this time of	year?	Ye	es 🗸 No	NWI classification: PEM1B, R4SBC (If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology Significantly	/ disturbed?	Aı	re "Normal C	 Circumstances" present?	Yes No	
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			plain any answers in Rem		
_						
SUMMARY OF FINDINGS - Attach site map showing	ıg sampli	ng point	location	s, transects, impor	tant feature	es, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		la tha Ca				
Hydric Soil Present? Yes No No No No No No No No No N			ampled Area Wetland?	L	Yes_	✓ No
Wetland Hydrology Present? Yes <u>✓</u> No						
Remarks: (Explain alternative procedures here or in a separate rep Wetland fringe of stream	ort.)					
Would have a discussion						
VEGETATION - Use scientific names of plants.						
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test Work	sheet	
1				Number of Dominant Sp		2 (1)
2				Are OBL, FACW, or FA	<u>_</u>	<u>2</u> (A)
3				Total Number of Domina Across All Strata:	ant Species	<u>2</u> (B)
5.						<u></u>
5		= Total Cov	/er	Percent of Dominant Sp Are OBL, FACW, or FA		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	Total Co.	• • • • • • • • • • • • • • • • • • • •	Prevalence Index work	ksheet:	
Phalaris arundinacea, Reed Canary Grass	90%	yes	FACW			Mark a basis
2. Carex trichocarpa, Hairy-Fruit Sedge	000/	yes	OBL	Total % Cover of:		tiply by:
3.					30 x1 = 90 x1 =	
4				FACW species FAC species	$\frac{90}{0}$ x1 = $\frac{0}{1}$	
5				FACU species		
		= Total Cov		UPL species	$\frac{0}{0}$ x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1	-m²) quadra	it)	Column Totals:	120 x1 =	
1.					ndex = B/A =	
2					-	
3. 4.				Hydrophytic Vegetatio	n indicators:	
5.				✓ 1 - Rapid Test for	, , , ,	jetation
6.				✓ 2 - Dominance Tes		
7				✓ 3 - Prevalence Ind	ex is <= 3.0 ¹	
8				4 - Morphological <i>i</i> supporting data in	Adaptations ¹ (Pr	rovide
9				sheet)	Remarks of on	a separate
10				PROBLEMATIC H	ydrophytic Veget	tation ¹ (Explain)
	0%	= Total Cov	ver	¹ Indicators of hydri	c soil and wetlar	nd hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be present,		
1.				Hydrophytic		
2		= Total Cov	/er	Vegetation Present?	Yes	_ ✓ _ No
Demonto (Includo abete ausabere bare or on a consuste abeet)						
Remarks: (Include photo numbers here or on a separate sheet.)						

ofile Desc	cription: (Describe t Matrix	to the depth		u <mark>ment the</mark> Redox Featı		r confirm	the abser	nce of indicators.)	
Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	: R	emarks
0-24	10YR - 2/1	100	/				SiL		
								_	
pe: C=Co	oncentration, D=Depl	letion, RM=R	educed Matrix, M	MS=Masked	Sand Grai	ns. ² l	 Location: F	PL=Pore Lining, M=Matrix.	
Iric Soil	Indicators:							Indicators for Problema	tic Hydric Soils ³ :
_	I (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox	(A16)
-	pipedon (A2) undefi	ned		y Redox (S	•			Dark Surface (S7)	
_	listi (A3) undefined			oed Matrix (•			Iron-Manganese Ma	sses (F12)
_	en Sulfide (A4)			ny Mucky M	` '			Very Shallow Dark S	
_	d Layers (A5)			ny Gleyed N				Other (Explain in Re	marks)
_	luck (A10)			eted Matrix	` '			³ Indicators of hydrop	hytic vegetation and we
- '	ed Below Dark Surfac	e (A11)		x Dark Sur				hydrology must be problematic.	present, unless disturbe
_	ark Surface (A12)				Surface (F7)			problematic.	
-	Mucky Mineral (S1) lucky Peat or Peat (S	53)	Redo	x Depression	ons (F8)				
•	Layer (if observed)	-							
Type:	Pipe					Hydi	ric Soil Pı	resent?	Yes <u>✓</u> No _
marks:	(inches): <u>24</u> Iric soil due to prese	nce of hydro	ohytic vegetation	and hydrol	ogy indicato	ors.			
marks: sume hyd	dric soil due to prese	nce of hydro	phytic vegetation	and hydrol	ogy indicato	ors.			
marks: sume hyd	Iric soil due to preser		phytic vegetation	and hydrol	ogy indicato	ors.			
marks: sume hyd	dric soil due to present				ogy indicato	ors.		Secondary Indicators (mini	
DROLO tland Hy	oGY drology Indicators:		check all that ap	oply)		ors.		Surface soil cracks (B	6)
narks: nume hyd PROLO tland Hy mary India	oGY drology Indicators: cators (minimum of cators (A1)		check all that ap	oply) -stained lea	aves (B9)	ors.		Surface soil cracks (B Drainage patterns (B1	6) 0)
PROLO tland Hy mary India Surface High wa	PGY drology Indicators: cators (minimum of coorse water (A1) ater table (A2)		check all that ap Water- Aquati	oply) -stained lea ic fauna (B:	aves (B9)	ors.		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl	6) 0)
PROLO tland Hy mary India Surface High wa	oGY drology Indicators: cators (minimum of compared (A1) ater table (A2) ion (A3)		check all that ap Water- Aquati True a	oply) -stained lea ic fauna (B: aquatic plan	aves (B9) 13) nts (B14)	ors.		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8)	6) 0) e (C2)
PROLO tland Hy mary India Surface High wa Saturati Water n	order (A1) eater table (A2) ion (A3) marks (B1)		check all that ap Water- Aquati True a	oply) -stained lea ic fauna (B: aquatic plan gen sulfide	aves (B9) 13) nts (B14) odor (C1)		s (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a	6) 0) e (C2) erial imagery (C9)
PROLO tland Hy nary India Surface High wa Saturati Water n Sedime	order (A1) atter table (A2) ion (A3) marks (B1) int deposits (B2)		check all that ap Water- Aquati True a Hydrog Oxidiz	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph	aves (B9) 13) nts (B14) odor (C1) heres along	living roots	s (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed p	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) mort deposits (B2) posits (B3)		check all that ap Water- Aquati True a Hydrog Oxidiz Preser	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu	aves (B9) 13) hts (B14) odor (C1) heres along iced iron (C	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m	dric soil due to present dric soil due to present drices and the present drices are table (A2) ion (A3) marks (B1) ion the deposits (B2) posits (B3) inat or crust (B4)		check all that ap Water- Aquati True a Hydrog Oxidiz Preser	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu at iron reduce	aves (B9) 13) nts (B14) odor (C1) heres along aced iron (C	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed p	6) 0) e (C2) erial imagery (C9) ants (D1)
PROLO Iland Hy nary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep	drology Indicators: cators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) mit deposits (B2) posits (B3) mat or crust (B4) posits (B5)	one required;	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tilled	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
PROLO Itland Hy mary Indio Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati	dric soil due to present dric soil due to present drices and the present drices are table (A2) ion (A3) marks (B1) ion the deposits (B2) posits (B3) inat or crust (B4)	one required;	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu at iron reduce	aves (B9) 13) nts (B14) odor (C1) heres along aced iron (C ction in tilled	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel	dric soil due to present description of the second of the	one required;	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	oply) -stained lea ic fauna (B: aquatic plan gen sulfide ted rhizosph nce of redu nt iron reduc	aves (B9) 13) nts (B14) odor (C1) heres along aced iron (C ction in tilled	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary Indio Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel	dric soil due to present description of the second of the	one required; imagery (B7) e surface (B8)	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc nuck surfac e or well da (Explain in	aves (B9) 13) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	living roots 4)		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary Indio Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	drology Indicators: cators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) mut deposits (B2) posits (B3) mat or crust (B4) posits (B5) ion visible on aerial in y vegetated concave	one required; imagery (B7) e surface (B8)	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc nuck surfac e or well da (Explain in	aves (B9) 13) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	living roots 4) d soils (C6))	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) erial imagery (C9) ants (D1)
DROLO tland Hy mary India Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel Id Obser face Wat ter Table uration P	dric soil due to present description of the water (A1) attent table (A2) attent table (B1) attent table (B2) posits (B3) attent table (B4) posits (B5) attent table (B5) atten	one required; imagery (B7) e surface (B8) Yes Yes	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc nuck surfac e or well da (Explain in Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller ce (C7) ta (D9) Remarks) hes): hes):	living roots 4) d soils (C6))	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) erial imagery (C9) ants (D1) D2)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Id Obser face Wat ter Table uration P	dric soil due to present of the control of the cont	imagery (B7) e surface (B8) Yes Yes Yes	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained leadic fauna (B: aquatic plan gen sulfide lead rhizosphance of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)) land Hydr	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) erial imagery (C9) ants (D1) D2)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Id Obser face Wat ter Table uration P	dric soil due to present description of the water (A1) attent table (A2) attent table (B1) attent table (B2) posits (B3) attent table (B4) posits (B5) attent table (B5) atten	imagery (B7) e surface (B8) Yes Yes Yes	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained leadic fauna (B: aquatic plan gen sulfide lead rhizosphance of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)) land Hydr	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) erial imagery (C9) ants (D1) D2)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ter Table uration P ludes cal	dric soil due to present of the control of the cont	imagery (B7) e surface (B8) Yes Yes Yes	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained leadic fauna (B: aquatic plan gen sulfide lead rhizosphance of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)) land Hydr	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) erial imagery (C9) ants (D1) D2)
DROLO tland Hy mary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel dd Obser face Wat ter Table uration P ludes cal	dric soil due to present of the control of the cont	imagery (B7) e surface (B8) Yes Yes Yes	check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge) Other	oply) -stained leadic fauna (B: aquatic plan gen sulfide lead rhizosphance of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)) land Hydr	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) erial imagery (C9) ants (D1) D2)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmst	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	Oity/00	-	e: MN Sampling Point: adp20
Investigator(s): Maddie Humphrey	Secti		
Lanform(hillslope, terrace, etc): Sideslope			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08622			, , , , , , , , , , , , , , , , , , , ,
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1B, R4SBC
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?		o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro			rplain any answers in Remarks.)
	Diomidio.	(plan any anonoro in resimance,
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No			
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	a. Yes No_ ✓ _
Wetland Hydrology Present? Yes No		within a wettand:	163 100
Remarks: (Explain alternative procedures here or in a separate repo	ort.)		
Upslope 1-foot of adp19.			
VEGETATION - Use scientific names of plants.			
Tree Chartery (Diet sire) 20 ft (0.1 m) undiver		Dominant Indicator Species? Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species? Status	
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3.			Total Number of Dominant Species
4.			Across All Strata: 2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 50 x1 = 50
3			FACW species 30 x1 = 60
4			FAC species 0 x1 = 0
5			FACU species 10 x1 = 40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	0% ft aguara (1	= Total Cover	UPL species 10
Carex trichocarpa, Hairy-Fruit Sedge	F00/	yes OBL	Column Totals: 100 x1 = 200 (B)
Phalaris arundinacea, Reed Canary Grass	20%	yes FACW	Prevalence Index = B/A = 2.000
Impatiens capensis, Spotted Touch-Me-Not	100/		Hydrophytic Vegetation Indicators:
Pastinaca sativa, Wild parsnip	10%	no UPL	
5. Rubus idaeus, Common Red Raspberry	5%	no FACU	✓ 1 - Rapid Test for Hydrophytic Vegetation
6. Cirsium arvense, Canadian Thistle	5%	no FACU	✓ 2 - Dominance Test is > 50%
7			✓ 3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	100%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
	0%	= Total Cover	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

OIL								Sample Point: <u>ad</u>
Profile Des	cription: (Describe	to the depth				or confirm	the abse	ence of indicators.)
Depth	Matrix (mariet)			Redox Feat		. 2		5
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	re Remarks
0-21	10YR - 2/1	100	/				SiL	
	concentration, D=Dep		Seduced Matrix A	10-Maskor	- Cond Crai	2	' contion:	PL=Pore Lining, M=Matrix.
	I Indicators:	JIEUUII, KIVI-N	.educeu Ivianix, ivi	S-IVIASKEU	1 Sanu Gran	IIS. L	_Ocation.	
•	ol (or Histel) (A1) un	defined	Sand [.]	y Gleyed M	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	Epipedon (A2) undef			y Redox (S				Dark Surface (S7)
	Histi (A3) undefined			oed Matrix (•			Iron-Manganese Masses (F12)
Hydrogo	gen Sulfide (A4)		Loam	y Mucky M	Mineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loam	ny Gleyed N	vlatrix (F2)			Other (Explain in Remarks)
	Muck (A10)			eted Matrix				³ Indicators of hydrophytic vegetation and wetla
	ed Below Dark Surfa	ice (A11)		x Dark Sur				hydrology must be present, unless disturbed of problematic.
	Dark Surface (A12)				Surface (F7)	1		problematic.
	Mucky Mineral (S1) Mucky Peat or Peat (S3)	Redu	x Depressi	ons (F8)			
	Layer (if observed)	•						
Type:	Pipe					Hydı	ric Soil P	Present? Yes No
	(inches): 21							
YDROLO)GY							
-	drology Indicators		the state of the tor	. L. A				Secondary Indicators (minimum of two required)
	icators (minimum of e water (A1)	one requireu,		oply) -stained lea	2VAS (R9)			Surface soil cracks (B6) Drainage patterns (B10)
	rater table (A2)			ic fauna (B:	` '			Dry-season water table (C2)
	tion (A3)			aquatic plan				Crayfish burrows (C8)
	marks (B1)		Hydror	gen sulfide	odor (C1)			Saturation visible on aerial imagery (C9)
Sedime	ent deposits (B2)				heres along		s (C3)	Stunted or stressed plants (D1)
Drift de	eposits (B3)		Preser	nce of redu	uced iron (C	:4)		Geomorphic position (D2)
	nat or crust (B4)		Recen	t iron redu	iction in tilled	d soils (C6))	✓ FAC-neutral test (D5)
	eposits (B5)			nuck surfac				
	tion visible on aerial		<u> </u>	e or well da	` '			
Sparsei	ly vegetated concav	e surface (Bo) Otner	(Explain in	Remarks)	<u> </u>		
Field Obser		\/a	NI	- ul- fina	·			
Surface Wat Water Table	ter Present?	Yes	S NO S No	Depth (incl		— Wetl	land Hyd	Irology Present? Yes No _•
Saturation P				Depth (incl			dilu iiya	mology Fresence
	apillary fringe)			D0p ,		_		
Describe Re	ecorded Data (strear	n gauge, mor	nitoring well, aeria	al photos, r	orevious insi	pections), if	f available	e:
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: Farmingt	ton/Olmste	d County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power	0.13700		State:	
Investigator(s): Maddie Humphrey	Secti			
				of (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08576		Long: -92.33	365	Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slopes,	, moderatel			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of you	ear?			(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly (disturbed?	Are	"Normal C	ircumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prob	olematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showing	sampli و	ing point lo	ocations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _		Is the Sam	nled Area	
Hydric Soil Present? Yes NoNo		within a W		Yes No
Wetland Hydrology Present? Yes No _ Remarks: (Explain alternative procedures here or in a separate report				
Slope breaker in agriculture field VEGETATION - Use scientific names of plants.				
		Dominant Ir		Dominance Test Weylsheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status_	Dominance Test Worksheet
2.				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
3				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That
	0%	= Total Cover	- -	Are OBL, FACW, or FAC: 0% (A/E
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species0 x1 =0
5				FAC species $0 \times 1 = 0$
	0%	= Total Cover	-	FACU species $105 \times 1 = 420$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-f	t square (1	m²) quadrat)		UPL species 5 x1 = 25
1. Bromus inermis, Smooth Brome	95%		FACU	Column Totals: $\frac{110}{}$ x1 = $\frac{445}{}$ (E
2. <u>Cirsium arvense</u> , Canadian Thistle	5%		FACU_	Prevalence Index = B/A = 4.045
3. Asclepias syriaca, Common Milkweed			FACU	Hydrophytic Vegetation Indicators:
4. Pastinaca sativa, Wild parsnip			UPL	1 - Rapid Test for Hydrophytic Vegetation
5 6.				2 - Dominance Test is > 50%
7				$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain
	110%	= Total Cover	-	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problemation
1				Hydrophytic
	0%	= Total Cover		Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)				

<u> </u>									
_	iption: (Describe t Matrix	o the depth		Redox Feat		r confirm	the abser	ice of indicators.)	
Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR - 3/3	100	/				SiL		
				-					
								_	
pe: C=Con	centration, D=Depl	etion, RM=F	educed Matrix, I	MS=Masked	 d Sand Grai	ns. ² l	Location: F	PL=Pore Lining, M=Matrix.	
dric Soil In	dicators:							Indicators for Problematic Hydric	Soils ³ :
-	or Histel) (A1) und			dy Gleyed M				Coast Prairie Redox (A16)	
	pedon (A2) undef ii	ned	Sand	dy Redox (S	85)			Dark Surface (S7)	
_ Black Hist	ti (A3) undefined		Strip	ped Matrix ((S6)			Iron-Manganese Masses (F12)	
_ Hydrogen	Sulfide (A4)		Loan	ny Mucky M	lineral (F1)			Very Shallow Dark Surface (TF1	12)
_Stratified	Layers (A5)		Loan	ny Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
2 cm Muc	k (A10)		Depl	eted Matrix	(F3)			³ Indicators of hydrophytic vegeta	ation and we
Depleted	Below Dark Surfac	e (A11)	Redo	ox Dark Sur	face (F6)			hydrology must be present, un	less disturbe
Thick Dar	k Surface (A12)		Depl	eted Dark S	Surface (F7)			problematic.	
	ucky Mineral (S1)		Redo	ox Depressi	ons (F8)				
=	cky Peat or Peat (S	-							
strictive La	ayer (if observed):	1				Hydi	ric Soil Pı	resent? Ye	s No
Type:							116 3011 F1	esent:	.3 110 _
Type: Depth (independent) marks:	ches):								
Depth (in	ches):								
Depth (in	s Y								
Depth (incomparks:	sY rology Indicators:		obsolvall that o					Secondary Indicators (minimum of two	o required)
Depth (incomparks: DROLOG tland Hydr mary Indica	iY rology Indicators: tors (minimum of o	ne required;			nyas (PO)			Surface soil cracks (B6)	o required)
Depth (incomarks: DROLOG tland Hydr mary Indica _ Surface w	ology Indicators: tors (minimum of o	ne required;	Water	r-stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)	o required)
Depth (incomarks: DROLOG tland Hydr mary Indicat Surface w High water	rology Indicators: tors (minimum of orater (A1) er table (A2)	ne required;	Water Aquat	r-stained lea tic fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	o required)
Depth (incomarks: DROLOG tland Hydr mary Indica Surface w High wate Saturation	rology Indicators: tors (minimum of orater (A1) er table (A2) n (A3)	ne required;	Water Aquat True a	r-stained lea tic fauna (Bi aquatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth (incommarks: DROLOG tland Hydr mary Indicat Surface w High wate Saturation Water ma	rology Indicators: tors (minimum of orvater (A1) er table (A2) n (A3) rks (B1)	ne required;	Water Aquat True : Hydro	r-stained lea tic fauna (B: aquatic plan ogen sulfide	13) nts (B14) odor (C1)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image	
DROLOG tland Hydr mary Indica Surface w High wate Saturation Water ma Sediment	cology Indicators: tors (minimum of or vater (A1) er table (A2) n (A3) rks (B1) deposits (B2)	one required;	Water Aquat True a Hydro Oxidiz	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizosph	13) nts (B14) odor (C1) heres along	living roots		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1)	
DROLOG tland Hydr mary Indica Surface w High wate Saturation Water ma Sediment Drift depo	cology Indicators: ators (minimum of of orater (A1) are table (A2) arks (B1) deposits (B2) asits (B3)	one required;	WaterAquatTrue :HydroOxidizPrese	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu	13) hts (B14) odor (C1) heres along uced iron (C	living roots	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (incommarks: DROLOG tland Hydr mary Indica Surface w High wate Saturation Water ma Sediment Drift depo Algal mat	rology Indicators: tors (minimum of orater (A1) er table (A2) n (A3) rks (B1) deposits (B2) esits (B3) or crust (B4)	ne required;	Water Aquat True : Hydro Oxidiz Prese	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizosph ence of redu nt iron redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	living roots	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1)	
Depth (incommarks: DROLOG tland Hydr mary Indica Surface w High wate Saturation Water ma Sediment Drift depo Algal mat Iron depos	ology Indicators: tors (minimum of orater (A1) er table (A2) n (A3) rks (B1) deposits (B2) sits (B3) or crust (B4) sits (B5)		Water Aquat True a Hydro Oxidiz Prese Recei	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron reduce muck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tilled the (C7)	living roots	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (incommarks: DROLOG tland Hydr mary Indicat Surface w High wate Saturation Water ma Sediment Drift depo Algal mat Iron depos Inundation	rology Indicators: tors (minimum of orater (A1) er table (A2) n (A3) rks (B1) deposits (B2) sits (B3) or crust (B4) sits (B5) n visible on aerial in	magery (B7)	Water Aquat True a Hydro Oxidiz Prese Recei Thin a Gaug	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron redur muck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living roots	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (incomarks: DROLOG tland Hydr mary Indica Surface w High wate Saturation Water ma Sediment Drift depo Algal mat Iron depos Inundatior Sparsely w	cology Indicators: ators (minimum of or or table (A2) ators (B1) deposits (B2) asits (B3) or crust (B4) sits (B5) a visible on aerial invegetated concave	magery (B7)	Water Aquat True a Hydro Oxidiz Prese Recei Thin a Gaug	r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron reduce muck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living roots	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2)	
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Project/Site: Lemon Hill	City/Co	ounty: Farmii	ngton/Olmste	d County Sampling Date:	2024-05-30
Applicant/Owner: Ranger Power				: MN Sampling Point:	
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: <u>S</u>	12 T107N S013W	
Lanform(hillslope, terrace, etc): Toeslope			Local relie	of (concave, convex, none): concave	
Slope(%): 0-2 Lat: 44.08454		Long: -92.	33214	Datum: W	GS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drain	ned, 0 to 2 per	rcent slopes		NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Ye	es , No	(If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significan	tly disturbed?	Aı	re "Normal C	ircumstances" present? Yes , No	
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?			plain any answers in Remarks.)	
					
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ing point	location	s, transects, important featu	res, etc.
Hydrophytic Vegetation Present? Yes N		lo the Co	manlad Araa		
Hydric Soil Present? Yes N			ampled Area Wetland?		s No <u> </u>
Wetland Hydrology Present? Yes _ Remarks: (Explain alternative procedures here or in a separate re					
Toeslope of an agriculture slope break VEGETATION - Use scientific names of plants.					
-		Dominant Species?		Dominance Test Worksheet	
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius) 1		Species?	Status		
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
3				Total Number of Dominant Species Across All Strata:	2 (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cov	/er	Prevalence Index worksheet:	<u> </u>
1				Total % Cover of: M	fultiply by:
2				OBL species 0 x1 =	
3				· —	0
4		-			0
5	0%	= Total Cov	· · ·	FACU species 125 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2				UPL species 0 x1 =	0
Bromus inermis, Smooth Brome	000/	yes	FACU	Column Totals: 125 x1 =	
Dactylis glomerata, Orchard Grass	200/	ves	FACU	Prevalence Index = B/A =	4.000
Taraxacum officinale, Common Dandelion				Hydrophytic Vegetation Indicators:	
4.					
5				1 - Rapid Test for Hydrophytic V 2 - Dominance Test is > 50%	egetation
6					
7				3 - Prevalence Index is <= 3.0 ¹	
8.				4 - Morphological Adaptations ¹ (supporting data in Remarks or o	
				sheet)	•
9.					
		- Total Co		PROBLEMATIC Hydrophytic Veg	getation ¹ (Explain)
9.		= Total Cov	/er		land hydrology
9. 10. Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1.	125%		/er	PROBLEMATIC Hydrophytic Veg 1Indicators of hydric soil and wet must be present, unless disturb	land hydrology
9. 10. Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	125%			PROBLEMATIC Hydrophytic Veg Indicators of hydric soil and wet must be present, unless disturb Hydrophytic Vegetation	land hydrology

SOIL Sample Point: adp22

Dept: C=Concentration, D=Deptetion, RM=Reduced Matrix, MS=Masked Sand Grains. Dept: C=Concentration, D=Deptetion, RM=Reduced Matrix, MS=Masked Sand Grains. Continue Cont	Depth (inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Matrix. *Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Coast Prairie Redox (ALG) Dark Surface (F7) Dark Surface (F7) Dark Surface (F7) Dark Surface (F7) Uvery Shallow Dark Surface (F7)	0-10 10YR - 3/3	100	/				Sil		
Histosol (or Histol (A1) undefined Sandy Gleyed Matrix (S4) Coast Frainis Redox (A16)			· · · · · · · · · · · · · · · · · · ·						
Histosol (or Histol (A1) undefined Sandy Gleyed Matrix (S4) Coast Frainis Redox (A16)									
Histosol (or Histol (A1) undefined Sandy Gleyed Matrix (S4) Coast Frainis Redox (A16)									
Histosol (nr Histor) (A1) undefined Histosol (nr Histor) (A2) undefined Sandy Redox (S5) Black Hist (A3) undefined Stripped Matrix (S6) Black Hist (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Board Matrix (F3) Tron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Popleted Board Surface (A11) Thick Dark Surface (A12) Depleted Matrix (F3) Thick Dark Surface (A12) Depleted Board Surface (F7) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3) estrictive Layer (if observed): Type: Type: Surface Water (A1) High water table (A2) High water table (A2) Aquatic fauna (B13) High water table (A2) Surface water (A1) High water table (A2) Sediment deposts (B3) Sediment deposts (B3) Presence or reduction in tilled soils (C6) Aqual mat or crust (B4) Recent iron reduction in tilled soils (C6) Triun dation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Other (Explain and weter in the August Park (A1) Surface water (A2) Surface water (A3) Fresence or reducted into (C4) Sediment deposits (B3) Again at or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Other (Explain and weter in the August Park (A2) FAC-neutral test (D5) FAC-neutral test (D5) Wettand Hydrology Present? Yes No Depth (inches): Wettand Hydrology Present?	· · · · · · · · · · · · · · · · · · ·								
Histosol (or Histol (A1) undefined Sandy Gleyed Matrix (S4) Coast Frainis Redox (A16)									
Histosol (or Histol (A1) undefined Sandy Gleyed Matrix (S4) Coast Frainis Redox (A16)									
Histocay (or Histel) (AJ undefined Sandy Gleyed Matrix (S4) Dark Surface (S7) Da	Type: C=Concentration, D=D	epletion, RM=	Reduced Matrix, M	S=Masked	Sand Grain	ns. ² l	_ocation: PL	=Pore Lining, M=Matrix.	
Histic Epipedon (A2) undefined Sandy Redox (S5) Dark Surface (S7) Black Histi (A3) undefined Stripped Matrix (S6) Black Histi (A3) undefined Stripped Matrix (F2) Loamy Mucky Mineral (F1) Yery Shallow Dark Surface (TF12) Cofther (Explain in Remarks) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Dark Surface (F6) Depleted Below Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) So m Mucky Peat or Peat (S3) estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Surface water (A1) High water table (A2) Aquatic fauna (B33) Surface soll price (A2) Surface water (A1) High water table (A2) Aquatic fauna (B33) Dorsason water table (C2) Saturation (A3) Water marks (B1) Hydrogen sulfide odor (C1) Sediment deposits (B2) Dorit deposits (B2) Dorit deposits (B3) Presence of reduced inn (C4) Saduration (C4) Recent inner deduction in tilled soils (C6) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Indicators: ### Hydric Soil Present? ### Becondary Indicators (minimum of two required) Surface water (A1) Surface water (A1) Dorsason water table (C2) Crayfish burnows (C8) Suturation visible on aerial imagery (C9) Sediment deposits (B2) Ordicated Thickspheres along living roots (C3) Suturation visible on aerial imagery (C9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) #### Wetland Hydrology Present? YesNoDepth (inches): water Thin muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) #### Wetland Hydrology Present? Wetland Hydrology Present? YesNoDepth (inches): water Table Present? Yes No Depth (inches): water Table Present? yes No Depth (inches): water Table Present? yes No Depth (inches): water Table Present? yes No	-							Indicators for Problematic Hydric Soil	s³:
Black Histi (A3) undefined				-					
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Peredox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Set m Mucky Peat or Peat (S3) Sestrictive Layer (if observed): Type: Depth (inches): De				-	-				
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Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Extrictive Layer (if observed): Type:	_ , , ,			-					
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Indicators in rytrophyriv eggleation and wetler problematic. Depleted Dark Surface (F7) Depleted Dark Surface (F7) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Destrictive Layer (if observed): Type:	_ , , ,				` '				
Thick Dark Surface (A12)		rfaco (A11)						³ Indicators of hydrophytic vegetation	n and wetlar
Comparison of the Comparison	_ '	` ,			` ,				alsturbea c
								·	
restrictive Layer (if observed): Type:	_	•	Redox	Depressi	ulis (Fo)				
Proper in the control of the control	_	-							
Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches): Itemarks: Depth (inches):		ou).				Hvdi	ric Soil Pre	sent? Yes	No 🗸
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Aquatic fauna (B13) Water-stained leaves (B9) High water table (A2) Water stained leaves (B9) Formal patterns (B10) Drive aguatic plants (B14) Water marks (B1) Water marks (B1) Water marks (B1) Water marks (B2) Oxidized friizospheres along living roots (C3) Sediment deposits (B2) Oxidized friizospheres along living roots (C3) Stunted or stressed plants (D1) Drift deposits (B3) Presence of reduced iron (C4) Agal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No Depth (inches): vater Table Present? Yes No Depth (inches): aturation Present? Yes No Depth (inches): vater Table Present? Yes No Depth (inc						_ '			
rimary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Agal mat or crust (B4) Iron deposits (B5) Inimidation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Sparsely vegetated concave surface (B8) Wetland Hydrology Present? Yes No Depth (inches): Jedical Survations (B1) Wetland Hydrology Present? Wetland Hydrology Present? Yes No Depth (inches): Jedical Survations (B1) Water-stained leaves (B9) Drift agal mater (B1) Drift deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No Depth (inches): Jedical Stream gauge, monitoring well, aerial photos, previous inspections), if available:	,					<u>-</u>			
Surface water (A1)	emarks:					_			
High water table (A2)	emarks:	rs:					<u>s</u>	econdary Indicators (minimum of two rec	juired)
Saturation (A3)	emarks: 'DROLOGY Vetland Hydrology Indicato		ed; check all that ap	ply)			<u>s</u>	Surface soil cracks (B6)	quired)
Water marks (B1)	emarks: /DROLOGY /etland Hydrology Indicatorimary Indicators (minimum Surface water (A1)		Water-	stained lea	. ,		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)	quired)
Sediment deposits (B2)	Processing of the state of the		Water- Aquatio	stained lea	13)		<u>§</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	quired)
Drift deposits (B3)	PROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	13) nts (B14)		 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Vester Table Present? Yes No ✓ Depth (inches): Vester Table Present? Yes No Vester Table Present? Yes No Yes No Vester Table Present? Yes No Yes No Yes No Yes No Yes Yes No Yes	PROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (B. quatic plar gen sulfide	13) ats (B14) odor (C1)		= - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (6)	
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Project/Site: Lemon Hill	Citv/Co	ounty: Farmir	ngton/Olmste	ed County Sampling	Date: 2024	1-05-30
Applicant/Owner: Ranger Power			State			
Investigator(s): Maddie Humphrey	Sect	tion, Townshi	ip, Range: S			
				ef (concave, convex, none): none	<u>;</u>	
Slope(%): 8-15 Lat: 44.0827		Long: -92.	32635	Da	tum: WGS 8	84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slop	es, modera	ately eroded		NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es 🗸 No	o (If no, explain in Remark	(s.)	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Aı	re "Normal (Circumstances" present? Yes	, No	
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)	<u> </u>	-
						
SUMMARY OF FINDINGS - Attach site map showing	g sampl	ing point	location	s, transects, important f	features,	etc.
Hydrophytic Vegetation Present? Yes No		1- 41- 0-		_		
Hydric Soil Present? Yes No			ampled Area Wetland?	l	Yes	No <u></u> ✓_
Wetland Hydrology Present? Yes No	<u> </u>					
Remarks: (Explain alternative procedures here or in a separate repo Agriculture slope break	rt.)					
Agriculture Stope break						
VEGETATION - Use scientific names of plants.						
VEGETATION - OSE SCIENTIFIC Harries of plants.	Abaaluta	Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet		
1				Number of Dominant Species	That	
2				Are OBL, FACW, or FAC:		<u>0</u> (A)
3				Total Number of Dominant Spe	ecies	4
4				Across All Strata:		<u>1</u> (B)
5				Percent of Dominant Species 1 Are OBL, FACW, or FAC:	Γhat	0% (A/B)
	0%	= Total Cov	⁄er	Ale OBL, FACW, OI FAC.		(A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:	1	
1				Total % Cover of:	Multip	ly by:
3.				OBL species0	x1 =	0
4.				FACW species <u>5</u>	x1 =	10
5.				FAC species0	x1 =	0
	0%	= Total Cov	/er	FACU species95	x1 =	380
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadra	t)	·	x1 =	<u> </u>
1. Bromus inermis, Smooth Brome	90%	yes	FACU		x1 =	、,
2. Rubus idaeus, Common Red Raspberry	5%	no	FACU	Prevalence Index =	B/A =3	3.900
3. <u>Urtica dioica</u> , Stinging Nettle	5%	no	FACW	Hydrophytic Vegetation Indic	ators:	
4				1 - Rapid Test for Hydrop	hytic Vegeta	ation
5				2 - Dominance Test is > 5	50%	
6				3 - Prevalence Index is <	= 3.0 ¹	
8.				4 - Morphological Adaptat		
9.				supporting data in Remark sheet)	ks or on a s	separate
10.				PROBLEMATIC Hydrophy	rtio Vogotati	ion ¹ (Evoloin)
	100%	= Total Cov	/er		_	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1				¹ Indicators of hydric soil a must be present, unless		
2.				Hydrophytic		
	0%	= Total Cov	/er	Vegetation Present?	Yes _	No <u></u> ✓
Remarks: (Include photo numbers here or on a separate sheet.)				<u> </u>		
T (The first term of the companies and the						

ofile Description: (D	Describe to to Matrix	the depth r		ument the Redox Featu		r confirm	the absen	ce of indicators.)	
Depth nches) Color (n		% (Color (moist)	%	Type ¹	Loc ²	Texture	Remark	s
0-10 10YR -			/				SiL		
·									
pe: C=Concentration	ı, D=Depletio	on, RM=Re	duced Matrix, M	1S=Masked	Sand Grai	ns. ² l	Location: F	PL=Pore Lining, M=Matrix.	
ric Soil Indicators: Histosol (or Histel)		ned	Sand	y Gleyed M	Aatriy (SA)			Indicators for Problematic Hy	dric Soils ³ :
Histic Epipedon (A.				y Redox (S				Coast Prairie Redox (A16) Dark Surface (S7)	
Black Histi (A3) un	•			oed Matrix (•			Iron-Manganese Masses (F	:12)
Hydrogen Sulfide (A4)		Loam	ny Mucky M	lineral (F1)			Very Shallow Dark Surface	,
Stratified Layers (A	\5)		Loam	y Gleyed M	Matrix (F2)			Other (Explain in Remarks)	` ,
2 cm Muck (A10)			Deple	eted Matrix	(F3)			3Indicators of hydrophytic v	
Depleted Below Da	ark Surface ((A11)	Redo	x Dark Surf	face (F6)			hydrology must be preser	it, unless disturbe
Thick Dark Surface	e (A12)		Deple	eted Dark S	Surface (F7)			problematic.	
Sandy Mucky Mine	ral (S1)		Redo	x Depression	ons (F8)				
5 cm Mucky Peat of	or Peat (S3)								
strictive Layer (if ol	bserved):								
	-					Hyd	ric Soil Pr	esent?	Yes No _
Type: Depth (inches):	-								
	-								
Depth (inches):	-								
Depth (inches): <u></u> marks:	-					_			
Depth (inches): marks: DROLOGY tland Hydrology Inc	dicators:							Secondary Indicators (minimum o	f two required)
Depth (inches): marks: DROLOGY tland Hydrology Inches	dicators: imum of one	required; c			nyas (PO)			Surface soil cracks (B6)	f two required)
Depth (inches): marks: DROLOGY tland Hydrology Inches mary Indicators (mining Surface water (A1)	dicators: imum of one	required; c	Water-	-stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)	f two required)
Depth (inches): marks: DROLOGY tland Hydrology Inches mary Indicators (minimary Indicat	dicators: imum of one	required; c	Water- Aquati	-stained lea ic fauna (B1	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	f two required)
Depth (inches): marks: DROLOGY tland Hydrology Inc mary Indicators (mini Surface water (A1) High water table (A Saturation (A3)	dicators: imum of one	required; c	Water- Aquati True a	-stained lea ic fauna (B1 aquatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth (inches): marks: DROLOGY tland Hydrology Inches mary Indicators (minical Surface water (A1) High water table (A) Saturation (A3) Water marks (B1)	dicators: imum of one (A2)	required; c	Water- Aquati True a	-stained lea ic fauna (B1 aquatic plan gen sulfide	13) nts (B14) odor (C1)	living roots		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in	nagery (C9)
Depth (inches): marks: DROLOGY tland Hydrology Inc mary Indicators (mini Surface water (A1) High water table (A Saturation (A3) Water marks (B1) Sediment deposits	dicators: imum of one (A2)	required; c	Water- Aquati True a Hydro Oxidiz	-stained lea ic fauna (B3 aquatic plan gen sulfide red rhizosph	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ir Stunted or stressed plants (I	nagery (C9)
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Depth (inches): narks: PROLOGY Idand Hydrology Inches nary Indicators (minicators (dicators: imum of one A2) (B2) (B4) on aerial ima	agery (B7)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	-stained lea ic fauna (B.1 aquatic plan gen sulfide red rhizosph nce of redu at iron reduc	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ir Stunted or stressed plants (E Geomorphic position (D2)	nagery (C9)
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Project/Site: Lemon Hill	City/Co	unty: Farmington/	Olmsted County	Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power		-		Sampling Point: adp24
Investigator(s): Maddie Humphrey	Secti			
			cal relief (concave, conve	
Slope(%): 0-2 Lat: 44.0827		Long: -92.32601	_	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well draine				
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸	No (If no, exp	lain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	y disturbed?	Are "No	rmal Circumstances" pre	sent? Yes . No
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?		ed, explain any answers	•
<u> </u>				
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point loca	ations, transects, i	important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No) <u></u>			
Hydric Soil Present? Yes <u>✓</u> No		Is the Sample within a Wetla		Yes ✔ No
Wetland Hydrology Present? Yes <u>✓</u> No)			
Remarks: (Explain alternative procedures here or in a separate rep Grassy depression between agriculture fields	ort.)			
Grassy depression between agriculture neius				
VEGETATION - Use scientific names of plants.				
VEGETATION - Ose scientific flames of plants.	Absolute	Daminant India		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indic Species? State		t Worksheet
1			Number of Domi	nant Species That
2			Are OBL, FACW	, or FAC: <u>2</u> (A)
3				Dominant Species
4			Across All Strata	<u>3</u> (B)
5			Percent of Domi Are OBL, FACW	nant Species That ', or FAC: 66.667% (A/B)
	0%	= Total Cover	Ale OBL, FACW	, or FAC(A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Inde	ex worksheet:
2.			Total % C	over of: Multiply by:
3.			OBL species	<u> </u>
4.			FACW species	<u>80</u> x1 = <u>160</u>
5			FAC species	0 x1 =0
	0%	= Total Cover	FACU species	40 x1 =160
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1	-m²) quadrat)	UPL species	0 x1 =0
Urtica dioica, Stinging Nettle	40%	yes FAC		<u>120</u> x1 = <u>320</u> (B)
2. Bromus inermis, Smooth Brome	40%	yes FAC	CU Preva	alence Index = B/A = 2.667
3. Phalaris arundinacea, Reed Canary Grass	40%	yes FAC	W Hydrophytic Ve	getation Indicators:
4			1 - Rapid T	est for Hydrophytic Vegetation
5			2 - Domina	nce Test is > 50%
6		-	3 - Prevale	nce Index is <= 3.0 ¹
7. 8.			4 - Morpho	logical Adaptations ¹ (Provide
9.			supporting sheet)	data in Remarks or on a separate
10.				ATIC III duambatia Variatatian 1 (Tambaia)
	120%	= Total Cover	_	ATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				of hydric soil and wetland hydrology resent, unless disturbed or problematic.
1				, , , , , , , , , , , , , , , , , , ,
2	- ——		Hydrophytic Vegetation	
	0%	= Total Cover	Present?	Yes No
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: adp24

ofile Des	Matrix			edox Feat	luies				
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	R	Remarks
0-9	10YR - 3/2	100	/				SiL	<u></u>	
9-20	10YR - 4/2	98	10YR-4/6	2	C	М	SiL		
		leties DM 5	Sadara d Markina N	10. Maralas			li andina Bi	Book Linius M. Mahin	
	oncentration, D=Dep	iletion, Rivi=r	Reduced Matrix, IV	IS-IVIASKEI	u Sanu Grai	1115.		=Pore Lining, M=Matrix.	
	Indicators: I (or Histel) (A1) und	defined	Sand	, Cleved N	Matrix (S4)			Indicators for Problema	
_	pipedon (A2) undef			y Redox (S				Coast Prairie Redox	(A16)
_	listi (A3) undefined		·	ed Matrix				Dark Surface (S7) Iron-Manganese Ma:	sses (F12)
_	en Sulfide (A4)				//ineral (F1)			Very Shallow Dark S	
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Re	` ,
_ 2 cm M	luck (A10)		Deple	ted Matrix	(F3)				phytic vegetation and we
_ Deplete	ed Below Dark Surfa	ce (A11)	Redo	x Dark Su	rface (F6)			hydrology must be	present, unless disturbe
_ Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7))		problematic.	
Sandy	Mucky Mineral (S1)		Redo	x Depress	ions (F8)				
_ 5 cm M	lucky Peat or Peat (S3)							
strictive	Layer (if observed)	:							
Type:						Нус	Iric Soil Pre	sent?	Yes _ <pre>Yes _ </pre>
Depth emarks:	(inches): <u></u>								
emarks:									
marks:	o G Y						S	econdary Indicators (mini	mum of two required)
marks: DROLO tland Hy			; check all that ap	ply)			<u>s</u>	econdary Indicators (mini Surface soil cracks (B	
DROLO	OGY rdrology Indicators:			pply) stained le	aves (B9)	_	<u></u>		6)
DROLO tland Hy mary Indi _ Surface	OGY drology Indicators: cators (minimum of		Water-		` '		<u>s</u>	Surface soil cracks (B	6)
DROLO tland Hy mary Indi _ Surface	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water- Aquati	stained le	313)		<u>s</u> 	Surface soil cracks (B Drainage patterns (B1	6) 0) e (C2)
DROLO tland Hy mary Indi Surface High wa Saturat Water r	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a	stained le c fauna (B quatic pla gen sulfide	B13) nts (B14) e odor (C1)	_		Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a	6) 0) e (C2) aerial imagery (C9)
DROLO tland Hy mary Indi _ Surface _ High wa _ Saturat _ Water r _ Sedime	order (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained le c fauna (E quatic pla gen sulfide ed rhizosp	B13) nts (B14) e odor (C1) oheres along		ts (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) aerial imagery (C9) lants (D1)
DROLO ttland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3)		Water-Aquati True a Hydrog Oxidiz Preset	stained le c fauna (E quatic pla gen sulfide ed rhizosp nce of redi	B13) Ints (B14) Ints (B14) Ints odor (C1) Interes along Interes along Interes (C	(4)	ts (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) aerial imagery (C9) lants (D1)
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DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	exactors (minimum of exactors (B1) exactors (B1) exactors (B2) posits (B3) exactor crust (B4) posits (B5)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge	stained le c fauna (E quatic plai gen sulfide ed rhizosp nce of redu t iron redu nuck surfai e or well da	B13) Ints (B14) Ints (B14) Ints (C1) Interes along Interes along Interes along Interes along Interes along Interes along Interes (C1)	(4)	ts (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	6) 0) e (C2) aerial imagery (C9) lants (D1)
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DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obset Iface Wat ter Table turation F cludes ca	rdrology Indicators: cators (minimum of exators (minimum of exators (minimum of exators) exators (minimum of exators) exators (Minimum of exators) exator (Maximum of exators) exator (Maximum of exators) exators (Maximum	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained le c fauna (E quatic plai gen sulfide ed rhizosp nce of redu t iron redu nuck surfai e or well di (Explain ir Depth (inco	stata) Ints (B14) Ints (B14)	d soils (Co	ts (C3)	Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	6) 0) e (C2) aerial imagery (C9) lants (D1) (D2)

SOIL

Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp25
Investigator(s): Maddie Humphrey	Sect	tion, Township, Range: S	512 T107N S013W
Lanform(hillslope, terrace, etc): Sideslope		Local relie	ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08263		Long: -92.32592	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	a samnli	ing point location	e transacte important features etc
Hydrophytic Vegetation Present? Yes No			s, transcets, important reatures, etc.
Hydric Soil Present? Yes No		Is the Sampled Area	
Wetland Hydrology Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate report downslope from adp24 in grassy meadow VEGETATION - Use scientific names of plants.			
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2			Total Number of Dominant Species
4			
5	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species 0 x1 = 0
4.			FACW species 40
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species 90 x1 = 360
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadrat)	UPL species $0 \times 1 = 0$
1. Bromus inermis, Smooth Brome	90%	yes FACU	Column Totals: $\underline{130} \times 1 = \underline{440} \text{ (B)}$
2. <u>Urtica dioica</u> , Stinging Nettle	40%	yes FACW	Prevalence Index = B/A = 3.385
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	130%	= Total Cover	 -
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate sheet.)			

OIL								Sample Point: <u>ad</u>
Profile Des	cription: (Describe	to the depth				r confirm	the abser	nce of indicators.)
Depth	Matrix			Redox Feat		. 2		
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	Loc ²	Texture	
0-9	10YR - 3/2	100	/				SiL	
9-14	10YR - 4/2	100	/				SiL	_
						-		
							-	
						-		
Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	IS=Masked	J Sand Grain	ns. 2	² Location: F	PL=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
	Epipedon (A2) undefi	ned		y Redox (S	-			Dark Surface (S7)
	Histi (A3) undefined			ed Matrix (-			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5) Muck (A10)			y Gleyed N eted Matrix	` '			Other (Explain in Remarks)
	ed Below Dark Surfac	re (A11)		x Dark Sur				³ Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o
	Dark Surface (A12)	,, (, (,			Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depression	` ,			
	Mucky Peat or Peat (S	S3)						
Restrictive	Layer (if observed)	:						
Type:	<u></u>					Hyd	dric Soil Pı	resent? Yes No <u>✓</u>
Depth	(inches):							
YDROLO	OGY							
	drology Indicators:		المسال المسالة	L A				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	icators (minimum of one water (A1)	one requireu,		oply) -stained lea	-VPS (R9)			Drainage patterns (B10)
	ater table (A2)			c fauna (B:	. ,			Drainage patterns (B10) Dry-season water table (C2)
	tion (A3)		·	quatic plan				Crayfish burrows (C8)
	marks (B1)		_	gen sulfide				Saturation visible on aerial imagery (C9)
Sedime	ent deposits (B2)		Oxidize	ed rhizosph	heres along	living roo	ts (C3)	Stunted or stressed plants (D1)
Drift de	eposits (B3)		Preser	nce of redu	uced iron (C4	4)		Geomorphic position (D2)
	nat or crust (B4)				ction in tilled	soils (C6	6)	FAC-neutral test (D5)
	posits (B5)	. (57)		nuck surfac				
	tion visible on aerial i	. , , ,		or well da	` '			
	ly vegetated concave	surface (B8) Otner	(Explain in	Remarks)	1		
Field Obser		Vos	No. 4	Danth (incl	I- 201.			
Surface Wai Water Table	ter Present?	Yes Yes	SNO SNO	Depth (inch Depth (inch		_ _{We}	tland Hydr	rology Present? Yes No
Saturation F				Depth (incl		_ ,	uana nya.	100 100
	apillary fringe)					_		<u></u>
Describe Re	ecorded Data (stream	gauge, mor	nitoring well, aeria	l photos, p	revious insp	ections),	if available	x:
Remarks:								

Applicant/Owner: Ranger Power Investigator(s): Maddie Humphrey Lanform(hillslope, terrace, etc): Depression			State	. MNI		
			State	: MN	Sampling Point: <u>ac</u>	dp26
Lanform(hillslope terrace etc): Depression	Sect	ion, Townsh	ip, Range: S	12 T107N S013W		
Edition (missispe, terrase, etc):			Local relie	ef (concave, convex, no	one): concave	
Slope(%): 0-2 Lat: 44.08018		Long: -92.	.32618		Datum: WG	S 84
Soil Map Unit Name: 471: Root silt loam				NWI classificati	on: PFO1B	
Are climatic / hydrologic conditions on the site typical for this time of	year?	Ye	es 🔎 No	(If no, explain	in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly	y disturbed?	A	re "Normal C	 Circumstances" present	? Yes , No	
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?	(II	f needed, ex	plain any answers in R	temarks.)	
SUMMARY OF FINDINGS - Attach site map showi	na compli	ina naint	location	o tropocata imp	artant facture	o oto
•	· ·	The point	location	s, transects, imp	oriani leature	es, etc.
Hydrophytic Vegetation Present? Yes No			ampled Area	ı		
Wetland Hydrology Present? Yes No		within a	Wetland?		Yes_	No <u> </u>
Remarks: (Explain alternative procedures here or in a separate rep						
VEGETATION - Use scientific names of plants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?	Indicator Status	Dominance Test Wo	orksheet	
1				Number of Dominant Are OBL, FACW, or		<u>1</u> (A)
3. 4.				Total Number of Don Across All Strata:	ninant Species	<u>2</u> (B)
5.				Percent of Dominant Are OBL, FACW, or		50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cov	ver	Prevalence Index w		<u> </u>
1				Total % Cover	of: Mu	Itiply by:
2					0 x1 =	
3				FACW species	50 x1 =	100
4				FAC species	<u>5</u> x1 =	
5	0%	= Total Cov	ver	FACU species	70 x1 =	280
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28				UPL species	<u>5</u> x1 =	25
Arctium minus, Lesser Burrdock	70%	yes	FACU	Column Totals:	<u>130</u> x1 =	<u>420</u> (B)
2. Phalaris arundinacea, Reed Canary Grass	40%	yes	FACW	Prevalend	e Index = B/A =	3.231
3. Impatiens capensis, Spotted Touch-Me-Not	10%	no	FACW	Hydrophytic Vegeta	tion Indicators:	
4. Alliaria petiolata, Garlic-Mustard	5%	no	FAC	1 - Rapid Test f	or Hydrophytic Vo	notation
5. Pastinaca sativa, Wild parsnip	5%	no	UPL	2 - Dominance		getation
6				3 - Prevalence		
7					al Adaptations ¹ (P	rovido
8				supporting data	in Remarks or on	
9				sheet)		_
10		= Total Cov		PROBLEMATIC	Hydrophytic Vege	tation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		- Total Cov	vei		dric soil and wetlant, unless disturbe	
1				Hydrophytic		
	0%	= Total Cov	ver	Vegetation Present?	Yes	s No 🗸
Remarks: (Include photo numbers here or on a separate sheet.)	2.0	12.00		1		

nches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-3 10YR - 3/2 100/ SiL 3-14 10YR - 4/2 100/ SiL 3-14 10YR - 4/2 100/ SiL 3-15 SiL SiL 3-16 SiL 3-17 SiL 3-18 SiL 3-19 SiL 3-10 SiL 4-10 SiL 4-10 SiL 4-10 SiL 4-10 SiL 4-10 SiL 5 C	ofile Description: (Describe Matrix	to the depth n		edox Featu		r confirm	the abser	nce of indicators.)
3-14 10YR - 4/2 100	Depth inches) Color (moist)	<u></u> % C	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
pre: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining, M=Matrix. dric Soil Indicators: Histosod (or Histor) (A1) undefined Sandy Redox (S5) Black Histor (A2) undefined Sandy Redox (S5) Black Histor (A3) Loamy Micky Mineral (F1) Stratified (A4) Loamy Micky Mineral (F2) Loamy Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F2) Loamy Micky Mineral (F3) Loamy Micky Mineral (F2) Loamy Micky Mineral (F2) Loamy Micky Mineral (F3) Loamy Micky Mineral (F2) Loamy Micky Mineral (F2) Loamy Micky Mineral (F3) Loamy Mineral (F3) Loamy Micky Mineral (F3) Loamy Min	0-3 10YR - 3/2	100 -	/				SiL	_ :
Histos (Cir Histel) (A1) undefined	3-14 10YR - 4/2	100 -	/				SiL	
Histos (Critice) (A1) undefined								
Histos (Critice) (A1) undefined								
Listosol (or Histel) (A1) undefined Histosol (a2) undefined Histosol (a2) undefined Sandy Redox (S5) Sandy Redox (S5) Sandy Medox (S5) Sandy Medox (S5) Sandy Medox (S5) Sandy Medox (S5) Sandy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F2) Depleted Below Dark Surface (A11) Redox Dark Surface (A11) Redox Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mater (S1) Sandy Mucky Mineral (S1) Sandy Mineral (S1) Sandy Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mineral (S1)	rpe: C=Concentration, D=Dep	oletion, RM=Rec	luced Matrix, M	S=Masked	Sand Grain	ns. 2	Location: F	PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) undefined Sandy Redox (SS) Dark Surface (ST) Dark Surface (ST) Black Histil (A3) undefined Sinped Matrix (S6) Black Histil (A3) undefined Sinped Matrix (S6) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Depleted Dark Surface (F6) Depleted Dark Surface (A12) Depleted Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (A12) Depleted Dark Surface (A12) Depleted Dark Surface (A13) Strictice Layer (if observed): Type:		d. 6 d	0	. 01 1 14	(O.1)			Indicators for Problematic Hydric Soils ³ :
Back Histi (A3) undefined	•			-				
Hydrogen Sulfide (A4)	•		·					
Stratified Layers (A5)				,				
2 cm Muck (A10)	_ , , ,							
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Inflocators of Inflocators of Inflocators (F8) Problematic. Redox Depressions (F8) Problematic. Redox Depressions (F8) Redox Depressions (F8) Problematic. Redox Dervisions (F8) Problematic. Redox Dark Surface (F6) Truncators (F8) Problematic. Redox Dark Surface (F6) Problematic. Redox Dark Surface (F7) Problematic. Redox Dark Surface (F7) Problematic. Redox Dark Surface (F7) Problematic. Redox Dark Surface (F8) Problematic. Redox Dark Surface (F8) Problematic. Redox Dark Surface (F8) Problematic. Redox Dark Surface (F7) Problematic. Recontary Indicators (Indinum of two required) Problematic. Recontary Indicators (Indinum of two required) Problematic. Recondary Indicators (Indinum of two required) Problematic. Recontary Indicators (Indinum of two required) Problematic. Recontary Indicators (Indinum of two required) Problematic. Recontary Indicators (Indinum of two required) Problematic. Redox Dark Surfa				-				
Thick Dark Surface (A12)		νορ (Δ11)			` '			Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Type:	- '	ice (AII)			` '			
Strictive Layer (if observed): Type:	-							
Secondary Indicators (minimum of two required) Type: Depth (inches): Type: Depth (inches): Dep	•	(S3)	110005	СВоргосова	5110 (1 0)			
Depth (inches):		` '						
Aguatic fauna (As) Water-stained leaves (B9) Surface water (A1) Surface water (A1) Surface water (A1) Surface water (A2) Saturation (A3) Surface water (A3) Surface water (A3) Surface water (A3) Surface water (A1) Surface (C7) Surface water (A1) Surface (C7) Surface (B8) Surface (B9)	Type: <u></u>					Hyd	ric Soil Pr	resent? Yes N
tand Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water-stained leaves (B9) Hydrogen sulfide odor (C1) Sediment deposits (B2) Ordinage patterns (B10) Dry-season water table (C2) Saturation (A3) Hydrogen sulfide odor (C1) Sediment deposits (B2) Ordinage patterns (B10) Dry-season water table (C2) Saturation visible on aerial imagery (C9) Drift deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Inin muck surface (C7) Inin muck surface (C7) Ininundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Ind Observations: face Water Present? Yes No/ Depth (inches): ter Table Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Secondary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Ald Observations: rface Water Present? Yes No Depth (inches): Caudiary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dray-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Saturation visible on aerial imagery (B1) Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D	Depth (inches): <u></u> marks:							
mary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B8) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Wetland Hydrology Present? Yes No Depth (inches): Uturation Present? Yes No Depth (inches): Uturation Present? Ves No Depth (inches): Uturation Present? Ves No Depth (inches): Uturation Present? Ves No Depth (inches): Uturation Present? Yes No Depth (in	marks:					_		
High water table (A2) Saturation (A3) Aquatic fauna (B13) Dry-season water table (C2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Dry-season water table (C2) Sediment deposits (B3) Dry-season water table (C2) Saturation visible on aerial imagery (C9) Sediment deposits (B3) Dry-season water table (C2) Saturation visible on aerial imagery (C9) Sediment deposits (B2) Dry-season water table (C2) Saturation visible on aerial imagery (C9) Sunted or stressed plants (D1) FAC-neutral test (D5) In undation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Dither (Explain in Remarks) Id Observations: If ace Water Present? Yes No Depth (inches): FAC-neutral test (D5) Wetland Hydrology Present? Yes No Version Depth (inches): FAC-neutral test (D5) Wetland Hydrology Present? Yes No Soribe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY	:				_		Secondary Indicators (minimum of two required
True aquatic plants (B14)	DROLOGY tland Hydrology Indicators		heck all that ap	ply)				-
Water marks (B1)	DROLOGY tland Hydrology Indicators mary Indicators (minimum of			• • •	ves (B9)			Surface soil cracks (B6)
Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Stunted or stressed plants (D1) Presence of reduced iron (C4) Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Id Observations: face Water Present? Yes No Depth (inches): ter Table Present? Yes No Depth (inches): Urration Present? Yes No Depth (inches): Scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY tland Hydrology Indicators mary Indicators (minimum of _ Surface water (A1)		Water-s	stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)
Drift deposits (B3)	DROLOGY tland Hydrology Indicators mary Indicators (minimum of _ Surface water (A1) _ High water table (A2)		Water-s	stained lea c fauna (B1	L3)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks)	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water-s Aquatio	stained lea c fauna (B1 quatic plan	13) ts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Id Observations: flace Water Present?	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water-s Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	ts (B14) odor (C1)	living root	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Inundation visible on aerial imagery (B7) Gauge or well data (D9) Other (Explain in Remarks) Id Observations: face Water Present?	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water-s Aquatio True ao Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	ts (B14) odor (C1) neres along	•	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Id Observations: face Water Present?	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water-s Aquatic True ac Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	ts (B14) odor (C1) neres along ced iron (C4	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Id Observations: face Water Present?	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water-s Aquatio True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ts (B14) odor (C1) neres along ced iron (C4)	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
face Water Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches): Letr Table Present? Yes No _ <_ Depth (inches)	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	one required; c	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
ter Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Louration Presen	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial	one required; co	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
uration Present? Yes No Depth (inches): cludes capillary fringe) scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav Id Observations:	one required; commerced; commerce	— Water-s — Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
cludes capillary fringe) scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY Interest of the process of	one required; commerced; commerce	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well dat (Explain in	ts (B14) odor (C1) heres along ced iron (Cation in tilled e (C7) ta (D9) Remarks)	4) I soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	DROLOGY Interest of the present? Interest of the present of the present? Interest of the present of the present? Interest of the present of the present of the present? Interest of the present	imagery (B7) e surface (B8) Yes _ Yes _	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) ta (D9) Remarks) ness): ness):	4) I soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
marks:	DROLOGY Intland Hydrology Indicators Mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concaveld Observations: Ifface Water Present? Iter Table Present? Ituration Present?	imagery (B7) e surface (B8) Yes _ Yes _	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) ta (D9) Remarks) ness): ness):	4) I soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
marks:	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav Id Observations: face Water Present? ter Table Present? uration Present?	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillect e (C7) ta (D9) Remarks) nes): nes):	1) I soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav Id Observations: face Water Present? ter Table Present? uration Present?	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillect e (C7) ta (D9) Remarks) nes): nes):	1) I soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
	DROLOGY tland Hydrology Indicators mary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav Id Observations: face Water Present? ter Table Present? ter Table Present? uration Present? cludes capillary fringe) scribe Recorded Data (streat	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillect e (C7) ta (D9) Remarks) nes): nes):	1) I soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/0	Olmsted County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power			State: MN Sampling Point: adp27
Investigator(s): Maddie Humphrey	Sect	ion, Township, Rai	nge: S12 T107N S013W
			al relief (concave, convex, none): none
Slope(%): 0-2 Lat: 44.07972		Long: -92.32545	Datum: WGS 84
Soil Map Unit Name: 471: Root silt loam		_	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of	vear?	Yes	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			rmal Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro			ed, explain any answers in Remarks.)
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(out, orpiant any anomore in remainer,
SUMMARY OF FINDINGS - Attach site map showin	ıg sampli	ing point loca	itions, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		In the Committee	1.6
Hydric Soil Present? Yes No		Is the Sampled within a Wetla	
Wetland Hydrology Present? Yes No			
Sideslope between agriculture field and wetland meadow. VEGETATION - Use scientific names of plants.	,		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indica	
1.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species
5.			Across All Strata: 1 (B) Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2. 3.			OBL species0 x1 =0
3. 4.			FACW species85 x1 =170
5.			FAC species 20 x1 = 60
	0%	= Total Cover	FACU species 10 x1 = 40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28			UPL species 20
Phalaris arundinacea, Reed Canary Grass	80%	yes FAC	Column Totals: <u>135</u> x1 = <u>370</u> (B)
2. Poa pratensis, Kentucky Blue Grass	20%	no FA	C Prevalence Index = B/A = 2.741
3. Pastinaca sativa, Wild parsnip	20%	no UP	Hydrophytic Vegetation Indicators:
4. Galium aparine, Sticky-Willy		no FAC	cu
5. Urtica dioica, Stinging Nettle	5%	no FAC	1 - Rapid Test for Hydrophytic Vegetation
6.	· · · · · · · · · · · · · · · · · · ·		✓ 2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			supporting data in Remarks of on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	135%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			
2	0%	= Total Cover	Hydrophytic Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			
The second control of the coparate shocky			

SOIL Sample Point: adp27

Profile Des	cription: (Describe Matrix	to the dep		ıment the Redox Feat		confirm	the absence	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-4	10YR - 3/2	100	/				SiL	_ =
4-12	10YR - 4/2	100	/				SiL	_ ===
							• '-	
					·			
							-	· .
¹ Type: C=C	oncentration, D=Dep	letion, RM=	:Reduced Matrix, M	IS=Masker	d Sand Grair	ns. 2	Location: PI	L=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) und	defined	Sandy	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef			y Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
	d Below Dark Surfa	ce (A11)		x Dark Sui				hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	60)	Redox	x Depressi	ions (F8)			
	ucky Peat or Peat (-						
	Layer (if observed)):						
Type:	 (in a la a a):					Hyd	dric Soil Pre	esent? Yes No <u>✓</u>
Remarks:	(inches): <u></u>							
HYDROLO	GY							
Wetland Hy	drology Indicators:	:					<u> </u>	Secondary Indicators (minimum of two required)
	cators (minimum of	one require		• • •				Surface soil cracks (B6)
	water (A1)			stained lea	. ,		=	Drainage patterns (B10)
	ater table (A2)		 •	c fauna (B	•		-	Dry-season water table (C2)
Saturati	narks (B1)			quatic plar	e odor (C1)		=	Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	livina roo	ts (C3)	Stunted or stressed plants (D1)
	posits (B3)			=	uced iron (C	-	.3 (03)	Geomorphic position (D2)
	at or crust (B4)				ction in tilled	•	- 6)	✓ FAC-neutral test (D5)
	posits (B5)			nuck surfac		•	, <u> </u>	
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	e surface (E	38) Other	(Explain in	Remarks)			
Field Obser	vations:							
Surface Wat		Υє	es No _ 🗸	Depth (inc	:hes):			
Water Table		Ye	es No			Wet	tland Hydro	ology Present? Yes No _ 🗸
Saturation P	resent?		es No 🔽			_		
(includes ca	pillary fringe)							
Describe Re	corded Data (strean	n gauge, mo	onitoring well, aeria	ıl photos, p	orevious insp	ections),	if available:	
Domorko								
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmst	ed County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: adp28
Investigator(s): Maddie Humphrey	Sect	tion, Townsh	ip, Range: S	S12 T107N S013W
Lanform(hillslope, terrace, etc): Depression			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07962		Long: -92.	3256	Datum: WGS 84
Soil Map Unit Name: 471: Root silt loam				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y		o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol				kplain any answers in Remarks.)
	oronnano.	(pain any anomono in remainely
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		l		
Hydric Soil Present? Yes _ ✓ No _			ampled Area Wetland?	a Yes ✔ No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate repo Depression in mapped NWI between sideslope and forest. VEGETATION - Use scientific names of plants.	т.)			
·		Dominant		Parriagnes Test Westerbest
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	<u>Status</u>	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3				,,,
4				Total Number of Dominant Species Across All Strata:2 (B)
5.				Percent of Dominant Species That
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 x1 = 0
3				FACW species x1 = 250
4				FAC species 0 x1 = 0
5				FACU species 5 x1 = 20
Heathers are Otroture (Diet einer F. fr. (4. F. m.) medice OD 0.00 km, 0.00 km	0%	= Total Co		UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28- 1. <i>Phalaris arundinacea</i> , Reed Canary Grass	n square (1 95%	, .	ιι) FACW	Column Totals: 130 x1 = 270 (B)
Phalaris arundinacea, Reed Canary Grass Urtica dioica, Stinging Nettle	30%	<u>yes</u> ves	FACW	Prevalence Index = B/A = 2.077
Galium aparine, Sticky-Willy		no	FACU	
			FACO	Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is > 50%
7.				✓ 3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide
9				supporting data in Remarks or on a separate sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	130%	= Total Co	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Co	ver	Vegetation Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: adp28

	cription: (Describe Matrix		R	Redox Feat	tures			
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-9	10YR - 3/2	100	/				SiL	
9-17	10YR - 4/2	95	10YR-5/8	5		М	SiL	
<u> </u>			10::: 0,0					
				-				-
				-				
				-				
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	1S=Masked	d Sand Grai	ns. ²	Location: Pl	 L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	lefined		-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undefi	ned		y Redox (S				Dark Surface (S7)
	listi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5) luck (A10)			iy Gieyed i eted Matrix	Matrix (F2)			Other (Explain in Remarks)
	ed Below Dark Surfac	re (Δ11)		x Dark Sur	` '			³ Indicators of hydrophytic vegetation and whydrology must be present, unless disturb
	eark Surface (A12)	(AII)			Surface (F7)			problematic.
	Mucky Mineral (S1)		 ·	x Depressi	, ,			
	lucky Peat or Peat (S	S3)		0,0.000	(* -)			
Restrictive	Layer (if observed)	:						
Type:						Hyd	dric Soil Pre	esent? Yes <u>✓</u> No
Remarks:	(inches): <u></u> low dark surface							
Remarks:								
Remarks: Depleted be	low dark surface							Pagandary Indicators (minimum of two required)
Remarks: Depleted be YDROLO Wetland Hy	low dark surface		theck all that an	nlvì			<u> </u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Remarks: Depleted be YDROLO Wetland Hy Primary Indi	low dark surface OGY drology Indicators: cators (minimum of o				aves (B9)		<u> </u>	Surface soil cracks (B6)
Remarks: Depleted be YDROLO Wetland Hy Primary Indi Surface	low dark surface		Water-	oply) -stained lea c fauna (B	. ,		5	· · · · · · · · · · · · · · · · · · ·
Remarks: Depleted be YDROLO Wetland Hy Primary Indi Surface	low dark surface OGY drology Indicators: cators (minimum of ce water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B	313)		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati	low dark surface OGY drology Indicators: cators (minimum of ce water (A1) ater table (A2)		Water- Aquatio True a	-stained lea c fauna (B aquatic plar	313)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r	oGY drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B aquatic plan gen sulfide	313) nts (B14)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime	low dark surface OGY Idrology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog Oxidize	estained lea c fauna (B aquatic plan gen sulfide ed rhizosp	813) nts (B14) e odor (C1)	•	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
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SOIL

Project/Site: Lemon Hill	Citv/Cc	ounty: Farmington/Olmsto	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			:: MN Sampling Point: adp29
Investigator(s): Maddie Humphrey			
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.07958		Long: -92.31611	Datum: WGS 84
Soil Map Unit Name: 16: Arenzville silt loam, 0 to 3 percent slopes, oc	casionally f	looded	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology , Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		Is the Sampled Area	
Hydric Soil Present? Yes _ No		Is the Sampled Area within a Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate repo			
Agriculture side slope, seep wetland			
VEGETATION - Use scientific names of plants.		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species Across All Strata: 0 (B)
5			Percent of Dominant Species That
	·	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of:Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 0 x1 = 0
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species 0 x1 = 0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4 5.			1 - Rapid Test for Hydrophytic Vegetation
5 6			2 - Dominance Test is > 50%
7.	·		$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
1			must be present, unless disturbed or problematic.
2	0%	= Total Cover	Hydrophytic Vegetation Present? Yes ✓ No
Demonstra (technic whete		50101	165 - NU
Remarks: (Include photo numbers here or on a separate sheet.) Tiny sedges and other tiny facw plant. Recently planted soybeans			

SOIL Sample Point: adp29

Depth inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Re	emarks
0-12	3/	100	/				SiL	Gley1 2.5 N	sa.r.e
								·	
								-	
ype: C=C	oncentration, D=Dep	letion, RM=F	educed Matrix, M	S=Masked	Sand Grair	ns. ² Lo	ocation: PL	=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problema	tic Hydric Soils ³ :
_ Histoso	l (or Histel) (A1) und	defined	Sandy	y Gleyed M	latrix (S4)			Coast Prairie Redox	
	pipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (` '			Iron-Manganese Mas	ses (F12)
_	en Sulfide (A4)			y Mucky M	` '			Very Shallow Dark S	urface (TF12)
	d Layers (A5)			y Gleyed M				Other (Explain in Rer	•
_	luck (A10) ed Below Dark Surfa	00 (111)		ted Matrix x Dark Surf				³ Indicators of hydrop	hytic vegetation and we
- '	ed Below Dark Surfa Park Surface (A12)	re (VII)			Surface (F7)			problematic.	present, unless disturbe
_	Mucky Mineral (S1)			x Depressio					
_	lucky Peat or Peat (S3)			(* 5)				
strictive	Layer (if observed)):							
	 (inches):					Hydri 	ic Soil Pres	sent?	Yes <u> </u>
	 (inches):					Hydri 	ic Soil Pres	sent?	Yes <u>✓</u> No _
Depth	 (inches):					Hydri 	ic Soil Pre	sent?	Yes <u>✓</u> No _
Depth						Hydri	ic Soil Pre	sent?	Yes <u>✓</u> No _
Depth (marks:	OGY rdrology Indicators:		check all that an	nh à		Hydri	<u>s</u>	econdary Indicators (minir	num of two required)
Depth marks: DROLO tland Hy mary Indi	PGY Pdrology Indicators: cators (minimum of		•		oves (R9)	Hydri	<u>s</u>	econdary Indicators (minir ✓ Surface soil cracks (B6	num of two required)
Depth of marks: DROLO tland Hy mary Indi _ Surface	OGY rdrology Indicators:		Water-	stained lea	` '	Hydri	<u>s</u>	econdary Indicators (minir ✓ Surface soil cracks (B€ _ Drainage patterns (B10	num of two required) S)
Depth of marks: DROLO tland Hy mary Indi Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-	stained lea c fauna (B1	13)	Hydri	<u>s</u>	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table	num of two required) S)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati	drology Indicators: cators (minimum of		Water- Aquation True a	stained lea	13) its (B14)	Hydri	<u>S</u>	econdary Indicators (minir ✓ Surface soil cracks (B€ _ Drainage patterns (B10	num of two required) 5) 0) e (C2)
DROLO tland Hy mary Indi Surface High wa Saturati Water r	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) its (B14)		<u>s</u>	econdary Indicators (minir Surface soil cracks (B1) Drainage patterns (B1) Dry-season water table Crayfish burrows (C8)	num of two required) 5) 5) 6 (C2) erial imagery (C9)
DROLO ctland Hy mary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) ats (B14) odor (C1)	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a	num of two required) 5) 5) 6 (C2) erial imagery (C9) ants (D1)
DROLO ttland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) its (B14) odor (C1) neres along	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on au Stunted or stressed pla	num of two required) 5) 5) 6 (C2) erial imagery (C9) ants (D1)
DROLO tiland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) not deposits (B2) posits (B3)		Water-s Aquation True as Hydrog Oxidizes Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	nts (B14) odor (C1) neres along ced iron (C4)	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (Bt) Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I	num of two required) 5) 5) 6 (C2) erial imagery (C9) ants (D1)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial	one required;	Water-s Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ats (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (Bt) Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I	num of two required) 5) 5) 6 (C2) erial imagery (C9) ants (D1)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) aat or crust (B4) posits (B5)	one required;	Water-s Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surfac	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (Bt) Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I	num of two required) (5) (7) (8) (C2) (C2) (C3) (C4) (C9) (C3) (C4)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	reactions:	one required; imagery (B7) e surface (B8	Water-s Aquation True an Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks)	living roots	<u>s</u>	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (Bt) Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I	num of two required) 5) 5) 6 (C2) erial imagery (C9) ants (D1)
Depth of marks: DROLO Interpretation of the properties of the pr	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present?	one required; imagery (B7) e surface (B8 Yes	Water Aquation True an Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in	tts (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9) Remarks)	living roots 4) I soils (C6)	(C3)	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) (5) (5) (6) (6) (7) (8) (8) (9) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Depth of marks: DROLO Itland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6)	(C3)	econdary Indicators (minir Surface soil cracks (Bt Drainage patterns (Bt) Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I	num of two required) (5) (7) (8) (C2) (C2) (C3) (C4) (C9) (C3) (C4)
Depth of marks: DROLO Itland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser rface Wat ster Table turation P	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	Water Aquation True and Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6)	(C3)	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) (5) (5) (6) (6) (7) (8) (8) (9) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Depth of marks: DROLO Itland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser Iface Wat Iter Table Ituration P	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) lat or crust (B4) posits (B5) ion visible on aerial by vegetated concave fivations: are Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct t iron reduct cuck surfact cor well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillecte (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetla	(C3)	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) (5) (5) (6) (6) (7) (8) (8) (9) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table curation P	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct t iron reduct cuck surfact cor well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillecte (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetla	(C3)	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) (5) (5) (6) (6) (7) (8) (8) (9) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table uration P cludes ca scribe Re	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct t iron reduct cuck surfact cor well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillecte (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetla	(C3)	econdary Indicators (minir Surface soil cracks (Be Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) (5) (5) (6) (6) (7) (8) (8) (9) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1

Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp30
Investigator(s): Maddie Humphrey	Sect	ion, Township, Range: S	507 T107N S012W
Lanform(hillslope, terrace, etc): Sideslope		Local reli	ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08089		_ Long: -92.31818	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1B, R4SBC
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes ✓ No		Is the Sampled Area within a Wetland?	a. Yes No_ <u>✔</u> _
Wetland Hydrology Present? Yes No		within a wettand:	163 100
Remarks: (Explain alternative procedures here or in a separate reposition of side slope between agriculture field and wetland fringe VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3			Total Number of Dominant Species Across All Strata: 1 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 110
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: $\underline{110}$ x1 = $\underline{220}$ (B)
2. Urtica dioica, Stinging Nettle	10%	no FACW	Prevalence Index = B/A = 2.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6.			✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate
10.			sheet)
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

SOIL Sample Point: adp30

Profile Des	cription: (Describe t	to the dept		ıment the edox Feat		confirm	the absence	e of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-20	10YR - 2/1	100	/		<u> </u>		SiL	
20-28	/	100	/				SiL	Gley1 2.5 N
20-20		100					- JIL	Oldy 1 2.5 N
		 -		-				
-		 -		-				
		 -		-				
				-				-
¹ Type: C=C	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	IS=Masked	Sand Grain	ıs. ² L	ocation: PL:	=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	ol (or Histel) (A1) und	efined	Sand	y Gleyed N	/latrix (S4)			Coast Prairie Redox (A16)
	Epipedon (A2) undefi	ned		y Redox (S	•			Dark Surface (S7)
	Histi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				lineral (F1) Matrix (F2)			Very Shallow Dark Surface (TF12)
	ed Layers (A5) Muck (A10)			ted Matrix	` '			Other (Explain in Remarks)
	ed Below Dark Surfac	e (A11)		x Dark Sui				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	Dark Surface (A12)	,			Surface (F7)			problematic.
Sandy	Mucky Mineral (S1)		Redo	x Depressi	ons (F8)			
5 cm M	Mucky Peat or Peat (S	S3)						
Restrictive	Layer (if observed):							
Туре:						Hydı	ric Soil Pres	sent? Yes <u>✓</u> No
Depth	(inches): <u></u>							
HYDROLO	OGY							
_	/drology Indicators:						<u>Se</u>	econdary Indicators (minimum of two required)
	icators (minimum of c e water (A1)	one required		ply) stained lea	2) (OC (PO)			Surface soil cracks (B6)
	ater table (A2)			c fauna (B	` ,		_	Drainage patterns (B10) Dry-season water table (C2)
	tion (A3)			quatic pla	,		_	Crayfish burrows (C8)
	marks (B1)				odor (C1)			Saturation visible on aerial imagery (C9)
Sedime	ent deposits (B2)		Oxidiz	ed rhizosp	heres along	living roots	s (C3)	Stunted or stressed plants (D1)
Drift de	eposits (B3)				uced iron (C4	-	_	Geomorphic position (D2)
	nat or crust (B4)				ction in tilled	soils (C6)) <u> </u>	FAC-neutral test (D5)
	posits (B5)	maganı (D7		nuck surfac				
	tion visible on aerial i ly vegetated concave			or well da (Explain in	Remarks)			
oparson	ly regetated contoure	Sandoc (Bi		(Explain iii	rtemanoj			
-								
Field Obser		Va	a Na d	Dantle (inc	la a a\.			
Surface Wat	ter Present?		SNo			Wetl	and Hydrol	ngy Present? Yes No ✔
	ter Present? e Present?	Ye	s No	Depth (inc	hes): <u></u>	Wetl	and Hydrol	ogy Present? Yes No
Surface Wat Water Table Saturation F	ter Present? e Present?	Ye		Depth (inc	hes): <u></u>	 Wetl 	and Hydrol	ogy Present? Yes No ✓
Surface Wat Water Table Saturation F (includes ca	ter Present? Present? Present?	Ye Ye	S No S No	Depth (inc Depth (inc	hes): <u></u> hes): <u></u>	_		ogy Present? Yes No
Surface Wat Water Table Saturation F (includes ca	ter Present? Present? Present? apillary fringe)	Ye Ye	S No S No	Depth (inc Depth (inc	hes): <u></u> hes): <u></u>	_		ogy Present? Yes No ✓
Surface Wat Water Table Saturation F (includes ca	ter Present? Present? Present? apillary fringe)	Ye Ye	S No S No	Depth (inc Depth (inc	hes): <u></u> hes): <u></u>	_		ogy Present? Yes No 🗸
Surface Wat Water Table Saturation F (includes ca	ter Present? Present? Present? apillary fringe)	Ye Ye	S No S No	Depth (inc Depth (inc	hes): <u></u> hes): <u></u>	_		ogy Present? Yes No
Surface Wat Water Table Saturation F (includes ca	ter Present? Present? Present? apillary fringe)	Ye Ye	S No S No	Depth (inc Depth (inc	hes): <u></u> hes): <u></u>	_		ogy Present? Yes No

Project/Site: Lemon Hill		-				
Applicant/Owner: Ranger Power				<u> </u>	Sampling Point: <u>a</u>	1ap31
Investigator(s): Maddie Humphrey						
				ef (concave, convex,		20.04
Slope(%): 0-2		_ Long: <u>-92.</u> .				
Soil Map Unit Name: <u>468: Otter silt loam, channeled</u>		Vo			cation: <u>PEM1B, R4S</u> iin in Remarks.)	ВС
Are climatic / hydrologic conditions on the site typical for this time of	•		es / No	`	,	
<u> </u>	itly disturbed?			Circumstances" pres		,
Are Vegetation, Soil, or Hydrology naturally	problematic?	(IT	needed, ex	plain any answers ir	1 Remarks.)	
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point	location	s, transects, in	nportant featur	es, etc.
· .				-, ,	•	
Hydrophytic Vegetation Present? Yes ✓ ! Hydric Soil Present? Yes ✓ !			mpled Area	ı	.,	
Wetland Hydrology Present? Yes 🗸		within a	Wetland?		Yes	No
Remarks: (Explain alternative procedures here or in a separate re	eport.)					
Wetland fringe	, ,					
VEGETATION - Use scientific names of plants.						
T 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Dominant		Dominance Test	Workshoot	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status			
1				Number of Domina Are OBL, FACW,		1 (A)
3.					_	、 ,
4				Total Number of D Across All Strata:	ominant Species	<u>1</u> (B)
5.				Percent of Domina	ant Species That	
	0%	= Total Cov	/er	Are OBL, FACW,		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1				Total % Cov	ver of: Mi	ultiply by:
2				OBL species	0 x1 =	<u>-</u>
3				FACW species	100 x1 =	<u> </u>
4				FAC species	10 x1 =	·
5				FACU species	0 x1 =	<u> </u>
Harbanana Chatan (Dlat ciras f (4 f rs) radius OD 2.20 hu 2		= Total Cov		UPL species	0 x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3. 1. Phalaris arundinacea, Reed Canary Grass		yes	FACW	Column Totals:	110 x1 =	230 (B)
Ambrosia trifida, Great Ragweed	10%	no	FAC	Prevale	ence Index = B/A =	、,
Urtica dioica, Stinging Nettle	F0/	no	FACW	Hydrophytic Veg	etation Indicators:	
4			17.000			
5.					st for Hydrophytic Ve	egetation
6.				<u>✓</u> 2 - Dominano		
7					ce Index is <= 3.0 ¹	
8					gical Adaptations ¹ (F ata in Remarks or or	
9				sheet)	ala iii Remarks or or	i a separate
10				PROBLEMAT	TIC Hydrophytic Veg	etation ¹ (Explain)
	110%	= Total Cov	/er	¹ Indicators of	f hydric soil and wetl	and hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					esent, unless disturbe	
1.				Hydrophytic		
2		- Total Cov		Vegetation	Vo	as 🗸 No
	0%	= Total Cov	/ei	Present?		es _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)						

rofile Desc	cription: (Describe Matrix	to the depti		ument the ledox Feat		r confirm	the abser	nce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	e Remarks
0-35	10YR - 2/1	100	/				SiL	
35-38	10YR - 2/1	98	10YR-4/6	2		M	SiL	
Type: C=Co	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	IS=Masked	d Sand Grai	ns. ²	Location: I	PL=Pore Lining, M=Matrix.
-	Indicators:			o				Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed N y Redox (S				Coast Prairie Redox (A16)
	pipedon (A2) undef i listi (A3) undefined	irieu	·	ed Matrix				Dark Surface (S7)
	en Sulfide (A4)				lineral (F1)			Iron-Manganese Masses (F12)
_ ′ ′	d Layers (A5)			y Gleyed N				Very Shallow Dark Surface (TF12)
	uck (A10)			ted Matrix				Other (Explain in Remarks)
	d Below Dark Surfac	re (Δ11)		x Dark Sur				³ Indicators of hydrophytic vegetation and hydrology must be present, unless distur
	ark Surface (A12)	50 (AII)			Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depressi				
_ ′	ucky Peat or Peat (S3)		. 2 ор. осс.	oo (. o)			
estrictive	Layer (if observed)	:						
						Hyd	ric Sail D	resent? Yes ✓ N
Type:						···yu	IIC JUII F	
Depth ((inches):	of hydrophy	tic vegetation and	hydrology	indicators.	1194	ine don P	
Depth (Remarks: Assume hyd	(inches): iric due to presence	of hydrophy	tic vegetation and	hydrology	indicators.		inc 30ii F	
Depth (Remarks: Assume hydrology)	(inches): iric due to presence		tic vegetation and	hydrology	indicators.	,,	ilic goli F	Secondary Indicators (minimum of two required)
Depth (Remarks: Assume hydrology) /DROLO Vetland Hy	(inches): ric due to presence				indicators.		inc 30ii F	
Depth (Remarks: Assume hydronic hydrology) Toronto Depth (Primary India hydronic hydrology)	(inches): ric due to presence GY drology Indicators:		l; check all that ap					Secondary Indicators (minimum of two required)
Depth (Remarks: Assume hydronic hydrology) Vetland Hydrimary India Surface	GY drology Indicators: cators (minimum of others):		l; check all that ap Water-	pply)	aves (B9)			Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth (Remarks: Assume hydronic hydrology) Vetland Hydrimary India Surface	GY drology Indicators: cators (minimum of owater (A1) ater table (A2)		l; check all that ap Water- Aquati	oply) stained lea	aves (B9)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Depth (Demarks: Sume hyde Demarks: De	GY drology Indicators: cators (minimum of owater (A1) ater table (A2)		l; check all that ap Water- Aquati True a	oply) estained lea c fauna (B	aves (B9) 13) nts (B14)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (Remarks: Assume hyde //DROLO //DROLO //Imary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		l; check all that ap Water- Aquati True a	pply) stained lea c fauna (B quatic plar gen sulfide	aves (B9) 13) nts (B14)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (Remarks: ASSUME hyd TDROLO Vetland Hy Trimary India Surface High wa Saturati Water n Sedime	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) marks (B1)		l; check all that ap Water- Aquati True a Hydroq Oxidiz	oply) stained lea c fauna (B quatic plar gen sulfide ed rhizospl	aves (B9) 13) nts (B14) odor (C1)	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (Depth (Demarks: Lessume hyde TDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift del Algal m	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		I; check all that ap Water- Aquati True a Hydrog Oxidiz Preser	oply) stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (Remarks: Assume hyde /DROLO /Petland Hy rimary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	I; check all that ap Water- Aquati True a Hydroi Oxidiz Preser Recen	oply) -stained lea c fauna (B iquatic plar gen sulfide ed rhizospl nce of redu t iron redu	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (Demarks: Assume hyder Demarks: Assume hyder Demarks: Assume hyder Demarks: Demarks	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	I; check all that ap Water- Aquati True a Hydrot Oxidiz Preser Recen Thin n	oply) stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			State	
Investigator(s): Maddie Humphrey	Sect	tion, Townsh	ip, Range: S	S13 T107N S013W
Lanform(hillslope, terrace, etc): Stream Terrace			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07818		Long: -92.	.32725	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
_				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	ampled Area	9
Hydric Soil Present? Yes <u>✓</u> No Wetland Hydrology Present? Yes <u>✓</u> No			Wetland?	Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate reportance stream terrace	irt.)			
. 9				
VEGETATION - Use scientific names of plants.				
•	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status	Dominance Test Worksheet
1. Acer saccharinum , Silver Maple	30%	yes	FACW	Number of Dominant Species That
2. Juglans nigra, Black Walnut	30%	yes	FACU	Are OBL, FACW, or FAC:3 (A)
3. <u>Ulmus americana</u> , American Elm	10%	no	FACW	Total Number of Dominant Species Across All Strata: 4 (B)
4				、 ,
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
Capling (Church Chroture (Diet size (15 ft (4 C ps) redive)	70%	= Total Co	ver	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species 160
5.				FAC species 30 x1 = 90
	0%	= Total Co	ver	FACU species 50 x1 = 200
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadra	nt)	UPL species 0 x1 = 0
Impatiens capensis, Spotted Touch-Me-Not	70%	yes	FACW	Column Totals: $\underline{240} \text{ x1} = \underline{610} \text{ (B)}$
2. Pilea pumila, Canadian Clearweed	30%	yes	FACW	Prevalence Index = B/A =2.542
3. <u>Hackelia virginiana</u> , Virginia stickseed	20%	no	FACU	Hydrophytic Vegetation Indicators:
4. <u>Phalaris arundinacea</u> , Reed Canary Grass	15%	no	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. <u>Ribes cynosbati</u> , Eastern Prickly Gooseberry		no	FAC	2 - Dominance Test is > 50%
6. Hydrophyllum virginianum, Shawnee-Salad	10%	no	FAC	$\underline{\checkmark}$ 3 - Prevalence Index is $\le 3.0^1$
7. Alliaria petiolata, Garlic-Mustard	5%	no	FAC	4 - Morphological Adaptations ¹ (Provide
8. <u>Dryopteris carthusiana</u> , Spinulose Wood Fern		no	<u>FACW</u>	supporting data in Remarks or on a separate sheet)
9				
10	170%	= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	21070	Total Co	V 01	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

	ription: (Describe t Matrix			Redox Featu	ures		tile abser	ioc of maloatorsiy	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Re	marks
0-20	10YR - 2/1	100	/				SiCL		
20-38	10YR - 2/1	90	7.5YR-3/4	10	C	M	SiCL		
								<u> </u>	
ype: C=Co	ncentration, D=Depl	letion, RM=F	 Reduced Matrix, M	IS=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problemati	c Hydric Soils ³ :
	(or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
_	pipedon (A2) undefi	ned	· · · · · · · · · · · · · · · · · · ·	y Redox (S				Dark Surface (S7)	
	isti (A3) undefined			ed Matrix (Iron-Manganese Mass	es (F12)
	en Sulfide (A4)			y Mucky M				Very Shallow Dark Su	rface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Rem	arks)
_ 2 cm Mi	uck (A10)		Deple	eted Matrix	(F3)			³ Indicators of hydroph	ytic vegetation and wet
_ Depleted	d Below Dark Surfac	e (A11)	Redo:	x Dark Sur	face (F6)			hydrology must be p	resent, unless disturbed
Thick Da	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.	
_ Sandy N	Mucky Mineral (S1)		Redo:	x Depression	ons (F8)				
_ 5 cm Mu	ucky Peat or Peat (S	33)							
strictive L	_ayer (if observed)	:				l			
-									Yes 🗸 No
marks:	inches): ric due to presence	of hydrophyt	ic vegetation and	hydrology	indicators.	Hyd	ric Soil P	resent?	
Depth (i	ric due to presence	of hydrophyt	ic vegetation and	hydrology	indicators.	Hyd	ric Soli Pi	resent?	
Depth (i	ric due to presence		ic vegetation and	hydrology	indicators.	Hyd	ric Soil Pi		
Depth (i	ric due to presence		-		indicators.	Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6)	um of two required)
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Depth (imary Indicates	GY drology Indicators:		; check all that ap Water-	oply)	aves (B9)	Hyd	ric Soil Pi	Secondary Indicators (minim Surface soil cracks (B6)	um of two required)
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Depth (interpretation of the property of the p	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in a vegetated concave	one required	; check all that ap Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge	oply) -stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu at iron reduct e or well da	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
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Depth (interpretation of the property of the p	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial if of vegetated concave vations: er Present?	one required; imagery (B7) e surface (B8	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	oply) -stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduct nuck surface or well da (Explain in	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
Depth (imary Indices Saturation Sedit Observation Princes Saturation P	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) oosits (B3) at or crust (B4) oosits (B5) on visible on aerial if of vegetated concave vations: er Present? Present?	one required; imagery (B7) e surface (B8 Yes	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	eply) -stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduc nuck surfac e or well da (Explain in Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1) 2)
Depth (imary Indices Saturation Sedit Observation Princes Saturation P	GY drology Indicators: eators (minimum of of water (A1) eter table (A2) on (A3) eats (B1) ent deposits (B2) eat or crust (B4) easits (B5) en visible on aerial if of vegetated concave evations: er Present?	one required; imagery (B7) e surface (B8 Yes	check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No	eply) -stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduc nuck surfac e or well da (Explain in Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along iced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1) 2)
Depth (interpretation Procedures and interpretation Procedures and	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) oosits (B3) at or crust (B4) oosits (B5) on visible on aerial if of vegetated concave vations: er Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	oply) -stained lea c fauna (B: equatic plan gen sulfide ed rhizosph nce of redu at iron reduct cor well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1)
Depth (interpretation of the content	ric due to presence GY drology Indicators: cators (minimum of content of the cators (minimum of	one required; imagery (B7) e surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	oply) -stained lea c fauna (B: equatic plan gen sulfide ed rhizosph nce of redu at iron reduct cor well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1)
Depth (interpretation Procludes capetation Proclude	ric due to presence GY drology Indicators: cators (minimum of content of the cators (minimum of	one required; imagery (B7) e surface (B8 Yes Yes	check all that ap Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	oply) -stained lea c fauna (B: equatic plan gen sulfide ed rhizosph nce of redu at iron reduct cor well da (Explain in Depth (inch Depth (inch	aves (B9) 13) nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1)

Project/Site: Lemon Hill	City/Co	ounty: Olmst	ed County	Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power				: MN Sampling Point: adp33
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: <u>S</u>	13 T107N S013W
Lanform(hillslope, terrace, etc): Toeslope			Local relie	ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.07818</u>		Long: -92.	.32724	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this tin	ne of year?	Ye	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Signific	cantly disturbed?	A	re "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology natura	lly problematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map sho	owing sampl	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No <u> </u>			
	No		ampled Area Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes	No <u> </u>			
Remarks: (Explain alternative procedures here or in a separat	e report.)			
Forested toeslope below forested 3-7 percent slope				
VEGETATION - Use scientific names of plants.				
		Dominant		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
Juglans nigra, Black Walnut	60%	yes	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. <u>Populus deltoides</u> , <u>Eastern Cottonwood</u>			<u>FAC</u>	
3.				Total Number of Dominant Species Across All Strata: 6 (B)
4				, 、 ,
5		= Total Cov		Percent of Dominant Species That Are OBL, FACW, or FAC: 33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		- 10tai Co	VCI	Dravalance Index worksheet
Juglans nigra, Black Walnut	20%	ves	FACU	Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 0 x1 = 0
4.				FACW species 40
5				FAC species $45 \times 1 = 135$
	20%	= Total Cov	ver	FACU species 180
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by	3.28-ft square (1	m²) quadra	at)	UPL species <u>0</u> x1 = <u>0</u>
Rubus idaeus, Common Red Raspberry	70%	yes	FACU	Column Totals: $\underline{265} \times 1 = \underline{935} (B)$
2. Parthenocissus quinquefolia, Virginia-Creeper	30%	yes	FACU	Prevalence Index = B/A = 3.528
3. Pilea pumila, Canadian Clearweed	30%	yes	FACW	Hydrophytic Vegetation Indicators:
Ribes cynosbati, Eastern Prickly Gooseberry		no	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. <u>Hydrophyllum virginianum</u> , Shawnee-Salad		no	FAC	2 - Dominance Test is > 50%
6. Dryopteris carthusiana, Spinulose Wood Fern	10%	no	FACW	3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8.				supporting data in Remarks or on a separate
9.				sheet)
10		= Total Cov		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		- Total Cov	vei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2				Vegetation
	0%	= Total Cov	ver	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate shee	t.)			

SOIL Sample Point: adp33

Profile Desc	cription: (Describe Matrix	to the dep		iment the		r confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-17	10YR - 2/1	100	/				SiCL	
17-25	10YR - 4/2	95	10YR-3/6	5	C	М	SiCL	
					·		-	
							_	
								_
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grair	ns.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol	l (or Histel) (A1) und	defined	Sandy	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	Redox (S	S5)			Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
	en Sulfide (A4)				/lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)
	uck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and wetland
	d Below Dark Surfa	ce (A11)		x Dark Sui				hydrology must be present, unless disturbed or problematic.
	ark Surface (A12)				Surface (F7)			problemator
	Mucky Mineral (S1) ucky Peat or Peat (S3)	Redox	x Depressi	ions (F8)			
	Layer (if observed)	-	_					
Type:						Hyd	dric Soil Pr	esent? Yes <u>✓</u> No
	(inches):					_ ´		· · · · · · · · · · · · · · · · · · ·
Remarks:						•		
l								
HYDROLO	GY							
Wetland Hy	drology Indicators:							Secondary Indicators (minimum of two required)
Primary Indi	cators (minimum of	one require	d; check all that ap	ply)				Surface soil cracks (B6)
	water (A1)			stained lea	, ,		,	Drainage patterns (B10)
	ater table (A2)		 '	c fauna (B	,			Dry-season water table (C2)
Saturati				quatic plai			,	Crayfish burrows (C8)
	narks (B1)				odor (C1)	Distance of the second	t- (OO)	Saturation visible on aerial imagery (C9)
	nt deposits (B2)			-	heres along	-	ots (C3)	Stunted or stressed plants (D1)
	posits (B3) at or crust (B4)				uced iron (Ca action in tilled	-	6)	Geomorphic position (D2) FAC-neutral test (D5)
	oosits (B5)			uck surfac		1 30113 (C		1 AC-neutral test (D3)
	ion visible on aerial	imagery (B		or well da	` '			
	y vegetated concave				Remarks)			
Field Obser	vations:							
Surface Wat		Y.	es No 🗸 [Depth (inc	:hes):			
Water Table			es No [We	tland Hydro	ology Present? Yes No 🗸
Saturation P	resent?		es No 🗸 [_		
(includes ca	pillary fringe)							
Describe Re	corded Data (strean	າ gauge, m	onitoring well, aeria	l photos, p	orevious insp	ections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmsto	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: adp34
Investigator(s): Maddie Humphrey	Section	on, Township, Range: S	S13 T107N S013W
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.06516		Long: -92.32411	Datum: WGS 84
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 No	o (If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significa	ntly disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally	problematic?	(If needed, ex	plain any answers in Remarks.)
-			
SUMMARY OF FINDINGS - Attach site map show	wing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Area	
Hydric Soil Present? Yes		within a Wetland?	Yes No
Wetland Hydrology Present? Yes <u>✓</u>			
Remarks: (Explain alternative procedures here or in a separate Slight depression in agriculture field north of County Road 2 NE			
Signic depression in agriculture field florar of equity fload 2 No.	•		
VEGETATION - Use scientific names of plants.			
VEGETATION - OSC SCIENCING Haines of plants.	Absoluto	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4			Across All Strata:0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sanling/Chrub Stratum (Dlat ciza:15 ft (4.6 m) radius)	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of:Multiply by:
3.			OBL species0 x1 =0
4			FACW species0 x1 =0
5			FAC species 0 x1 = 0
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3	3.28-ft square (1-	·m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN NaN
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2		- Total Cover	Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted corn)		

ofile Des	cription: (Describe Matrix	to the depth		iment the i		r confirm	the absen	nce of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-10	10YR - 3/2	100	/				SiL		
10-26	10YR - 2/1	100	/				SiL		
rpe: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:			GI 1.1				Indicators for Problemati	c Hydric Soils ³ :
-	l (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
_	pipedon (A2) undefi	nea	·	Redox (S				Dark Surface (S7)	
_	listi (A3) undefined			ed Matrix (y Mucky M	. ,			Iron-Manganese Mass	
	en Sulfide (A4)				` ,			Very Shallow Dark Su	
	d Layers (A5)			y Gleyed M				Other (Explain in Rem	•
_	luck (A10)	20 (411)		ted Matrix				³ Indicators of hydroph	ytic vegetation and we
- '	ed Below Dark Surfac	e (AII)		x Dark Surf				problematic.	resent, unless disturbe
	Park Surface (A12) Mucky Mineral (S1)			x Depressio	Surface (F7)			,	
	lucky Peat or Peat (S	53)	Kedo	Depression	ulis (Fo)				
	Layer (if observed)	*							
Type:	<u> </u>					Hyd	ric Soil Pr	resent?	Yes No _
Depth marks:	(inches): <u></u>					_			
marks:						_			
marks:	o G Y							Secondary Indicators (minim	rum of two required)
DROLO	OGY drology Indicators:		check all that an	nlv				Secondary Indicators (minim	
DROLO	PGY drology Indicators: cators (minimum of o				aves (B9)			Surface soil cracks (B6)	
DROLO tland Hy mary Indi _ Surface	drology Indicators: cators (minimum of o		Water-	stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	
DROLO tland Hy mary Indi Surface High wa	oGY rdrology Indicators: cators (minimum of of water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B1	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	
DROLO tland Hy mary Indi Surface High wa Saturat	order of the control		Water- Aquation True a	stained lea c fauna (B1 quatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
DROLO tland Hy mary Indi Surface High wa Saturat Water r	oGY rdrology Indicators: cators (minimum of of water (A1) ater table (A2)		Water- Aquation True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) nts (B14)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	order (A1) atter table (A2) ion (A3) marks (B1) int deposits (B2)		Water- Aquation True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ats (B14) odor (C1) neres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	exactors (minimum of of of exactors (minimum of of of exactors (minimum of		Water- Aquation True a Hydrog Oxidize Preser Recen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	nts (B14) odor (C1) neres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
PROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of of exwater (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required;	Water- Aquation True a Hydrog Oxidize Preser Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along iced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	exactors (minimum of of of exactors (minimum of of of exactors (minimum of	one required;	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ats (B14) odor (C1) neres along aced iron (C ction in tilled be (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	edrology Indicators: cators (minimum of of exwater (A1) ater table (A2) ion (A3) marks (B1) iont deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in by vegetated concave	one required; imagery (B7) e surface (B8)	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in	ats (B14) odor (C1) neres along aced iron (C ction in tilled the (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
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Project/Site: Lemon Hill	City/Co	unty. Olmsted County	Samp	ling Date: 2024-06-03
Applicant/Owner: Ranger Power		,	: MN Sampl	
Investigator(s): Maddie Humphrey				g . o <u></u>
Lanform(hillslope, terrace, etc): Depression	Scci		ef (concave, convex, none): C	oncave
Slope(%): 0-2 Lat: 44.06654			<u>-</u>	
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 1				
Are climatic / hydrologic conditions on the site typical for			(If no, explain in Rem	
, , , , , , , , , , , , , , , , , , , ,	•			
Are Vegetation , Soil , or Hydrology Are Vegetation , Soil , or Hydrology	Significantly disturbed?		Circumstances" present? Yes plain any answers in Remark	
Are vegetation , Soil , or Hydrology	naturally problematic?	(ii needed, ex	piain any answers in Remark	5.)
SUMMARY OF FINDINGS - Attach site ma	ap showing sampli	ng point location	s, transects, importar	nt features, etc.
Hydrophytic Vegetation Present?	es No <u> </u>			
	es No <u> </u>	Is the Sampled Area within a Wetland?	ı	Vos No 🗸
Wetland Hydrology Present?	es <u> </u>	within a welland?		Yes No
Remarks: (Explain alternative procedures here or in a	separate report.)			
Slight depression in agriculture field north of County R	oad 2 NE.			
VEGETATION - Use scientific names of p	lants.			
		Dominant Indicator	Danis Tank Wadalaha	-4
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Workshe	et
1.			Number of Dominant Speci Are OBL, FACW, or FAC:	es That0 (A)
2			Ale OBL, FACW, OF FAC.	<u>_</u> (A)
3.			Total Number of Dominant Across All Strata:	Species0 (B)
4 5.				
5		= Total Cover	Percent of Dominant Specie Are OBL, FACW, or FAC:	es That0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		10141 00101	Prevalence Index worksho	oot·
1.				
2.			Total % Cover of:	
3				<u>0</u> x1 = <u>0</u>
4			FACW species	<u> </u>
5			· · · · · · · · · · · · · · · · · · ·	<u>0</u> x1 = <u>0</u>
	0%	= Total Cover	•	<u>0</u> x1 = <u>0</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR	3.28- by 3.28-ft square (1-	-m²) quadrat)	UPL species	<u>0</u> x1 = <u>0</u>
1			Column Totals:	<u>0</u> x1 = <u>0</u> (B)
2			Prevalence Inde	x = B/A = NaN
3			Hydrophytic Vegetation In	ndicators:
4			1 - Rapid Test for Hyd	rophytic Vegetation
5			2 - Dominance Test is	> 50%
6.			3 - Prevalence Index i	s <= 3.0 ¹
7.			4 - Morphological Ada	
8.			supporting data in Rer	narks or on a separate
9			sheet)	
10.		= Total Cover	PROBLEMATIC Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		Total Cover		oil and wetland hydrology
1			must be present, unle	ess disturbed or problematic.
2.			Hydrophytic	
		= Total Cover	Vegetation Present?	Yes No ✔
Remarks: (Include photo numbers here or on a separa	eta shaat)			
Recently planted corn	ne sneet.)			

Depth	cription: (Describe Matrix		R	Redox Feati	ures				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	rks
0-6	10YR - 3/2	100	/				SiL		
6-13	10YR - 3/2	98	10YR-5/8	2	C	M	SiL		
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	d Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	
Histosol Histic E Black H Hydroge Stratifie 2 cm M Deplete Thick D Sandy N	Indicators: I (or Histel) (A1) und spipedon (A2) undefined en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) ucky Peat or Peat (S	ce (A11)	Sandy Stripp Loam Loam Deple Redox	y Gleyed Neted Matrix x Dark Sur	(S5) (S6) Mineral (F1) Matrix (F2) (F3) face (F6) Gurface (F7)			Indicators for Problematic H Coast Prairie Redox (A16 Dark Surface (S7) Iron-Manganese Masses Very Shallow Dark Surface Other (Explain in Remark Indicators of hydrophytic hydrology must be pres problematic.	(F12) ce (TF12) cs) c vegetation and we
strictive	Layer (if observed)	:					wie Ceil D	rocont2	Yes No
Type: Depth (marks:	 (inches): <u></u>					Hyd	ric Soil Pi	esent?	
Depth (Hyd	ric Soli Pi	esent?	
Depth (marks:						Hyd	ric Soli Pi	Secondary Indicators (minimum	
Depth (marks:	GY		; check all that ap	ply)		Hyd	ric Soli Pi		
Depth (marks: DROLO tland Hy mary India Surface	drology Indicators: cators (minimum of o		Water-	stained lea	, ,	Hyd	nic Soli Pi	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10)	of two required)
Depth (marks: DROLO tland Hy mary India Surface High wa	drology Indicators: cators (minimum of of water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)	Hyd	ric Soli Pi	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2	of two required)
Depth (marks: DROLO tland Hy mary India Surface High wa Saturati	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained lea c fauna (Ba quatic plan	13) nts (B14)	Hyd	ric Soli Pi	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	of two required)
Depth (marks: DROLO tland Hy mary India Surface High wa Saturati Water n	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (Bi quatic plan gen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial	of two required) 2) imagery (C9)
Depth (marks: DROLO tland Hy mary India Surface High wa Saturati Water n Sedime	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root		Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants	of two required) 2) imagery (C9)
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Project/Site: Lemon Hill	City/Co	unty: Farmi	naton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power	City/Cc			: MN Sampling Point: adp36
Investigator(s): Maddie Humphrey	Sect			
				ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.0787			_	
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1C, PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es , No	
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro				plain any answers in Remarks.)
		,		
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	Yes No _ ✓
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate repo	ort.)			
Forested side slope between agriculture field and stream				
VEGETATION - Use scientific names of plants.				
Tree Otreture (Diet sies 00 ft (0 ft m) andies)		Dominant Species?		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	
Acer saccharinum , Silver Maple 2.	50%		FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2. 3.				Total Number of Dominant Species
4.				Across All Strata: 4 (B)
5.				Percent of Dominant Species That
	50%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. Fraxinus pennsylvanica, Green Ash	80%	yes	FACW	Total % Cover of: Multiply by:
2. Lonicera tatarica, Twinsisters	15%	no	FACU	
3				OBL species $0 \times 1 = 0$ FACW species $190 \times 1 = 380$
4				FAC species 85 x1 = 255
5				FACU species 15 x1 = 60
		= Total Co	-	UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, .	,	Column Totals: 290 x1 = 695 (B)
Ribes cynosbati, Eastern Prickly Gooseberry	60%	yes	FAC	Prevalence Index = B/A = 2.397
Impatiens capensis, Spotted Touch-Me-Not Hydrophyllum virginianum, Shawnee-Salad	50% 15%	yes no	FACW FAC	
A Adia a constant of the state	100/	no	FACW	Hydrophytic Vegetation Indicators:
Arisaema tripnyiium, Jack-in-the-Pulpit Viola sororia, Hooded Blue Violet			FAC	1 - Rapid Test for Hydrophytic Vegetation
6			TAC	✓ 2 - Dominance Test is > 50%
7.				3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	145%	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
	0%	= Total Co	ver	Present? Yes _ V No
Remarks: (Include photo numbers here or on a separate sheet.)				

	Matrix			Redox Feat			tile absenc	e of indicators.)	
Depth nches) C	olor (moist)	<u></u> %	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Rem	arks
0-13 1	L0YR - 2/1	100	/				SiL		
3-19		100	/				SiL	Gley1 2.5 N	
pe: C=Concer	ntration, D=Dep	letion, RM=R	educed Matrix, N	/IS=Masked	 I Sand Grai	ns. 2	Location: PL		
lric Soil Indic								Indicators for Problematic	Hydric Soils ³ :
•	Histel) (A1) und			ly Gleyed M				Coast Prairie Redox (A1	L6)
•	lon (A2) undefi	ned	·	ly Redox (S				Dark Surface (S7)	
_	A3) undefined			ped Matrix (Iron-Manganese Masses	` '
Hydrogen Su	` ,			ny Mucky M	` '			Very Shallow Dark Surfa	
Stratified Lay				ny Gleyed N				Other (Explain in Remai	rks)
2 cm Muck (•	(444)		eted Matrix				³ Indicators of hydrophyt	ic vegetation and we
- '	low Dark Surfac	:e (AII)		ox Dark Sur	. ,			hydrology must be pre problematic.	sent, unless disturbe
Thick Dark S	· ·				Surface (F7)			P . • • • • • • • • • • • • • • • • • • •	
-	y Mineral (S1) Peat or Peat (S	23)	Reuc	x Depression	ons (Fo)				
•	r (if observed):	*							
•						Hyd	ric Soil Pre	esent?	Yes ✔ No
Type:									
Type: Depth (inche marks:									
Depth (inche						_			
Depth (inche marks:							s	Secondary Indicators (minimu	m of two required)
Depth (inche marks:	es):		check all that a	pply)		_	<u> </u>	Secondary Indicators (minimu Surface soil cracks (B6)	n of two required)
Depth (inche marks:	egy Indicators: s (minimum of c			pply) -stained lea	aves (B9)	_	<u> </u>		m of two required)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators	ogy Indicators: s (minimum of cer (A1)		Water		. ,			Surface soil cracks (B6)	
Depth (inche narks: DROLOGY tland Hydrologary Indicators Surface water	ogy Indicators: s (minimum of cor (A1) able (A2)		Water Aquat	-stained lea	13)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water to	ogy Indicators: s (minimum of coer (A1) able (A2)		Water Aquat True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	C2)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface water High water to a saturation (A	ogy Indicators: s (minimum of coer (A1) able (A2) a) (B1)		Water Aquat True a Hydro	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph	13) nts (B14) odor (C1) heres along	-	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	C2) al imagery (C9)
Depth (inche narks: DROLOGY tland Hydrolo nary Indicators Surface wate High water ta Saturation (A	egy Indicators: s (minimum of cer (A1) able (A2) a3) (B1) posits (B2)		Water Aquat True a Hydro	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph	13) nts (B14) odor (C1)	-	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water to saturation (A water marks) Sediment de	egy Indicators: s (minimum of cer (A1) able (A2) a3) (B1) posits (B2) s (B3)		Water Aquat True a Hydro Oxidiz Prese	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu	13) nts (B14) odor (C1) heres along	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Cayfish burrows (C8) Saturation visible on aeria	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits	egy Indicators: s (minimum of oter (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4)		Water Aquat True a Hydro Oxidiz Prese Recer	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) al imagery (C9) s (D1)
PROLOGY Cland Hydrolo mary Indicators Surface wate High water to Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits	egy Indicators: s (minimum of oter (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4)	one required;	Water Aquat True a Hydro Oxidiz Prese Recer	r-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu nt iron reduc	nts (B14) odor (C1) heres along uced iron (C ction in tilled the (C7)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) al imagery (C9) s (D1)
PROLOGY Itland Hydrolo mary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi	egy Indicators: s (minimum of cer (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4)	one required;	Water Aquat True a Hydro Oxidiz Prese Recer Thin r	r-stained lea ic fauna (B: aquatic plan gen sulfide ted rhizosph nce of redu nt iron reduce nuck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg	egy Indicators: s (minimum of cor (A1) able (A2) A3) (B1) posits (B2) s (B3) crust (B4) s (B5) sible on aerial interpretated concave	one required; imagery (B7) e surface (B8	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	r-stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg Id Observatio face Water Pr	es): orgy Indicators: s (minimum of cer (A1) able (A2) a3) (B1) posits (B2) crust (B4) crust (B4) s (B5) sible on aerial i petated concave	imagery (B7) e surface (B8	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gaug Other	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant: Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg Id Observatio face Water Pres	es): regy Indicators: s (minimum of cer (A1) able (A2) a3) (B1) posits (B2) crust (B4) s (B5) sible on aerial i petated concave esent? ent?	imagery (B7) e surface (B8 Yes Yes	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gaugr Other	r-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphane of redunt iron reduction with the control of the control o	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrolomary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg Id Observatio face Water Pr	es): regy Indicators: s (minimum of or (A1) able (A2) A3) (B1) posits (B2) s (B3) crust (B4) s (B5) sible on aerial in petated concave ins: esent? ent?	imagery (B7) e surface (B8 Yes Yes	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gaug Other	r-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphane of redunt iron reduction with the control of the control o	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant: Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)
PROLOGY tland Hydrolo mary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg d Observatio face Water Pr ter Table Prese uration Preser ludes capillary	ogy Indicators: s (minimum of cor (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4) s (B5) sible on aerial i petated concave ins: esent? ent? of fringe)	imagery (B7) e surface (B8 Yes Yes	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gaugr Other	-stained leadic fauna (B: aquatic planagen sulfide ted rhizosphane of redunt iron reduction well da (Explain in Depth (inch. Depth (inch.	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3) s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant: Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY tland Hydrologiany Indicators: Surface water High water to Saturation (A Water marks) Sediment de Drift deposits. Algal mat or Iron deposits: Inundation vices Sparsely vegodo dobservation face Water Proter Table Presuration Preservation	ogy Indicators: s (minimum of cor (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4) s (B5) sible on aerial i petated concave ins: esent? ent? of fringe)	imagery (B7) e surface (B8 Yes Yes		-stained leadic fauna (B: aquatic planagen sulfide ted rhizosphane of redunt iron reduction well da (Explain in Depth (inch. Depth (inch.	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3) s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant: Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)
Depth (inche marks: DROLOGY Itland Hydrologinary Indicators Surface wate High water ta Saturation (A Water marks Sediment de Drift deposits Algal mat or Iron deposits Inundation vi Sparsely veg Itld Observation face Water Preservation Preservation Preservations Indes capillary	ogy Indicators: s (minimum of cor (A1) able (A2) a3) (B1) posits (B2) s (B3) crust (B4) s (B5) sible on aerial i petated concave ins: esent? ent? of fringe)	imagery (B7) e surface (B8 Yes Yes		-stained leadic fauna (B: aquatic planagen sulfide ted rhizosphane of redunt iron reduction well da (Explain in Depth (inch. Depth (inch.	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3) s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant: Geomorphic position (D2) FAC-neutral test (D5)	C2) al imagery (C9) s (D1)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power				: MN Sampling Point: adp37
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: S	13 T107N S013W
Lanform(hillslope, terrace, etc): Stream Terrace			Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07865		Long: -92.	32543	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1C, PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(It	f needed, ex	plain any answers in Remarks.)
	_			
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	ampled Area	1
Hydric Soil Present? Yes Wetland Hydrology Present? Yes No			Wetland?	Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate repo				
Stream wetland fringe	, i.,			
VECTATION . Has accountific marrow of mlarets				
VEGETATION - Use scientific names of plants.	Δhsolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata: 1 (B)
5.	0%	= Total Cov	uor.	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	<u> </u>	- 10tal Co	vei	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2. 3.				OBL species 0 x1 = 0
3. 4.				FACW species 110
5.		-		FAC species <u>15</u> x1 = <u>45</u>
	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1	m²) quadra	ıt)	UPL species0 x1 =0
Impatiens capensis, Spotted Touch-Me-Not	90%	yes	FACW	Column Totals: <u>125</u> x1 = <u>265</u> (B)
2. Phalaris arundinacea, Reed Canary Grass	20%	no	FACW	Prevalence Index = B/A = 2.120
3. Solanum dulcamara, Climbing Nightshade	15%	no	FAC	Hydrophytic Vegetation Indicators:
4				 ✓ 1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9. 10.				sheet)
10.		= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	ription: (Describe Matrix			Redox Feat			tile abser	ice of maleutors.)	
inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	e Rei	marks
0-8	10YR - 2/1	100	/				SiL		
8-13	10YR - 2/1	5	10YR-4/6	5	C	M	SiL		
								_	
	ncentration, D=Dep	letion, RM=R	educed Matrix, M	IS=Masked	d Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	2
	Indicators: (or Histel) (A1) und	lefined	Sand [.]	y Gleyed M	Matrix (S4)			Indicators for Problematic	
_	oipedon (A2) undefi			y Redox (S				Coast Prairie Redox (A Dark Surface (S7)	410)
	sti (A3) undefined		· · · · · · · · · · · · · · · · · · ·	ed Matrix (Iron-Manganese Mass	es (F12)
_	n Sulfide (A4)				lineral (F1)			Very Shallow Dark Su	` '
Stratified	d Layers (A5)		 Loam	y Gleyed N	Matrix (F2)			Other (Explain in Rem	
	uck (A10)			ted Matrix					*
	d Below Dark Surfac	ce (A11)		x Dark Sur	` '			³ Indicators of hydroph	ytic vegetation and wei resent, unless disturbei
	ark Surface (A12)	, ,			Surface (F7)			problematic.	ocom, amoco dictarso
_	Mucky Mineral (S1)			x Depressi					
_ ′	ucky Peat or Peat (S	33)			(, ,				
_	_ayer (if observed)								
strictive L	, ,								
Type:						Hyd	ric Soil P	resent?	Yes <a> No
Type: Depth (i	 inches): <u></u>					Hyd	ric Soil P	resent?	Yes _ V No _
Type: Depth (i	 inches): <u></u>					Hyd	ric Soil P	resent?	Yes _ V No _
Type: Depth (i	inches):					Hyd	ric Soil P		
Type: Depth (i marks: DROLO etland Hyd	GY drology Indicators:		check all that an	nlv)		Hyd	ric Soil P	Secondary Indicators (minim	um of two required)
Type: Depth (in marks: DROLO Petland Hyden Mary Indice	GY drology Indicators:				aves (B9)	Hyd	ric Soil P	Secondary Indicators (minim Surface soil cracks (B6)	um of two required)
Type: Depth (i marks: DROLO etland Hyd mary India _ Surface	GY drology Indicators: eators (minimum of o		Water-	stained lea	. ,	Hyd	ric Soil P	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10)	um of two required)
Type: Depth (i	GY drology Indicators: eators (minimum of owater (A1) ter table (A2)		Water- Aquati	stained lea c fauna (B	13)	Hyd	ric Soil P	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	um of two required)
Type: Depth (i emarks: DROLOG etland Hyd mary Indic Surface High wa Saturatio	GY drology Indicators: eators (minimum of owater (A1) ter table (A2) on (A3)		Water- Aquati True a	stained lea c fauna (Ba quatic plan	13) nts (B14)	Hyd	ric Soil P	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	um of two required) (C2)
Type: Depth (i	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (Ba quatic plan gen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	um of two required) (C2) rial imagery (C9)
Type: Depth (i marks: DROLO etland Hyd mary Indic Surface High wa Saturatic Water m Sedimer	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root		Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aei Stunted or stressed plan	um of two required) (C2) rial imagery (C9) nts (D1)
Type: Depth (in the property of the property o	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) eat deposits (B2) exposits (B3)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
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Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp38
Investigator(s): Maddie Humphrey	Section	on, Township, Range: S	12 T107N S013W
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07989		Long: -92.32255	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly	y disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?		plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		la dia Camalad Ama	
Hydric Soil Present? Yes ✓ No		Is the Sampled Area within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate rep Slight depression at edge of agriculture field and above riverine.	ort.)		
Slight depression at edge of agriculture field and above fiverine.			
VEGETATION - Use scientific names of plants.			
VEGETATION - Ose scientific flames of plants.	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4	· ——		Across All Strata: 0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species 0 x1 = 0
4.			FACW species $0 \text{ x1} = 0$
5			FAC species $0 x1 = 0$
	0%	= Total Cover	FACU species $0 \text{ x1} = 0$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1-	-m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3.			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5. 6.			2 - Dominance Test is > 50%
6. 7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
	0%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			The decode of the
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted corn			
Trecently planted com			

	ription: (Describe 1	o the depti	needed to docu	ıment the	indicator o	r confirm	the absen	ce of indicators.)	
Depth	Matrix			Redox Feat			the absen	ce of marcators.	
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR - 2/1	100	/				SiL		
8-12	10YR - 2/1	95	10GY-4/6	5	C	M	SiL	_ ===	
12-18		100	/				SiL	Gley1 2.5 N	
Гуре: C=Co	ncentration, D=Depl	etion, RM=F	Reduced Matrix, M	1S=Masked	Sand Grai	ns. ²	Location: P	L=Pore Lining, M=Matrix.	
-	Indicators:							Indicators for Problematic Hydric Soils	3:
	(or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)	
	pipedon (A2) undefi	nea		y Redox (S	•			Dark Surface (S7)	
	isti (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)	
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
	uck (A10)	(444)		eted Matrix				³ Indicators of hydrophytic vegetation	and wetla
	d Below Dark Surfac	e (A11)		x Dark Sur	` '			hydrology must be present, unless problematic.	disturbed
	ark Surface (A12)				Surface (F7)			problematic.	
	Mucky Mineral (S1)	20)	Redo	x Depressi	ons (F8)				
	ucky Peat or Peat (S								
Type:	Layer (if observed):					Hvd	lric Soil Pr	esent? Yes•	/ No
	inches):					_ ,			
/DROLO	GY								
Vetland Hyd	drology Indicators:							Secondary Indicators (minimum of two requ	uired)
Vetland Hyd Primary Indic	drology Indicators: cators (minimum of c				(00)			Surface soil cracks (B6)	uired)
Vetland Hyd rimary Indic Surface	drology Indicators: cators (minimum of c water (A1)		Water-	stained lea	` '			Surface soil cracks (B6) Drainage patterns (B10)	uired)
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rimary Indic Surface High wa Saturatio Water m	drology Indicators: eators (minimum of o water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B. aquatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1)	
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Primary Indice Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely Field Obsen Surface Water Vater Table Saturation Princludes cap	drology Indicators: cators (minimum of o water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) on visible on aerial i of vegetated concave vations: er Present?	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redult iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	9)
Vetland Hyderimary Indice Surface High was Saturation Water m Sedimer Drift dep Algal mater Iron dep Inundation Sparsely Sield Observation Surface Water Table of Saturation Princludes cap	drology Indicators: cators (minimum of content (Management (Manage	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redult iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	9)
Vetland Hydrimary Indice Surface High wa Saturatice Water m Sedimer Drift dep Algal ma Iron dep Inundatice Sparsely Field Observa Surface Water Table of Saturation Princludes cap	drology Indicators: cators (minimum of content (Management (Manage	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redult iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	9)
Vetland Hyderimary Indice Surface High was Saturation Water m Sedimer Drift dep Algal mater Iron dep Inundation Sparsely Sield Observation Surface Water Table of Saturation Princludes cap	drology Indicators: cators (minimum of content (Management (Manage	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redult iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	9)
Vetland Hydrimary Indice Surface High wa Saturatice Water m Sedimer Drift dep Algal ma Iron dep Inundatice Sparsely Sield Observator Table is saturation Princludes cap	drology Indicators: cators (minimum of content (Management (Manage	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redult iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	9)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-06-03		
Applicant/Owner: Ranger Power			: MN Sampling Point: adp39		
Investigator(s): Maddie Humphrey	Secti	ion, Township, Range: S	12 T107N S013W		
Lanform(hillslope, terrace, etc): Sideslope		Local relie	ef (concave, convex, none): none		
Slope(%): 0-2 Lat: 44.08002		Long: -92.32256 Datum: WGS 84			
Soil Map Unit Name: 477B: Littleton silt loam, 1 to 4 percent slopes			NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes , No	(If no, explain in Remarks.)		
Are Vegetation , , Soil , or Hydrology Significantly	Are "Normal Circumstances" present? Yes No				
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)		
		(, ,		
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area			
Hydric Soil Present? Yes ✓ No		within a Wetland?	Yes No 🗸		
Wetland Hydrology Present? Yes No					
Remarks: (Explain alternative procedures here or in a separate report Upslope adp38 approximately 1-foot. VEGETATION - Use scientific names of plants.					
		Dominant Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet		
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
3.			Total Number of Dominant Species		
4.			Across All Strata: 0 (B)		
5			Percent of Dominant Species That		
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:		
1			Total % Cover of: Multiply by:		
2		·	OBL species		
3			FACW species 0 x1 = 0		
4			FAC species 0 x1 = 0		
5	0%	= Total Cover	FACU species		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			UPL species		
1		, , ,	Column Totals: $0 \times 1 = 0$ (B)		
2.			Prevalence Index = B/A = NaN		
3.			Hydrophytic Vegetation Indicators:		
4.					
5			1 - Rapid Test for Hydrophytic Vegetation		
6			2 - Dominance Test is > 50%		
7			3 - Prevalence Index is <= 3.0 ¹		
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate		
9			sheet)		
10		·	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
1.			Hydrophytic		
2	0%	= Total Cover	Vegetation Present? Yes No _ Yes No _ Yes No _ Yes No _ Yes No _ Yes No _ Yes No _ Yes No No _ Yes No _ Yes No _ Yes No _ Yes		
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted corn					

Depth	Matrix		R	Redox Feat	ures			•	
nches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	e Re	marks
0-4	10YR - 3/1	100	/				SiL		
4-13	10YR - 3/1	10	10YR-4/6	10	C	<u>M</u>	SiL		
oe: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	1S=Masked	J Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:			01 11				Indicators for Problemati	c Hydric Soils ³ :
	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
-	Epipedon (A2) undefi	nea	· · · · · · · · · · · · · · · · · · ·	y Redox (S				Dark Surface (S7)	
-	Histi (A3) undefined en Sulfide (A4)			oed Matrix (ly Mucky M				Iron-Manganese Mass	` '
	ed Layers (A5)			iy Mucky M iy Gleyed N	` '			Very Shallow Dark Su	
	fuck (A10)			eted Matrix				Other (Explain in Rem	•
_	ed Below Dark Surface	re (A11)		x Dark Sur				Indicators of hydroph	ytic vegetation and we resent, unless disturbe
- '	Dark Surface (A12)	,, (, (, , , , , , , , , , , , , , , ,			Surface (F7)			problematic.	resent, unless distarbe
_	Mucky Mineral (S1)			x Depressi					
	fucky Peat or Peat (S3)		0	(, ,				
trictive	Layer (if observed)	:							
						Hyd	ric Soil Pi	resent?	Yes 🔽 No
Type:									
	(inches): <u></u>								
Depth marks:									
Depth marks:	DGY							Secondary Indicators (minim	um of two required)
Depth narks:	DGY vdrology Indicators:		· check all that an	ınlvì				Secondary Indicators (minim Surface soil cracks (B6)	
Depth narks: DROLC tland Hy nary Indi	DGY				aves (B9)			Surface soil cracks (B6)	
Depth marks: DROLC tland Hy mary Indi Surface	OGY vdrology Indicators: icators (minimum of o		Water-	-stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10))
Depth marks: DROLC tland Hy mary Indi Surface High w	OGY /drology Indicators: icators (minimum of of ewater (A1)		Water-		13)			Surface soil cracks (B6))
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat	OGY /drology Indicators: icators (minimum of de water (A1) ater table (A2)		Water- Aquati True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	(C2)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water r	order (A1) ater table (A2) cion (A3)		Water- Aquati True a Hydrog	-stained lea ic fauna (Bi aquatic plan gen sulfide	13) nts (B14)	living root	rs (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydroç Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1)	•	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroo Oxidize Preser	estained leadic fauna (Banaquatic planagen sulfide led rhizosphane of redu	13) nts (B14) odor (C1) heres along	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquati True a Hydrog Oxidize Preser Recen	estained leadic fauna (Banaquatic planagen sulfide led rhizosphane of redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
PROLO Iland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de	or o	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl nce of redu at iron reduct	nts (B14) odor (C1) heres along uced iron (C ction in tilled the (C7)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
PROLCE I I I I I I I I I I I I I I I I I I I	pogy Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained leadic fauna (Biaquatic planagen sulfide ed rhizosplanae of reductiron reductiron surface surface surface surface surface surface surface	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse	order variable (A2) icators (minimum of of evater (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea ic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduct nuck surface or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Id Obset	order variable (A2) control (A3) control (B3) control (B4) control (B4) control (B4) control (B4) control (B4) control (B5) control (B5) control (B5) control (B5) control (B5) control (B5) control (B4) control (B4	imagery (B7) e surface (B8	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu ti iron reduct nuck surfact e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plae Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Wa ter Table	pogy Indicators:	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No V	stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron redunuck surface or well da (Explain in Depth (inched)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Id Obse face Wa ter Table uration F	pogy /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained leadic fauna (Biaquatic planagen sulfide ed rhizosphance of redunt iron redunuck surface or well da (Explain in Depth (inched)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plae Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
PROLCE I I I I I I I I I I I I I I I I I I I	pogy Indicators:	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiza Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
Depth narks: PROLC tland Hy nary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundai Sparse d Obse face Wa ter Table turation F ludes ca	order various incators: icators (minimum of order water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiza Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
Depth marks: PROLC tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obse face Water Table uration F ludes ca	order various incators: icators (minimum of order water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiza Preser Recen Thin m Gauge Other	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosphone of reduction reductio	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)

Project/Site: Lemon Hill	Citv/Cc	ounty: Farmington/Olr	nsted County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		S	
Investigator(s): Maddie Humphrey	Sect	<u> </u>	
			relief (concave, convex, none): convex
Slope(%): 0-2 Lat: 44.06872		Long: -92.29739	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes	NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Norm	al Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol	blematic?		explain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _		Is the Sampled A	l rea
Hydric Soil Present? Yes _ No _ N		within a Wetland	
Wetland Hydrology Present? Yes No No			
VEGETATION - Use scientific names of plants.			
·		Dominant Indicato	
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius) 1.	% Cover	Species? Status	_
2			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species Across All Strata: 2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5.			FAC species40 x1 =120
	0%	= Total Cover	FACU species
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species
Poa compressa, Flat-Stem Blue Grass	70%	yes FACU	-
Poa pratensis, Kentucky Blue Grass		yes FAC	Prevalence Index = B/A = 3.750
3. <u>undefined</u> , Wild parsnip	10%	no UPL	Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
7. 8.			 4 - Morphological Adaptations¹ (Provide
9			supporting data in Remarks or on a separate
10.			sheet)
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	Matrix			edox Feat		. 2			
inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	S
0-8	10YR - 2/1	98	10YR-4/6	2	C	M	SiL		
			_				-		
								_	
vne: C=Co	ncentration, D=Deple	etion. RM=R	educed Matrix. M	S=Masked	I Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		- maone				Indicators for Problematic Hy	dric Soils ³ :
_ Histosol	(or Histel) (A1) unde	efined	Sandy	Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	
_ Histic Ep	oipedon (A2) undefir	ned	Sandy	/ Redox (S	55)			Dark Surface (S7)	
Black Hi	sti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F	-12)
Hydroge	n Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface	(TF12)
Stratified	d Layers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
2 cm Mu	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic v	
Depleted	d Below Dark Surface	e (A11)	<u></u> ✓ Redox	x Dark Sur	face (F6)			hydrology must be presen	nt, unless disturbed
Thick Da	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.	
Sandy M	Mucky Mineral (S1)		Redox	x Depressi	ons (F8)				
_ 5 cm Mu	ucky Peat or Peat (S	3)							
estrictive L	_ayer (if observed):								
T	Dodrook								\/ / NI-
• •	Bedrock inches): 8					Hyd	ric Soil Pr	resent?	Yes <u>✓</u> No _
Depth (i	inches): 8					Hyd	ric Soil Pr	resent?	Yes _ V No _
Depth (i	inches): 8					Hyd		Secondary Indicators (minimum o	
Depth (i	GY	ne required;	check all that ap	ply)		Hyd			
Depth (i emarks: DROLOG etland Hyd imary Indic	GY drology Indicators:	ne required;		ply) stained lea	aves (B9)	Hyd		Secondary Indicators (minimum o	
Depth (i emarks: DROLOG etland Hydrimary Indid Surface	GY drology Indicators: cators (minimum of o	ne required;	Water-		. ,	Hyd		Secondary Indicators (minimum o	
Depth (i emarks: DROLOG etland Hyd imary Indid _ Surface	GY drology Indicators: cators (minimum of orwater (A1) ter table (A2)	ne required;	Water- Aquatio	stained lea	13)	Hyd		Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10)	
DROLOG etland Hydimary Indic Surface High wa Saturatio	GY drology Indicators: cators (minimum of orwater (A1) ter table (A2)	ne required;	Water- Aquatio True a	stained lea c fauna (B quatic plar	13)	Hyd		Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	of two required)
DROLO etland Hydimary Indic Surface High wa Saturatic Water m	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3)	ne required;	Water- Aquation True a Hydrog	stained lea c fauna (B. quatic plar gen sulfide	13) nts (B14)			Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	of two required)
DROLOGETIAN DROLOG	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1)	ne required;	Water- Aquati True a Hydrog Oxidize	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living root		Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in	of two required)
DROLOGIETIAN DROLO	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) on ter deposits (B2)	ne required;	Water- Aquation True a Hydrog Oxidizon Preser	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living root	s (C3)	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG Vetland Hydrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eosits (B3)	ne required;	Water- Aquation True a Hydrog Oxidize Preser Recen	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) odor (C1) heres along aced iron (C	living root	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG etland Hyd imary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) elosits (B3) eat or crust (B4)		Water- Aquation True a Hydrog Oxidize Preser Receno	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	living root	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG etland Hyd imary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eators (B3) eat or crust (B4) eosits (B5)	nagery (B7)	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	living root	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG etland Hyd imary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eator crust (B4) eosits (B5) en visible on aerial in a vegetated concave	nagery (B7) surface (B8)	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) ata (D9) Remarks)	living root	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG etland Hyd imary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely eld Observ	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eators (B4) eator crust (B4) eator crust (B4) eator crust (B5) en visible on aerial in a vegetated concave evations: er Present?	nagery (B7) surface (B8) Yes	Water- Aquation True a Hydrogo Oxidize Preser Recent Thin m Gauge Other	stained leact fauna (B quatic plar gen sulfide ged rhizosplace of redutiron reduction well da (Explain in Depth (incl	nts (B14) odor (C1) heres along iced iron (C ction in tiller te (C7) ata (D9) Remarks)	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I Geomorphic position (D2) FAC-neutral test (D5)	nf two required) magery (C9) D1)
Depth (i emarks: DROLOG Tetland Hydromary Indice Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely Teld Observer Trace Water Table	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eator crust (B4) easits (B5) en visible on aerial in a vegetated concave evations: er Present? Present?	nagery (B7) surface (B8) Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge Other of	stained leact fauna (B. quatic plar gen sulfide ed rhizosplance of reductiron reductiron reduck surfactor well da (Explain in Depth (incl	nts (B14) odor (C1) heres along aced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (i emarks: DROLOG Petland Hydromary Indice Surface High wa Saturatio Water m Sedimer Drift dep Algal ma Iron dep Inundation Sparsely eld Observerface Water Paturation Pri	GY drology Indicators: cators (minimum of orwater (A1) ter table (A2) on (A3) carks (B1) cat deposits (B2) cosits (B3) cat or crust (B4) cosits (B5) on visible on aerial in a vegetated concave vations: car Present? Present?	nagery (B7) surface (B8) Yes Yes	Water- Aquation True a Hydrogo Oxidize Preser Recent Thin m Gauge Other	stained leact fauna (B. quatic plar gen sulfide ed rhizosplance of reductiron reductiron reduck surfactor well da (Explain in Depth (incl	nts (B14) odor (C1) heres along aced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I Geomorphic position (D2) FAC-neutral test (D5)	nf two required) magery (C9) D1)
DROLO etland Hyderimary Indice Surface High wa Saturation Water many Sedimer Drift dep Algal many Inon dep Inon dep Inundation Sparsely eld Observation Procludes cap	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) eator crust (B4) easits (B5) en visible on aerial in a vegetated concave evations: er Present? Present?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge Other No No No No	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D2) Geomorphic position (D2) FAC-neutral test (D5)	nf two required) magery (C9) D1)
DROLO etland Hyderimary Indice Surface High wa Saturation Water many Sedimer Drift dep Algal many Inon dep Inon dep Inundation Sparsely eld Observation Procludes cap	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) easits (B3) eat or crust (B4) easits (B5) en visible on aerial in a vegetated concave evations: er Present? Present? ersent? ersent? ersent?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge Other No No No No	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D2) Geomorphic position (D2) FAC-neutral test (D5)	nf two required) magery (C9) D1)
Depth (interpretation products of the products	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2) on (A3) earks (B1) ent deposits (B2) easits (B3) eat or crust (B4) easits (B5) en visible on aerial in a vegetated concave evations: er Present? Present? ersent? ersent? ersent?	nagery (B7) surface (B8) Yes Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge Other No No No No	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D2) Geomorphic position (D2) FAC-neutral test (D5)	nf two required) magery (C9) D1)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olms	ted County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp41
Investigator(s): Maddie Humphrey	Sect	ion, Township, Range:	S17 T107N S012W
Lanform(hillslope, terrace, etc): Depression		Local rel	ief (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.06877		Long: -92.29743	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	d, 0 to 2 pe	rcent slopes	NWI classification: PEM1B, R4SBC
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 N	lo (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes _ No
Are Vegetation, Soil, or Hydrology naturally pro	blematic?	(If needed, e	xplain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes <u>✓</u> No		Is the Sampled Are within a Wetland?	a Yes <u>✓</u> No
Wetland Hydrology Present? Yes _ ✓ No	<u> </u>		
Depression at the bottom of a valley VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species
5.			Across All Strata:1 (B) Percent of Dominant Species That
Sonling/Shrub Stratum / Plot size:15 ft /4.6 m) radius)	0%	= Total Cover	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 100
5			FAC species 10 x1 = 30
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species $0 \times 1 = 0$
Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: $\frac{110}{200} \times 1 = \frac{230}{2001} $ (B)
Poa pratensis, Kentucky Blue Grass	10%	no FAC	Prevalence Index = B/A = 2.091
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Sample Point: <u>adp41</u>

SOIL

Profile Desc	cription: (Describe Matrix	to the dept		ment the		or confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR - 2/1	95	5YR-3/4	5	<u> 1,γευ</u>	M	SiL	
0-12	101R - 2/1	95	51R-3/4			IVI	SIL	
				-		-		
						-		
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Maske	d Sand Grai	ins. 2	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und			-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef	ined		Redox (•			Dark Surface (S7)
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
	en Sulfide (A4)			-	Matrix (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5) uck (A10)			y Gleyeu ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	d Below Dark Surfa	re (Δ11)			rface (F6)			³ Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or
	ark Surface (A12)	00 (/111)			Surface (F7)	١		problematic.
	Mucky Mineral (S1)				sions (F8)	,		
	ucky Peat or Peat (S3)	 ···		- (-)			
Restrictive	Layer (if observed)	:						
Type:	<u> </u>					Hyd	dric Soil Pro	esent? Yes 🗸 No
Depth ((inches): <u></u>							
HYDROLO	GV .							
	drology Indicators:	<u> </u>					:	Secondary Indicators (minimum of two required)
Primary Indi	cators (minimum of	one required	d; check all that ap	ply)				Surface soil cracks (B6)
Surface	water (A1)		Water-	stained le	aves (B9)			Drainage patterns (B10)
High wa	ater table (A2)		Aquatio	c fauna (E	313)			Dry-season water table (C2)
Saturati	on (A3)		True a	quatic pla	nts (B14)			Crayfish burrows (C8)
Water n	narks (B1)				e odor (C1)		-	Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along		ts (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	•		✓ Geomorphic position (D2)
	at or crust (B4)				uction in tille	d soils (C6	6)	FAC-neutral test (D5)
	oosits (B5)	imagan, (D		uck surfa				
	ion visible on aerial y vegetated concave	0 , (, <u>—</u>	or well d	n Remarks)			
Spaisei	y vegetated concave	surface (D	Other (τχριαίτι ιι	i Remarks)			
Field Obser								
Surface Wat			sNoI		· —	_ ,,,,	41 1 1 1 1	Jama Burarato
Water Table			sNo[we	tiana Hyard	llogy Present? Yes <u>✓</u> No
Saturation P (includes ca	resent? pillary fringe)	YE	sNoI	oehni (ii)(es). <u></u>	_		
	corded Data (stream	n dalide mo	nitoring well aeria	l nhotos	nrevious ins	nections)	if available:	
2000000	Data (Strout)	. gaage, m	g won, acria	, p. 10100,	F. 0 . 1040 1110		aranabic.	
Domestic								
Remarks:								

Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olms	ted County Sampling Date: 2024-06-03		
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp42		
Investigator(s): Maddie Humphrey	Sect	ion, Township, Range:	S17 T107N S012W		
Lanform(hillslope, terrace, etc): Depression		Local rel	ief (concave, convex, none): concave		
Slope(%): 0-2 Lat: 44.06488		Long: -92.29563 Datum: WGS 84			
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes	NWI classification: R4SBC		
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 N	lo (If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes , No		
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, e	xplain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing	a samnli	ing point location	ns transects important features etc		
Hydrophytic Vegetation Present? Yes No	<u> </u>		is, transects, important reatures, etc.		
Hydric Soil Present? Yes <u>✓</u> No		Is the Sampled Are			
Wetland Hydrology Present? Yes No		within a Wetland?	Yes <u>✓</u> No		
Remarks: (Explain alternative procedures here or in a separate repo Wetland fringe of stream north of Viola Rd NE. VEGETATION - Use scientific names of plants.	rt.)				
		Dominant Indicator Species? Status	Dominance Test Worksheet		
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species: Status	Number of Dominant Species That		
2.			Are OBL, FACW, or FAC: 1 (A)		
3. 4.			Total Number of Dominant Species Across All Strata: 1 (B)		
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	Prevalence Index worksheet:		
1					
2			Total % Cover of:Multiply by:		
3			OBL species $0 \text{ x1} = 0$ FACW species $100 \text{ x1} = 200$		
4			FAC species 0 x1 = 0		
5			FACU species 5 x1 = 20		
	0%	= Total Cover	UPL species		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	. ,	, , ,	Column Totals: $105 \times 1 = 220 \times 100$		
Phalaris arundinacea, Reed Canary Grass Girolum arunga Canadian Thirds	100%	yes FACW	Prevalence Index = B/A = 2.095		
Cirsium arvense, Canadian Thistle	5%	no FACU	Hydrophytic Vegetation Indicators:		
4.					
5			1 - Rapid Test for Hydrophytic Vegetation		
6			✓ 2 - Dominance Test is > 50% 1		
7			✓ 3 - Prevalence Index is <= 3.0 ¹		
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate		
9			sheet)		
10		- Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
1. 2.			Hydrophytic		
	0%	= Total Cover	Vegetation Present? Yes ✓ No		
Remarks: (Include photo numbers here or on a separate sheet.)					

(inches) Color (moist) 96 Calor (moist) 86 Type Loc2 Texture Remarks 1 10YR - 3/2 100 - +	Depth	Matrix Calar (maint)	0/		Redox Feat		12	Taratrasa	De	
10 10 10 10 10 10 10 10	(inches)	Color (moist)		Color (moist)		<u>rype-</u>	LOC			emarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Variet Soil Indicators:	0-6	10YR - 3/2	100	/					_ =	
Histosol (or Histel) (A1) undefined	6-13	10YR - 4/1	95	10YR-3/4	5		M/PL	L	_ 	
Histosol (or Histel) (A1) undefined									-	
Histosof (or Histel) (A1) undefined	Гуре: C=Co	ncentration, D=Depl	letion, RM=F	Reduced Matrix, N	//S=Masked	d Sand Grai	ns. ²	Location: Pl	L=Pore Lining, M=Matrix.	
Type: Depth (inches):	Histosol Histic Ep Black His Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M	(or Histel) (A1) und bipedon (A2) undefined isti (A3) undefined in Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1)	ce (A11)	Sand Stripp Loam Loam Deple Redo	y Redox (Speed Matrix by Mucky M by Gleyed M eted Matrix by Dark Sur eted Dark S	(S5) (S6) (Ineral (F1) (Satrix (F2) (F3) (F3) (F4) (F6) (F7)			Coast Prairie Redox (Dark Surface (S7) Iron-Manganese Mass Very Shallow Dark Su Other (Explain in Ren 3Indicators of hydroph	(A16) ses (F12) urface (TF12) narks) nytic vegetation and wetl
etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Aquatic fauna (B13) Water-stained leaves (B9) High water table (A2) Aquatic fauna (B13) Water marks (B1) Water marks (B1) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) eld Observations: urface Water Present? Yes _ No _ Depth (inches): atter Table Present? Yes _ No _ Depth (inches): _0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Surface soil cracks (B6) Surface water (A1) Water-stained leaves (B9) Aquatic fauna (B13) Dry-season water table (C2) Saturation (A3) Water marks (B1) Drift deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Iron deposits (B5) Iron deposits (B8) Other (Explain in Remarks) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Wetland Hydrology Present? Yes V No Depth (inches): 0 Wetland Hydrology Present? Yes V No Depth (inches): 0 Wetland Bydravailable:	Type: Depth (i	ayer (if observed)	:				Hyd	dric Soil Pre	esent?	Yes <u>*</u> No _
Surface water (A1)	Type: Depth (i emarks:	ayer (if observed): inches):	:				Нус	dric Soil Pre	esent?	Yes _ ✓ No _
✓ High water table (A2) Aquatic fauna (B13) Dry-season water table (C2) Saturation (A3) True aquatic plants (B14) Crayfish burrows (C8) Water marks (B1) Hydrogen sulfide odor (C1) Saturation visible on aerial imagery (C9) Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Stunted or stressed plants (D1) Drift deposits (B3) Presence of reduced iron (C4) Geomorphic position (D2) Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) ield Observations: Ves No Depth (inches):	Type: Depth (i emarks:	ayer (if observed): inches):					Hyd			
Saturation (A3)	Type: Depth (i emarks:	ayer (if observed): inches):		l; check all that ap	oply)		Hyo		Secondary Indicators (minin	num of two required)
Water marks (B1)	Type: Depth (i emarks: DROLOG Vetland Hydrimary Indic Surface	GY drology Indicators: eators (minimum of cowater (A1)		Water	-stained lea	, ,	Нус		Secondary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10	num of two required))
Sediment deposits (B2)	Type: Depth (i temarks: TDROLOG Vetland Hyd rimary Indic Surface High wat	GY drology Indicators: eators (minimum of owater (A1) ter table (A2)		Water Aquat	-stained lea ic fauna (B	13)	Hyo		Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two required))
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) ield Observations: ourface Water Present? Yes No Depth (inches): Vester Table Present? Yes _	Type: Depth (interpretation of the property of	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3)		Water Aquat True a	-stained lea ic fauna (B aquatic plar	13) nts (B14)	Hyo		Secondary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required))) (C2)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Sield Observations: Sield Observations: Surface Water Present? Yes No Depth (inches): Vater Table Present? Yes No Depth (inches): 3 Wetland Hydrology Present? Yes No Depth (inches): 0 Ves No Persent Present? Yes No No	Type: Depth (interpretation of the property of	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1)		Water Aquat True a	-stained lea ic fauna (B aquatic plar gen sulfide	13) nts (B14) e odor (C1)		-	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac	num of two required))) (C2) erial imagery (C9)
Inundation visible on aerial imagery (B7)	Type: Depth (interpretation of the property of	GY drology Indicators: eators (minimum of owater (A1) ter table (A2) on (A3) eatrs (B1) eat deposits (B2)		Water Aquat True & Hydro Oxidiz	-stained lea ic fauna (B aquatic plar gen sulfide ced rhizospl	nts (B14) odor (C1) heres along	living roo		Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae	num of two required))) (C2) erial imagery (C9) unts (D1)
Sparsely vegetated concave surface (B8) Other (Explain in Remarks) ield Observations: surface Water Present? Yes No Depth (inches): Vater Table Present? Yes No Depth (inches): 3 Staturation Present? Yes No Depth (inches): 0	Type: Depth (ii Temarks: TOROLOG Vetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) nt deposits (B2) eators (B3) at or crust (B4)		Water Aquat True a Hydro Oxidiz Prese Recer	-stained leadic fauna (Beaquatic plandic pland	nts (B14) e odor (C1) heres along uced iron (C	living roo	- - - - ts (C3)	Secondary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on action Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) unts (D1)
urface Water Present? Yes No Depth (inches): /ater Table Present? Yes No Depth (inches): 3 aturation Present? Yes No Depth (inches): 0 mcludes capillary fringe) Wetland Hydrology Present? Yes No Persent? Yes No Depth (inches): 0 wetland Hydrology Present? Yes No Yes No Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (i emarks: TDROLOG Tetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depriment (i)	GY drology Indicators: eators (minimum of owater (A1) ter table (A2) on (A3) earks (B1) eat deposits (B2) eat or crust (B4) eosits (B5)	one required	Water Aquat True a Hydro Oxidiz Prese Recer	-stained leadic fauna (Baquatic planagen sulfide ted rhizospince of redunuck surfacenuck s	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	living roo	- - - - ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required))) (C2) erial imagery (C9) unts (D1)
Vater Table Present? Yes V No Depth (inches): 3 Wetland Hydrology Present? Yes No Depth (inches): 0 No Depth (inch	Type: Depth (i emarks: TDROLOG Tetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundation	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) eat deposits (B2) easits (B3) eat or crust (B4) easits (B5) en visible on aerial in	one required	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	-stained lea ic fauna (B aquatic plar gen sulfide red rhizospl nce of redu nt iron redu muck surfac e or well da	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9)	living roo	- - - - ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required))) (C2) erial imagery (C9) unts (D1)
aturation Present? Yes 🗸 No Depth (inches): 0	Type: Depth (i emarks: TDROLOG Tetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundatic Sparsely ield Observi	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) eat deposits (B2) eosits (B3) at or crust (B4) eosits (B5) en visible on aerial in vegetated concave	one required imagery (B7)	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge Other	-stained lea ic fauna (B aquatic plar gen sulfide red rhizospl nce of redu nt iron redu muck surfac e or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9)	living roo	- - - - ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required))) (C2) erial imagery (C9) unts (D1)
	Type: Depth (i emarks: TDROLOG Vetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundatic Sparsely ield Observ	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) eat deposits (B2) eosits (B3) at or crust (B4) eosits (B5) en visible on aerial if vegetated concave vations: er Present?	one required imagery (B7) e surface (B8	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge B) Other	-stained leadic fauna (Baquatic planagen sulfide ted rhizosplance of redunt iron redunuck surface or well da (Explain in Depth (incl	nts (B14) nts (B	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two required))) (C2) erial imagery (C9) ints (D1)
omadia:	Type: Depth (i emarks: TDROLOG Tetland Hydrimary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundatic Sparsely ield Observ urface Water /ater Table Faturation Pr	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) harks (B1) ht deposits (B2) hosits (B3) at or crust (B4) hosits (B5) on visible on aerial if a vegetated concave vations: er Present? Present?	one required imagery (B7) e surface (B8) Yes	Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge Other No	-stained leadic fauna (Beaquatic planagen sulfide seed rhizosplance of redunt iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) n Remarks) hes): hes): 3	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two required))) (C2) erial imagery (C9) ints (D1)
emarks:	Type: Depth (i emarks: TDROLOG Tetland Hydrimary Indic Surface High wat Saturatio Water m Sedimen Drift dep Algal ma Iron depo Inundatio Sparsely ield Observ Jater Table Faturation Princludes cap	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) eat or crust (B4) eosits (B5) en visible on aerial if of vegetated concave vations: er Present? Present? ersent? ersent? eight of observed) each observed)	one required imagery (B7) e surface (B8) Yes Yes	Water	-stained leadic fauna (B) aquatic plar gen sulfide ted rhizospince of redunt iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) nts (B	living roo 4) d soils (Co	ts (C3) -	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two required))) (C2) erial imagery (C9) ints (D1)

Project/Site: Lemon Hill	City/Co	unty: Farmin	igton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power				: MN Sampling Point: adp43
Investigator(s): Maddie Humphrey	Section			
Lanform(hillslope, terrace, etc): Sideslope			_ Local relie	ef (concave, convex, none): none
Slope(%): 0-2 Lat: 44.06478		Long: -92.2	29564	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained,	0 to 2 per	cent slopes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ar?	Ye	s , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly d	isturbed?	Ar	e "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prob	lematic?			plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	samplii	ng point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	mpled Area	
Hydric Soil Present? Yes ✓ No _ Wetland Hydrology Present? Yes No _		within a		Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate report				
Upslope adp42 approximately 1-foot. VEGETATION - Use scientific names of plants.				
		Dominant		Paris and Table Madeland
	% Cover	Species?	Status	Dominance Test Worksheet
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species Across All Strata: 1 (B)
5				Percent of Dominant Species That
-	0%	= Total Cov	er	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species $0 \text{ x1} = 0$
4.				FACW species $20 \text{ x1} = 40$
5				FAC species $0 x1 = 0$
_	0%	= Total Cov	er	FACU species 90 x1 = 360
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft	square (1-	-m²) quadrat	:)	UPL species <u>0</u> x1 = <u>0</u>
Cirsium arvense, Canadian Thistle	90%	yes	FACU	Column Totals:
2. Phalaris arundinacea, Reed Canary Grass	20%	no	FACW	Prevalence Index = B/A =3.636
3				Hydrophytic Vegetation Indicators:
4		-		1 - Rapid Test for Hydrophytic Vegetation
5 6.				2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
_	110%	= Total Cov	er	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				Hydrophytic
		= Total Cov	er	Vegetation Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	Matrix		R	Redox Feati	ures				
nches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Rei	marks
0-8	10YR - 3/2	100	/				SiL		
8-14	10YR - 3/2	95	10YR-4/6	5	<u> </u>	M	SiL		
pe: C=C	Concentration, D=Depl	letion, RM=F	Reduced Matrix, M	IS=Masked	d Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	
	I Indicators:	la£:al	Condi	. Claused N	Antoire (CA)			Indicators for Problematic	
-	ol (or Histel) (A1) und			y Gleyed M y Redox (S				Coast Prairie Redox (/	A16)
_	Epipedon (A2) undefi Histi (A3) undefined	neu	·	y Redox (S oed Matrix (Dark Surface (S7)	(=- <u>-</u>)
_	gen Sulfide (A4)				lineral (F1)			Iron-Manganese Mass	` '
	ed Layers (A5)			y Gleyed N	` '			Very Shallow Dark Su	
	Muck (A10)			eted Matrix				Other (Explain in Rem	•
_	ed Below Dark Surfac	re (A11)		x Dark Sur				³ Indicators of hydroph	ytic vegetation and we resent, unless disturbe
-	Dark Surface (A12)	7C (7(11)			Surface (F7)			problematic.	esent, unless distarbe
_	Mucky Mineral (S1)			x Depressi					
-	Mucky Peat or Peat (S	33)	_		- (-)				
trictive	Layer (if observed)	:							
_						Hvd	ric Soil Pr	resent?	Yes ✔ No
Type:						iiyu	ile Son Fi	COCIIC.	
	(inches):					,u	ine son Fr	ood.iii.	
Depth marks:									
Depth marks:	DGY								
Depth marks: DROLC	OGY ydrology Indicators:		; check all that ap	ply)				Secondary Indicators (minim Surface soil cracks (B6)	um of two required)
Depth narks: DROLC tland Hy nary Indi	DGY			oply) -stained lea	aves (B9)			Secondary Indicators (minim	um of two required)
Depth marks: DROLO tland Hy mary Indi _ Surface	OGY ydrology Indicators: icators (minimum of c		Water-		. ,			Secondary Indicators (minimSurface soil cracks (B6)	um of two required)
Depth marks: DROLC tland Hy mary Indi Surface High w	OGY ydrology Indicators: icators (minimum of ce water (A1)		Water- Aquati	-stained lea	13)			Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10)	um of two required)
Depth marks: DROLC tland Hy mary Indi Surface High w Saturat	OGY ydrology Indicators: icators (minimum of ce water (A1) rater table (A2)		Water- Aquati True a	stained lea c fauna (B	13) nts (B14)			Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	um of two required) (C2)
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r	ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3)		Water- Aquati True a Hydrog	stained lea c fauna (Ba quatic plan gen sulfide	13) nts (B14)			Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	um of two required) (C2) rial imagery (C9)
Depth marks: DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	oddy ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living root		Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	um of two required) (C2) rial imagery (C9) nts (D1)
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de	ydrology Indicators: icators (minimum of de water (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aei Stunted or stressed plar	um of two required) (C2) rial imagery (C9) nts (D1)
Depth marks: DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	ody ydrology Indicators: icators (minimum of ce water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquati True a Hydrog Oxidiz Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
PROLO Itland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat	pdGY pdrology Indicators: icators (minimum of of ewater (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in	one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	estained lea c fauna (B: cquatic plan gen sulfide ed rhizosph nce of redu it iron reduct e or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de	pdrology Indicators: icators (minimum of de water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu it iron reductuck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
Depth marks: DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy ydrology Indicators: icators (minimum of of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in ely vegetated concave	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduct it iron reduct e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D	um of two required) (C2) rial imagery (C9) nts (D1)
Depth marks: DROLC tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy ydrology Indicators: icators (minimum of of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in ely vegetated concave rvations: iter Present?	imagery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	estained lead control factories fauna (B: aquatic plan gen sulfide ed rhizosphance of reduction reduction reduction reduction factories	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root 4) d soils (C6	s (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aee Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) nts (D1) 2)
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Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp44
Investigator(s): Maddie Humphrey	Secti		
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.06665		Long: -92.29706	Datum: WGS 84
Soil Map Unit Name: 476C: Frankville silt loam, 6 to 12 percent slope	S		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		plain any answers in Remarks.)
-			
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		In the Commission Aven	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No _ -/
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate reposition breaker in agriculture field.	ort.)		
Slope breaker in agriculture neid.			
VEGETATION - Use scientific names of plants.			
VEGETATION - OSE SCIENTING Harnes of plants.	A book sto	Densinent Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4			Across All Strata:2 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species $0 \text{ x1} = 0$
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species 130
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1-	-m²) quadrat)	UPL species0 x1 =0
Trifolium pratense, Red Clover	100%	yes FACU	Column Totals: 130 x1 = 520 (B)
2. <u>Medicago lupulina</u> , Black Medick	30%	yes FACU	Prevalence Index = B/A =4.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	130%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			The decords at a
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	Matrix		R	ledox Feati	ures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-8	10YR - 4/4	100	/				SiCL	
								
							-	
Type: C=Con	centration, D=Dep	oletion, RM=R	Reduced Matrix, M	IS=Masked	Sand Grai	ns. ²	Location: I	PL=Pore Lining, M=Matrix.
lydric Soil In	ndicators: or Histel) (A1) un	defined	Sand	y Gleyed M	Natriy (SA)			Indicators for Problematic Hydric Soils ³ :
	pedon (A2) unde t			y Redox (S				Coast Prairie Redox (A16)
	ti (A3) undefined	illeu		ed Matrix (•			Dark Surface (S7)
	Sulfide (A4)			y Mucky M	` '			Iron-Manganese Masses (F12)
′ ′	Layers (A5)			y Gleyed N				Very Shallow Dark Surface (TF12)
				-				Other (Explain in Remarks)
2 cm Muc	· ·	00 (411)		eted Matrix				³ Indicators of hydrophytic vegetation and we
	Below Dark Surfa	ce (AII)		x Dark Sur				hydrology must be present, unless disturbe problematic.
	k Surface (A12)				Surface (F7)			F
	ucky Mineral (S1) cky Peat or Peat (S3)	Redo:	x Depressi	ons (F8)			
Restrictive La	ayer (if observed):						
						Hyd	ric Soil P	resent? Yes No _
Type:	-1							
	 ches):							
Depth (in						_		
Depth (in Remarks:	SY.							Secondary Indicators (minimum of two required)
Depth (in Remarks: YDROLOG Wetland Hydr	SY rology Indicators		check all that an	nnlv)				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth (in Remarks: YDROLOG Wetland Hydr Primary Indica	SY rology Indicators ators (minimum of			• • •	aves (B9)			Surface soil cracks (B6)
Depth (in Remarks: YDROLOG Wetland Hydren Primary Indica Surface w	rology Indicators stors (minimum of		Water-	stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)
Depth (in Remarks: YDROLOG Vetland Hydre Primary Indica Surface w High water	rology Indicators tors (minimum of vater (A1) er table (A2)		Water- Aquati	stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
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Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp45
Investigator(s): Maddie Humphrey			
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.06695		Long: -92.299	Datum: WGS 84
Soil Map Unit Name: 473D: Dorerton loam, 12 to 25 percent slopes	i		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significant	tly disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?	(If needed, ex	plain any answers in Remarks.)
 			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N		Is the Sampled Area	
Hydric Soil Present? Yes N		Is the Sampled Area within a Wetland?	Yes No
Wetland Hydrology Present? Yes N			
Remarks: (Explain alternative procedures here or in a separate re Recently planted soybean field.	eport.)		
Reserved Soysean note.			
VEGETATION - Use scientific names of plants.			
VECETATION COSC SOICHAING HAINES OF PIAMES	Aheoluta	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species0 x1 =0
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species 30
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	. ,	, , ,	UPL species $0 \times 1 = 0$ Column Totals: $30 \times 1 = 120 $ (B)
1. <u>Trifolium pratense</u> , Red Clover			Column Totals: 30 x1 = 120 (B) Prevalence Index = B/A = 4.000
2			
34.			Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	30%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2		- Total Cover	Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	Matrix		R	edox Feat	ures			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-8	10YR - 3/3	100	/				SiL	
Type: C=C	 oncentration, D=Dep	 oletion, RM=F	Reduced Matrix, M	 IS=Masked	 I Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.
-	Indicators:							Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) un			y Gleyed M				Coast Prairie Redox (A16)
	pipedon (A2) undet	fined		y Redox (S	•			Dark Surface (S7)
	listi (A3) undefined			ed Matrix (` '			Iron-Manganese Masses (F12)
_ ′ °	en Sulfide (A4)			y Mucky M				Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
	uck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and wetla
	d Below Dark Surfa	ce (A11)		x Dark Sur	` '			hydrology must be present, unless disturbed
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.
	Mucky Mineral (S1) ucky Peat or Peat (S3)	Redo:	x Depression	ons (F8)			
	Layer (if observed)	-						
Type:						Hyd	ric Soil Pi	resent? Yes No
	(i I) -							
	(inches): <u></u>							
Depth (· · · ·					_		
Depth (Remarks:	· · · ·	:						Secondary Indicators (minimum of two required)
Depth (Remarks:	GY		; check all that ap	ply)				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth (Remarks: YDROLO Wetland Hy Primary Indi	GY drology Indicators			ply) stained lea	aves (B9)			, , , , , ,
Depth (Remarks: YDROLO Wetland Hy Primary Indi Surface	GY drology Indicators cators (minimum of		Water-	stained lea	. ,			Surface soil cracks (B6)
Depth (Remarks: YDROLO Vetland Hy Primary Indi Surface High wa	drology Indicators		Water- Aquati		13)			Surface soil cracks (B6) Drainage patterns (B10)
Depth (Remarks: YDROLO Vetland Hy Primary Indi Surface High wa Saturati	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained lea c fauna (B: quatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth of Primary Indi Surface High wa Saturati Water r	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (Bí quatic plan gen sulfide	13) nts (B14)	living root	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indi Surface High wa Saturati Water r Sedime	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	•	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) ats (B14) odor (C1) neres along aced iron (C	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Popth of Pop	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquati True a Hydrog Oxidiz Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) odor (C1) neres along aced iron (C	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Popth of Pop	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	ats (B14) odor (C1) neres along iced iron (C ction in tilled	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Pepth of Pep	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ats (B14) odor (C1) neres along aced iron (C ction in tiller te (C7) ata (D9)	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth of Permarks: Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concaviryations:	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduck surfac e or well da (Explain in	ats (B14) odor (C1) neres along aced iron (C ction in tilled the (C7) ata (D9) Remarks)	4)	` ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Pepth of Pep	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concaviruations: er Present?	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da (Explain in	nts (B14) odor (C1) neres along iced iron (C ction in tiller ie (C7) ita (D9) Remarks)	4) d soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth of Permarks: Primary Indi Surface High was Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concav rvations: er Present? Present?	imagery (B7) e surface (B8 Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along nced iron (C ction in tiller te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Pepth of Pep	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concavivations: are Present? Present?	imagery (B7) e surface (B8 Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along nced iron (C ction in tiller te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth of Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concav rvations: er Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along iced iron (C ction in tiller ie (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth of Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concavivations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along iced iron (C ction in tiller ie (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth of Remarks: Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wate Vater Table Saturation P includes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concavivations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along iced iron (C ction in tiller ie (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Cou	unty: Farmir	ngton/Olmste	ed County	Sampling Da	ite: 2024-06-04
Applicant/Owner: Ranger Power					Sampling Poi	·
Investigator(s): Maddie Humphrey	Section	on. Townshi				
			_	ef (concave, convex, r	none): none	
· · · · · · · · · · · · · · · · · · ·				, , ,	· —	: WGS 84
Soil Map Unit Name: 593E: Elbaville silt loam, 18 to 30 percent slope				NWI classifica		
Are climatic / hydrologic conditions on the site typical for this time of		Ye	es 🗸 No			
Are Vegetation , Soil , or Hydrology Significantly				 Circumstances" presen	nt? Voc (No
Are Vegetation , Soil , or Hydrology naturally pro				plain any answers in I		
	55.0	(noodod, on	piani any anomoro in i	romamory	
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point	location	s, transects, imp	portant fea	tures, etc.
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes No			mpled Area Wetland?	l		Yes No <u>✓</u>
Wetland Hydrology Present? Yes No						
Forested side slope above forested floodplain. VEGETATION - Use scientific names of plants.						
		Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test W	orksheet	
1. <u>Tilia americana</u> , American Basswood	50%	yes	FACU	Number of Dominar Are OBL, FACW, or		t 3 (A)
2. Prunus serotina, Black Cherry	30%	yes	FACU			, , ,
Quercus alba, Northern White Oak Lonicora tatorica, Twinsisters	20% undofined%	yes	FACU	Total Number of Do Across All Strata:	minant Species	s 10 (B)
Lonicera tatarica, Twinsisters Ulmus americana, American Elm	undefined% undefined%		FACU FACW	Percent of Dominan	nt Snecies Tha	
5. <u>Ulmus americana</u> , American Elm		<u>no</u> = Total Cov		Are OBL, FACW, or		30% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	<u>INAIN90</u>	- Iolai Cov	ei	Prevalence Index v	workshooti	
Lonicera tatarica, Twinsisters	undefined%	o no	FACU			
Ulmus americana, American Elm	undefined%		FACW	Total % Cove		Multiply by:
Tilia americana, American Basswood	10%	yes	FACU	OBL species _		1 = 0
4. Prunus serotina, Black Cherry	10%	yes	FACU	FACW species _		1 = <u>NaN</u>
5				FAC species _		1 = <u>105</u>
	NaN%	= Total Cov	er	FACU species UPL species		1 = <u>NaN</u> 1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1-	-m²) quadrai	t)	Column Totals:	NaN x1	
Parthenocissus quinquefolia, Virginia-Creeper	10%	yes	FACU	_	nce Index = B/A	
Lonicera tatarica, Twinsisters	undefined%	no no	FACU	Trevalen	CC IIIGCX - BIT	1 - 110.1
Ribes cynosbati, Eastern Prickly Gooseberry	15%	yes	FAC	Hydrophytic Veget	ation Indicato	rs:
4. Prunus serotina, Black Cherry	15%	yes	FACU	1 - Rapid Test	for Hydrophyti	c Vegetation
5. Geum canadense, White Avens	10%	yes	<u>FAC</u>	✓ 2 - Dominance	: Test is > 50%	,
6. Alliaria petiolata, Garlic-Mustard		yes	FAC	3 - Prevalence	Index is <= 3.	.0 ¹
7. <u>Hackelia virginiana</u> , Beggar's-Lice		no	FACU	4 - Morphologi	cal Adaptation:	s ¹ (Provide
9.				supporting data sheet)	a in Remarks o	or on a separate
10.				PROBLEMATION	C Hvdrophvtic	Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1.	NaN%	= Total Cov	ver	1Indicators of h	nydric soil and	wetland hydrology turbed or problematic.
2.				Hydrophytic Vegetation		
		= Total Cov	er	Present?		Yes _ 🗸 No
Remarks: (Include photo numbers here or on a separate sheet.)						

SOIL Sample Point: adp46

	Matrix		H	edox Feat	tures			ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-10	10YR - 3/2	100	/				SiL	_ ===
10-16	10YR - 3/1	98	10YR-4/4	2			SL	
				'	· <u></u>			-
								-
				-				-
					· ——			<u> </u>
					·		-	
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	=Reduced Matrix, M	IS=Masked	d Sand Grair	ns. 2	Location: PI	
Hydric Soil I			•					Indicators for Problematic Hydric Soils ³ :
-	(or Histel) (A1) und	lefined	Sand	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undefi			y Redox (S				Dark Surface (S7)
Black Hi	isti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratified	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm Mu	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Depleted	d Below Dark Surfac	ce (A11)		x Dark Sui				hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)		Redo:	x Depressi	ions (F8)			
5 cm Mu	ucky Peat or Peat (S	53)						
Restrictive L	Layer (if observed)	:						
Type:	<u></u>					_ Hyd	Iric Soil Pre	esent? Yes No <u>✓</u>
Remarks:	inches): <u></u>					_		
HYDROLO	GY							
HYDROLO	GY drology Indicators:						<u>c</u>	Secondary Indicators (minimum of two required)
Wetland Hyd			d; check all that ap	ply)			<u> </u>	Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Wetland Hyd Primary Indic Surface	drology Indicators: cators (minimum of o water (A1)		Water-	stained lea	. ,		<u>§</u> 	Surface soil cracks (B6) Drainage patterns (B10)
Wetland Hyde Primary Indice Surface High wa	drology Indicators: cators (minimum of o water (A1) ater table (A2)		Water- Aquati	stained lea c fauna (B	313)		<u>S</u> - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Primary Indice Surface High wa Saturation	drology Indicators: cators (minimum of of water (A1) ster table (A2) on (A3)		Water- Aquati True a	stained lea c fauna (B quatic plai	313) nts (B14)		- - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Wetland Hyd Primary Indic Surface High wa Saturatio Water m	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (B quatic plaa gen sulfide	e odor (C1)	living root	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indice Surface High wa Saturation Water m Sedimer	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		— Water- Aquati — True a — Hydroq — Oxidiz	stained lea c fauna (B quatic plan gen sulfide ed rhizosp	ents (B14) odor (C1) heres along	-	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Wetland Hyd Primary Indic Surface High wa Saturatic Water m Sedimer Drift dep	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquati True a Hydroo Oxidiz Preser	stained leace fauna (B quatic plangen sulfide ed rhizospence of redu	et13) nts (B14) e odor (C1) heres along uced iron (C4)	1)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hyd Primary Indice Surface High wa Saturatic Water m Sedimer Drift dep	cators (minimum of of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) oosits (B3) at or crust (B4)		Water- Aquati True a Hydrog Oxidiz Preser Recen	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (C4 action in tilled	1)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
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Project/Site: Lemon Hill	City/Co	unty: Farmington/Oln	nsted County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power			tate: MN Sampling Point: adp47
Investigator(s): Maddie Humphrey	Secti	ion, Township, Range	e: S29 T107N S012W
Lanform(hillslope, terrace, etc): Depression		Local ı	relief (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.04596		Long: -92.28418	Datum: WGS 84
Soil Map Unit Name: 593E: Elbaville silt loam, 18 to 30 percent slopes			NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Norma	al Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	<u> </u>	ng point locatio	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sampled A	urea
Wetland Hydrology Present? Yes No		within a Wetland	? Yes <u> / No</u>
Remarks: (Explain alternative procedures here or in a separate repo			
Dammed stream in forest	11.)		
VEGETATION - Use scientific names of plants.			
	Absolute	Dominant Indicato	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1. Acer negundo , Ash-Leaf Maple	10%	yes FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2			<u> </u>
3			Total Number of Dominant Species Across All Strata:1 (B)
5.			-
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 0 x1 = 0
4			FAC species 10 x1 = 30
5			FACU species 0 x1 = 0
	0%	= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	, ,	, . ,	Column Totals: 10 x1 = 30 (B)
2.			Prevalence Index = B/A = 3.000
3.			Hydrophytic Vegetation Indicators:
4.			
5			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			- sheet)
10		Tatal Carran	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			- Hydrophytic
2	0%	= Total Cover	─ Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	Matrix			edox Featu	_	. 2	- .		
(inches)	Color (moist)	<u>%</u> _	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	_	Remarks
Type: C=Con	centration, D=Deple	etion, RM=R	educed Matrix, M	 S=Masked	Sand Grain	ns. ² l	_ocation: P	L=Pore Lining, M=Matrix	
ydric Soil In	dicators:							Indicators for Problem	natic Hydric Soils ³ :
	or Histel) (A1) unde			/ Gleyed M				Coast Prairie Redo	ox (A16)
	pedon (A2) undefir	ned		/ Redox (S	•			Dark Surface (S7)	
	ti (A3) undefined			ed Matrix (•			Iron-Manganese M	lasses (F12)
_ ′ ′	Sulfide (A4)			y Mucky M				Very Shallow Dark	Surface (TF12)
	Layers (A5)			y Gleyed M				Other (Explain in F	Remarks)
2 cm Muc	` '	- (444)		ted Matrix				³ Indicators of hydr	ophytic vegetation and we
	Below Dark Surface	e (AII)		x Dark Surf				hydrology must b problematic.	e present, unless disturbed
	k Surface (A12)			k Depressio	urface (F7)			,	
	ucky Mineral (S1) cky Peat or Peat (S	3)	Redox	x Depression	JIIS (FØ)				
ootriotivo La	yer (if observed):								
Type: Depth (in emarks:	ches): sumed, Surface wat	er present.				Hyd	ric Soil Pro	esent?	Yes <u> • </u>
Type: Depth (in emarks: ydric soil ass	sumed, Surface wat	er present.				Hyd	ric Soil Pro	esent?	Yes <u> • No </u>
Type: Depth (in emarks: lydric soil ass	sumed, Surface wat	er present.				Hydi		esent?	
Type: Depth (in emarks: lydric soil ass	sumed, Surface wat		check all that ap	ply)		Hydi			nimum of two required)
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Type: Depth (in emarks: ydric soil ass /DROLOG /etland Hydr rimary Indica / Surface w High wate Saturatior	sumed, Surface wat solvent in the surface water solvent in the s		Water- Aquatio True a	stained lea c fauna (B1 quatic plan	13) ts (B14)	Hydi		Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (C	(B6) B10) ble (C2)
Type: Depth (in temarks: lydric soil ass /DROLOG /etland Hydr rimary Indica / Surface w High wate Saturatior Water ma	sumed, Surface water (A1) er table (A2) in (A3) rks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	ts (B14) odor (C1)		<u> </u>	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (Ci Saturation visible on	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9)
Type: Depth (in emarks: lydric soil ass /DROLOG /etland Hydr rimary Indica / Surface w High wate Saturation Water ma Sediment	sumed, Surface wat sology Indicators: tors (minimum of o vater (A1) er table (A2) n (A3) rks (B1) deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	ts (B14) odor (C1) neres along	living roots	<u> </u>	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (Ci Saturation visible on	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1)
Type: Depth (in Pemarks: Pydric soil ass DROLOG Vetland Hydr rimary Indica Surface w High wate Saturatior Water ma Sediment Drift depo	cology Indicators: stors (minimum of o vater (A1) er table (A2) n (A3) rks (B1) deposits (B2) esits (B3)		Water- Aquation True a Hydrog Oxidizon Preser	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	ts (B14) odor (C1) neres along ced iron (C	living roots	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (C: Saturation visible on Stunted or stressed Geomorphic position	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1)
Type: Depth (in Temarks: Tydric soil ass TOROLOG Tetland Hydr Trimary Indicat Surface w High wate Saturatior Water ma Sediment Drift depo Algal mat	cology Indicators: tors (minimum of o vater (A1) er table (A2) n (A3) rks (B1) deposits (B2) sists (B3) or crust (B4)		Water- Aquation True a Hydrog Oxidize Preser Recen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C- ction in tilled	living roots	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (Ci Saturation visible on	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1)
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Type: Depth (in Demarks: Dydric soil ass YDROLOG Yetland Hydr rimary Indica Y Surface w High water Saturatior Water ma Sediment Drift depo Algal mat Iron depo Inundatior Sparsely ield Observa	cology Indicators: tors (minimum of orater (A1) er table (A2) in (A3) in (A3) in (A3) or crust (B4) sits (B5) in visible on aerial in vegetated concave	ne required; magery (B7) surface (B8)	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct ouck surfact or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks)	living roots	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (C: Saturation visible on Stunted or stressed Geomorphic position	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1)
Type: Depth (in Demarks: Dydric soil ass YDROLOG Yetland Hydr rimary Indica Y Surface w High wate Saturatior Water ma Sediment Drift depo Algal mat Iron depo Inundatior Sparsely ield Observa	cology Indicators: tors (minimum of orater (A1) er table (A2) in (A3) rks (B1) deposits (B2) sits (B3) or crust (B4) sits (B5) in visible on aerial invegetated concave ations: Present?	ne required; magery (B7) surface (B8)	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge Other of	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks)	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (Ci Saturation visible on Stunted or stressed Geomorphic position FAC-neutral test (D5	nimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1) a (D2) S)
Type: Depth (in Demarks: Dydric soil ass YDROLOG Yetland Hydr rimary Indica Y Surface w High water Saturatior Water ma Sediment Drift depo Algal mat Iron depo Inundatior Sparsely ield Observa	cology Indicators: tors (minimum of oreater (A1) er table (A2) in (A3) rks (B1) deposits (B2) sits (B3) or crust (B4) sits (B5) in visible on aerial invegetated concave ations: Present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): 36 nes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (C: Saturation visible on Stunted or stressed Geomorphic position	inimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1)
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Type: Depth (in emarks: ydric soil ass //DROLOG //etland Hydr rimary Indica // Surface w High wate Saturatior Water ma Sediment Drift depo Algal mat Iron depo Inundation Sparsely //etland Deserva urface Water //ater Table P aturation Pre ncludes capil	sumed, Surface wat solvent and solvent an	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge Other No No No	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C2 ction in tilled e (C7) ta (D9) Remarks) nes): 36 nes): nes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (mi Surface soil cracks (Drainage patterns (E Dry-season water ta Crayfish burrows (C: Saturation visible on Stunted or stressed Geomorphic position FAC-neutral test (D5	nimum of two required) (B6) B10) ble (C2) 8) a aerial imagery (C9) plants (D1) a (D2) S)

Project/Site: Lemon Hill	City/Co	untv [.] Farmir	naton/Olmste	d County Samplin	n Date: 2024-06-04
Applicant/Owner: Ranger Power	0.13/001	-		: MN Sampling	
Investigator(s): Maddie Humphrey	Secti				, · · · · · · · · · · · · · · · · · · ·
				ef (concave, convex, none): con	ıcave
Slope(%): 0-2 Lat: 44.04578		Long: -92.2	28217	D	atum: WGS 84
Soil Map Unit Name: 322D2: Timula silt loam, 12 to 20 percent slopes,				NWI classification: PEM	11B
Are climatic / hydrologic conditions on the site typical for this time of ye	ar?	Ye	es , No	(If no, explain in Rema	rks.)
Are Vegetation , Soil , or Hydrology Significantly di	isturbed?	Ar	e "Normal C	ircumstances" present? Yes	. No
Are Vegetation , Soil , or Hydrology naturally probl	lematic?			olain any answers in Remarks.)	<u> </u>
<u> </u>					
SUMMARY OF FINDINGS - Attach site map showing	sampli	ng point	location	s, transects, important	features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No _		le the Sa	ımpled Area		
Hydric Soil Present? Yes No			Wetland?	•	Yes No <u></u> ✓
Wetland Hydrology Present? Yes <u>✓</u> No _					
Remarks: (Explain alternative procedures here or in a separate report Depression in valley between soybean field and meadow slope	-,				
VEGETATION - Use scientific names of plants.					
	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1.				Number of Dominant Species Are OBL, FACW, or FAC:	S That 3 (A)
3.				Total Number of Dominant Sp Across All Strata:	
4					
5	0%	= Total Cov	ver	Percent of Dominant Species Are OBL, FACW, or FAC:	That 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index workshee	t:
1				Total % Cover of:	Multiply by:
2. 3.				OBL species	<u>0</u> x1 = <u>0</u>
4.				FACW species6	<u>5</u> x1 = <u>130</u>
5.				FAC species3	<u>0</u> x1 = <u>90</u>
	0%	= Total Cov	/er	FACU species1	<u>5</u> x1 = <u>60</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft	square (1-	-m²) quadrat	t)	UPL species	<u>0</u> x1 = <u>0</u>
Urtica dioica, Stinging Nettle	35%	yes	FACW		0 x1 =
2. Phalaris arundinacea, Reed Canary Grass	30%	yes	FACW	Prevalence Index	= B/A = <u>2.545</u>
Ambrosia trifida, Great Ragweed	30%	yes	FAC	Hydrophytic Vegetation Ind	icators:
4. Galium aparine, Sticky-Willy	10%	no	FACU	1 - Rapid Test for Hydro	phytic Vegetation
5. <u>Cirsium arvense</u> , Canadian Thistle	5%	no	FACU	✓ 2 - Dominance Test is >	. , ,
6				3 - Prevalence Index is	<= 3.0 ¹
7				4 - Morphological Adapta	
8				supporting data in Rema	
9				sheet)	4
10		= Total Cov	/er	PROBLEMATIC Hydropl	nytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		- 10tai C0V		¹ Indicators of hydric soil must be present, unless	and wetland hydrology s disturbed or problematic.
1				Hydrophytic	
2	0%	= Total Cov	/er	Vegetation Present?	Yes ✔ No
<u> </u>		- 10tai Cov	CI	r resent:	
Remarks: (Include photo numbers here or on a separate sheet.)					

Depth Matrix		R	edox Feat	ures				
(inches) Color (moist)	<u></u> % C	color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-15 10YR - 3/2	100 -	/				SiL		
							_	
ype: C=Concentration, D=De	oletion, RM=Red	luced Matrix, M	IS=Masked	Sand Grai	ns. ² I	ocation: F	PL=Pore Lining, M=Matrix.	
dric Soil Indicators:							Indicators for Problematic Hydric Soils ³ :	
_ Histosol (or Histel) (A1) un			y Gleyed M				Coast Prairie Redox (A16)	
Histic Epipedon (A2) unde			y Redox (S	•			Dark Surface (S7)	
Black Histi (A3) undefined			ed Matrix (` '			Iron-Manganese Masses (F12)	
Hydrogen Sulfide (A4)		Loam	y Mucky M	ineral (F1)			Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
2 cm Muck (A10)		Deple	eted Matrix	(F3)			³ Indicators of hydrophytic vegetation and	d wet
Depleted Below Dark Surfa	ace (A11)	Redox	x Dark Sur	face (F6)			hydrology must be present, unless dist	urbec
Thick Dark Surface (A12)		Deple	eted Dark S	Surface (F7)			problematic.	
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat	(C3)	Redox	x Depression	ons (F8)				
estrictive Layer (if observed								
	,				Hyd	ric Soil Pı	resent? Yes	No _
Type: <u> </u>								
Depth (inches): emarks:								
Depth (inches): <u></u> emarks:								
Depth (inches): emarks: DROLOGY					_		Secondary Indicators (minimum of two require	4)
Depth (inches): emarks: DROLOGY Tetland Hydrology Indicators		neck all that an	nnlv)				Secondary Indicators (minimum of two required Surface soil cracks (B6)	d)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of			• • •	ives (B9)			Surface soil cracks (B6)	d)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum ofSurface water (A1)		Water-	stained lea	` '			Surface soil cracks (B6) Drainage patterns (B10)	d)
Depth (inches): emarks: DROLOGY Tetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2)		Water- Aquati	stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	d)
Depth (inches): emarks: DROLOGY Tetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquation True a	stained lea c fauna (B: quatic plan	13) its (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	d)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators fimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (Bí quatic plan gen sulfide	13) its (B14) odor (C1)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	d)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquati True a Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	d)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water- Aquati True a Hydrog Oxidizo	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) ts (B14) odor (C1) neres along ced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	d)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water- Aquati True a Hydrog Oxidize Preser Recen	estained lea c fauna (B. quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	d)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators imary Indicators (minimum of _ Surface water (A1) _ High water table (A2) _ Saturation (A3) _ Water marks (B1) _ Sediment deposits (B2) _ Drift deposits (B3) _ Algal mat or crust (B4) _ Iron deposits (B5)	one required; cl	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct	ats (B14) odor (C1) neres along ced iron (C ction in tilled e (C7)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	d)
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Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav	one required; cl	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	d)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power	0.1,700	State	
Investigator(s): Maddie Humphrey	Secti		: v
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.04732		Long: -92.28039	Datum: WGS 84
Soil Map Unit Name: 322D2: Timula silt loam, 12 to 20 percent slopes	, moderatel	y eroded	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of you	ear?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prof	olematic?		xplain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _		Is the Sampled Are	2
Hydric Soil Present? Yes NoNo		within a Wetland?	Yes No
Wetland Hydrology Present? Yes No No			
Meadow swale adjacent open water VEGETATION - Use scientific names of plants.			
		Dominant Indicator	Daminanaa Taat Waykahaat
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species? Status	Dominance Test Worksheet
2.			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species Across All Strata: 2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 0 x1 = 0
5			FAC species50 x1 =150
	0%	= Total Cover	FACU species60 x1 =240
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft	t square (1	-m²) quadrat)	UPL species 10
Poa pratensis, Kentucky Blue Grass	50%	yes FAC	Column Totals: 120 x1 = 440 (B)
2. <u>Solidago canadensis</u> , Canadian Goldenrod	40%	yes FACU	Prevalence Index = B/A = 3.667
3. <u>Parthenocissus quinquefolia, Virginia-Creeper</u>		no FACU	Hydrophytic Vegetation Indicators:
4. Pastinaca sativa, Wild parsnip		no UPL	1 - Rapid Test for Hydrophytic Vegetation
5. Asclepias syriaca, Common Milkweed	5%	no FACU	2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separatesheet)
10.			
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No ✓
Remarks: (Include photo numbers here or on a separate sheet.)		10101 00101	100
remarks. (meduce proto numbers here of on a separate sheet.)			

	cription: (Describe to Matrix	to the depth		iment the i edox Featu		r confirm	the abser	nce of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	rks
0-8	10YR - 3/2	100	/				SiL		
8-15	10YR - 3/3	100	/				SiL		
								_	
/pe: C=C	oncentration, D=Depl	letion, RM=Re	educed Matrix, M	S=Masked	 I Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problematic F	lydric Soils ³ :
_	ol (or Histel) (A1) und			/ Gleyed M				Coast Prairie Redox (A1	6)
_	Epipedon (A2) undefi	nea	·	/ Redox (S				Dark Surface (S7)	
_	Histi (A3) undefined			ed Matrix (` '			Iron-Manganese Masses	
_ , ,	en Sulfide (A4)			y Mucky M				Very Shallow Dark Surfa	
	ed Layers (A5)			y Gleyed M				Other (Explain in Remark	•
_	fluck (A10)	(444)		ted Matrix	` '			³ Indicators of hydrophytic	vegetation and we
-	ed Below Dark Surfac	:e (A11)		x Dark Surf	` '			hydrology must be pres problematic.	ent, unless disturbe
_	Dark Surface (A12)				Surface (F7)			problemate.	
_	Mucky Mineral (S1)	20)	Redox	x Depression	ons (F8)				
_	fucky Peat or Peat (S Layer (if observed):	*							
Type:		•				Hvd	ric Soil Pi	resent?	Yes No
Depth	(inches):								
Depth marks:									
Depth marks:	DGY							Secondary Indicators (minimum	of two required)
Depth marks: DROLC	OGY vdrology Indicators:		check all that ap	(vla				Secondary Indicators (minimum Surface soil cracks (B6)	n of two required)
Depth marks: DROLO etland Hy mary Indi	DGY			ply) stained lea	aves (B9)				of two required)
Depth marks: DROLO etland Hy mary Indi _ Surface	OGY /drology Indicators: icators (minimum of c		Water-	stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)	
Depth marks: DROLC tland Hy mary Indi Surface High w	OGY /drology Indicators: icators (minimum of ce water (A1)		Water-	• • •	13)			Surface soil cracks (B6)	
Depth marks: DROLC titand Hy mary Indi _ Surface _ High w Saturat	OGY /drology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquatio True a	stained lea c fauna (B1	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	2)
Depth marks: DROLO etland Hy mary Indi Surface High w Saturat Water r	OGY /drology Indicators: icators (minimum of ce water (A1) ater table (A2) tion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) nts (B14)	living root	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	2) imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	OGY vdrology Indicators: icators (minimum of of the water (A1) ater table (A2) tion (A3) marks (B1)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	•	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial	2) imagery (C9)
DROLO Control Contr	order (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquatio True a Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ats (B14) odor (C1) neres along aced iron (C	4)	` '	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants	2) imagery (C9)
DROLO DROLO Etland Hy Mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	or water (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2)		Water- Aquatio True a Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	nts (B14) odor (C1) neres along aced iron (C	4)	` '	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
Depth marks: DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	pogy Indicators: icators (minimum of ce water (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along iced iron (C ction in tilled	4)	` '	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
Depth marks: DROLC tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de	or or crust (B4)	one required;	Water- Aquation True and Hydrog Oxidized Present Recent Thin man	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ats (B14) odor (C1) neres along aced iron (C ction in tilled te (C7) ata (D9)	4)	` '	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
DROLO Continue Hymary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in ely vegetated concave	one required;	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct ouck surfact or well da (Explain in	ats (B14) odor (C1) neres along aced iron (C ction in tilled be (C7) ata (D9) Remarks)	4)	` '	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
DROLO Petland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in the control of	imagery (B7) e surface (B8)	Water- Aquatio True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in	nts (B14) odor (C1) neres along iced iron (C ction in tilled ie (C7) ita (D9) Remarks)	4) d soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
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Depth marks: DROLC etland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) ition (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) ition visible on aerial in the posits (B5) ter Present? Present?	imagery (B7) e surface (B8) Yes Yes	Water- Aquatio True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along nced iron (C ction in tilled te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
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Depth marks: DROLO etland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse eld Obset rface Water Table turation F cludes ca	pogy Indicators:	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
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Depth marks: DROLO etland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse eld Obset rface Water Table turation F cludes ca	pogy Indicators:	imagery (B7) e surface (B8) Yes Yes Yes	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)

Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp50
Investigator(s): Maddie Humphrey	Sect	ion, Township, Range: S	S29 T107N S012W
Lanform(hillslope, terrace, etc): Depression		Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.04734		Long: -92.28041	Datum: WGS 84
Soil Map Unit Name: 322D2: Timula silt loam, 12 to 20 percent slopes	, moderatel	ly eroded	NWI classification: PEM1B, PUBHh
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	xplain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	a samnli	ing point location	as transects important features etc
	<u> </u>		is, transcots, important reatures, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sampled Are	
Wetland Hydrology Present? Yes ✓ No		within a Wetland?	Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate repo Depression adjacent open water VEGETATION - Use scientific names of plants.			
		Dominant Indicator	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species Across All Strata: 1 (B)
5.			、 ,
5	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1. 2.			Total % Cover of: Multiply by:
3.			OBL species5 x1 =5
4.			FACW species 100
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: $105 \text{ x1} = 205 \text{ (B)}$
2. Angelica atropurpurea, Purple-Stem Angelica	5%	no OBL	Prevalence Index = B/A = 1.952
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. 2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	Matrix		<u>F</u>	Redox Feat			=			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		emarks	
0-8	10YR - 4/1	95	7.5YR-3/4	5	C	M/PL	Mucky Loam			
Гуре: С=С	oncentration, D=Dep	letion, RM=R	Reduced Matrix, N		d Sand Grai	ns.	² Location:	PL=Pore Lining, M=Matrix.		
Histoso Histic E Black F Hydrog Stratifie 2 cm M Deplete Thick D Sandy	Indicators: I (or Histel) (A1) und spipedon (A2) undefilisti (A3) undefined en Sulfide (A4) d Layers (A5) luck (A10) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (S	ce (A11)	Sand Stripp Loam Loam Deple Redo	y Redox (Sped Matrix by Mucky May Gleyed I eted Matrix x Dark Su	(S6) Mineral (F1) Matrix (F2) (F3) rface (F6) Surface (F7)	,		Indicators for Problemat Coast Prairie Redox Dark Surface (S7) Iron-Manganese Mas Very Shallow Dark St Other (Explain in Rer Indicators of hydropl hydrology must be p	(A16) ses (F12) urface (TF12) marks) hytic vegetation	and wetl
octrictivo	Layer (if observed)									
Type: Depth	 (inches):	-				Hy	dric Soil P	resent?	Yes <u>•</u>	No
Type: Depth emarks:	 (inches):					Hyv	dric Soil P	resent?	Yes <u> •</u>	No
Type: Depth emarks:	 (inches):					Hy	dric Soil P	Secondary Indicators (minin	num of two requ	
Type: Depth emarks: DROLO /etland Hy rimary Indi	GY drology Indicators: cators (minimum of				avas (BQ)	Hy	dric Soil P	Secondary Indicators (minin Surface soil cracks (B6	num of two requ	
Type: Depth emarks: 'DROLO /etland Hy rimary Indi Surface	GY drology Indicators: cators (minimum of a water (A1)		Water	stained le	. ,	Hy	dric Soil P	Secondary Indicators (mininSurface soil cracks (B6Drainage patterns (B10	num of two requ	
Type: Depth emarks: DROLO /etland Hy rimary Indi Surface High wa	GY drology Indicators: cators (minimum of water (A1) ater table (A2)		Water Aquat	stained le c fauna (B	313)	Hy	dric Soil P	Secondary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two requ	
Type: Depth Type:	GY drology Indicators: cators (minimum of water (A1) ater table (A2)		Water Aquati True a	stained le c fauna (B quatic pla	313)	Hyv	dric Soil P	Secondary Indicators (mininSurface soil cracks (B6Drainage patterns (B10	num of two requ 5) 0) e (C2)	iired)
Type: Depth Type:	drology Indicators: cators (minimum of extern table (A2) ion (A3)		Water-Aquati True a Hydro	stained le c fauna (B aquatic pla gen sulfide	313) nts (B14)			Secondary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two requ 5) 0) e (C2) erial imagery (C	uired)
Type: Depth emarks: TDROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime	inches): OGY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1)		Water Aquati True a Hydro Oxidiz	stained le c fauna (B quatic pla gen sulfide ed rhizosp	B13) nts (B14) e odor (C1)	living roc		Secondary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac	num of two requ 5) 0) e (C2) erial imagery (C ants (D1)	uired)
Type: Depth emarks: TDROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2)		Water Aquati True a Hydro Oxidiz Prese	stained le c fauna (E aquatic pla gen sulfide ed rhizosp nce of redi	B13) nts (B14) e odor (C1) oheres along	living roc	ots (C3)	Secondary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two requ 5) 0) e (C2) erial imagery (C ants (D1)	uired)
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Type: Depth Demarks: TOROLO Tetland Hy Timary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Teld Obser Jurface Wat Vater Table Saturation F Includes ca	(inches): (i	one required; imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydro — Oxidiz — Presei — Recer — Thin n — Gauge (i) — Other No _ ✓ No _ ✓ No _ ✓ No _ ✓	estained le c fauna (E fauna (E c fauna (E f	stata) Ints (B14) Ints (B14)	living rocate) d soils (C	ots (C3) 6) otland Hydr	Secondary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two requisitions of	nired)

Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olmsto	ed County Sampling Date: 2024-06-04			
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp51			
Investigator(s): Maddie Humphrey	Sect					
			ef (concave, convex, none): concave			
Slope(%): 0-2 Lat: 44.04795		Long: -92.28072	Datum: WGS 84			
Soil Map Unit Name: W: Water			NWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes , No	o (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology Significantly		Are "Normal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)			
SUMMARY OF FINDINGS - Attach site map showin	ıg sampli	ing point location	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sampled Area				
Wetland Hydrology Present? Yes Ves No		within a Wetland?	Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate repropen water wetland VEGETATION - Use scientific names of plants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet			
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)			
3.			Total Number of Dominant Species			
4. 5.			Across All Strata: 0 (B) Percent of Dominant Species That			
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B) Prevalence Index worksheet:			
1						
2			Total % Cover of:Multiply by:			
3			OBL species $0 \times 1 = 0$ FACW species $0 \times 1 = 0$			
4			FAC species 0 x1 = 0			
5			FACU species			
	0%	= Total Cover	UPL species			
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1	m²) quadrat)	Column Totals: $0 \times 1 = 0$ (B)			
1			Prevalence Index = B/A = NaN			
2						
3. 4.			Hydrophytic Vegetation Indicators:			
5			1 - Rapid Test for Hydrophytic Vegetation			
6.			2 - Dominance Test is > 50%			
7.			3 - Prevalence Index is <= 3.0 ¹			
8			4 - Morphological Adaptations ¹ (Provide			
9			supporting data in Remarks or on a separate sheet)			
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	0%	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
1 2.			Hydrophytic			
	0%	= Total Cover	Vegetation Present? Yes✓_ No			
Remarks: (Include photo numbers here or on a separate sheet.) No surface vegetation, assume hydrophytic due to presence of surf	ace water					

Depth	Matrix			edox Feati		. 2	- .		
(inches)	Color (moist)	<u> </u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	_	Remarks
Type: C=C	oncentration, D=Deple	etion, RM=R	educed Matrix, M	IS=Masked	Sand Grai	ns. ² I	Location: F	PL=Pore Lining, M=Mati	rix.
-	Indicators:	ofinad	Sand	, Clayed M	Antriy (CA)				ematic Hydric Soils ³ :
	l (or Histel) (A1) unde pipedon (A2) undefir			y Gleyed M y Redox (S				Coast Prairie Re	
	listi (A3) undefined	icu		ed Matrix (•			Dark Surface (S7	
	en Sulfide (A4)				lineral (F1)			Iron-Manganese	
	d Layers (A5)			y Gleyed N	` '			Other (Explain in	rk Surface (TF12)
	uck (A10)			ted Matrix				` ` '	•
Deplete	d Below Dark Surface	e (A11)		x Dark Sur				hydrology must	drophytic vegetation and we be present, unless disturbe
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.	•
Sandy	Mucky Mineral (S1)		Redo	x Depressi	ons (F8)				
5 cm M	ucky Peat or Peat (S	3)							
estrictive	Layer (if observed):								
Type:						Hyd	ric Soil Pr	esent?	Yes _ 🗸 No _
Depth emarks:	(inches):	ter				_			
Depth Remarks: Issume hyd	Iric due to surface wa	ter				_			
Depth Remarks: Assume hyd	Iric due to surface wa	ter				_			
Depth Remarks: sssume hyc	Iric due to surface wa					_			minimum of two required)
Depth Remarks: Assume hyce /DROLO Vetland Hy rimary Indi	Iric due to surface wa				nuco (DO)	_		Surface soil cracks	s (B6)
Depth Remarks: Assume hyce /DROLO Vetland Hy Primary Indi ✓ Surface	Iric due to surface wa		Water-	stained lea	. ,	_		Surface soil cracks Drainage patterns	(B10)
Depth Remarks: Ssume hyc /DROLO /etland Hy /erimary Indi / Surface High wa	drology Indicators: cators (minimum of o		Water- Aquati	stained lea c fauna (B	13)	_		Surface soil cracks Drainage patterns Dry-season water	s (B6) (B10) table (C2)
Depth Remarks: Ssume hyc /DROLO /etland Hy /erimary Indi / Surface High wa Saturat	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained lea c fauna (B: quatic plan	13) nts (B14)	_		Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (s (B6) (B10) table (C2)
Depth Remarks: ASSUME hyd Primary Indi Surface High wa Saturat Water r	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1)		Water-Aquati True a	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14)	living roots		Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (s (B6) (B10) table (C2) C8) on aerial imagery (C9)
Depth Remarks: A Control Cont	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1)	•		Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1)
Depth Remarks: Ssume hyc /DROLO // DROLO // DROLO // Surface High wa Saturat Water r Sedime Drift de	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2)		Water-Aquati True a Hydro Oxidiz Preser	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) nts (B14) odor (C1) heres along	4)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2)
Depth Remarks: Assume hyce /DROLO // DROLO // DROLO // Surface High wa Saturat Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquati True a Hydrog Oxidiz Presei Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	nts (B14) odor (C1) heres along aced iron (C	4)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2)
Depth Remarks: Assume hyce /DROLO /Petland Hy Primary Indi / Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	ne required;	Water- Aquati True a Hydro Oxidiz Presei Recen Thin n	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reduc	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	4)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2)
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Depth Remarks: Assume hyce /DROLO /Petland Hy Primary Indi / Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave	ne required; magery (B7) surface (B8)	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc s or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2)
Depth Remarks: Assume hyce Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave rvations: er Present?	ne required; magery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): 36	4) d soils (C6)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position FAC-neutral test (I	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2) D5)
Depth Remarks: Assume hyce Vetland Hy rimary Indi Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Gield Obser Water Table	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave rvations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): 36 hes):	4) d soils (C6)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2)
Depth Remarks: Assume hyce Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vield Obser Sield Obser Sield Obser Sield Obser Sield Obser	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave rvations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): 36 hes):	4) d soils (C6)	s (C3)	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic position FAC-neutral test (I	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2) D5)
Depth Remarks: ASSUME hyd Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Gurface Wat Vater Table Gaturation F ncludes ca	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): 36 hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic positic FAC-neutral test (I	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2) D5)
Depth Remarks: Assume hyd Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Sield Obser Surface Wat Water Table Saturation F Includes ca	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ter Present? Present? present? present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): 36 hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic positic FAC-neutral test (I	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2) D5)
Depth Itemarks:	drology Indicators: cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ter Present? Present? present? present?	ne required; magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): 36 hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks Drainage patterns Dry-season water Crayfish burrows (Saturation visible of Stunted or stresse Geomorphic positic FAC-neutral test (I	s (B6) (B10) table (C2) C8) on aerial imagery (C9) d plants (D1) on (D2) D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power				e: MN Sampling Point: adp52
Investigator(s): Maddie Humphrey	Sect	ion, Townsh	ip, Range: S	S29 T107N S012W
Lanform(hillslope, terrace, etc): Sideslope			Local reli	ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.04836		Long: -92.	.28046	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well draine	ed, 0 to 2 per	rcent slopes	i <u> </u>	NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?	(1:	f needed, ex	xplain any answers in Remarks.)
CLIMMADY OF FINDINGS. Attack site man chausing			loootion	a transacta immantant factures at
SUMMARY OF FINDINGS - Attach site map showing	<u> </u>	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No ✓ No			ampled Area	
Wetland Hydrology Present? Yes ✓ No		within a	Wetland?	Yes _ 🗸 No
Remarks: (Explain alternative procedures here or in a separate rep				
Slope adjacent stream, wetland seep				
VEGETATION - Use scientific names of plants.				
		Dominant		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3. 4.				Total Number of Dominant Species Across All Strata:1 (B)
5.				Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B) Prevalence Index worksheet:
1				
2				Total % Cover of: Multiply by:
3				OBL species0 x1 =0
4				FACW species 80 x1 = 160
5				FAC species 15 x1 = 45 FACU species 42 x1 = 168
	0%	= Total Co		FACU species 42 x1 = 168 UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28		, ,	,	Column Totals: 137 x1 = 373 (B)
Impatiens capensis, Spotted Touch-Me-Not Ribes cynosbati, Eastern Prickly Gooseberry	80% 15%	yes no	FACW FAC	Prevalence Index = B/A = $\frac{2.723}{2}$
Parthenocissus quinquefolia, Virginia-Creeper		no	FACU	
Rubus idaeus, Common Red Raspberry		no	FACU	Hydrophytic Vegetation Indicators:
Solidago canadensis, Canadian Goldenrod	100/	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
Lonicera tatarica, Twinsisters	100/	no	FACU	2 - Dominance Test is > 50%
7. Dactylis glomerata, Orchard Grass	2%	no	FACU	$_{\underline{\checkmark}}$ 3 - Prevalence Index is $\leq 3.0^1$
8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	137%	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2	0%	= Total Co	ver	Vegetation Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				•

Depth	Matrix		K	ledox Feati					
(inches)	Color (moist)	<u></u> %	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Ren	narks
0-16	10YR - 2/1	100	/				SiL		
								_	
Type: C=C	oncentration, D=Dep	letion, RM=R	Reduced Matrix, M	 IS=Masked	Sand Grai	ns. 2	Location: P	L=Pore Lining, M=Matrix.	
-	Indicators:							Indicators for Problematic	Hydric Soils ³ :
	l (or Histel) (A1) un			y Gleyed M				Coast Prairie Redox (A	16)
	Epipedon (A2) undet	inea		y Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (Iron-Manganese Masse	` '
′ °	en Sulfide (A4)			y Mucky M				Very Shallow Dark Sur	
	ed Layers (A5)			y Gleyed N	, ,			Other (Explain in Rema	·
	luck (A10)	00 (111)		ted Matrix x Dark Suri				³ Indicators of hydrophy	tic vegetation and wetla
	ed Below Dark Surfa	ce (AII)			` ,			nydrology must be pro problematic.	esent, unless disturbed
	Oark Surface (A12) Mucky Mineral (S1)			x Depressi	Surface (F7)			•	
	lucky Peat or Peat (S3)		x Depressi	JIIS (F0)				
	Layer (if observed)):				Llved	ria Cail Dr		Voc. d. No.
Type:	RUCK					пуи	ric Soil Pr	esent?	Yes _ 🗸 No
Depth	(inches): 16	redox							
Depth Remarks: Assume hyd	dric. Too wet to see	redox							
Depth Remarks: Assume hyd	dric. Too wet to see							Secondary Indicators (minimu	ım of two required)
Depth Remarks: Assume hyc	dric. Too wet to see	:	; check all that ap	pply)				Secondary Indicators (minimu Surface soil cracks (B6)	ım of two required)
Depth Remarks: Assume hyc YDROLO Wetland Hy Primary Indi	dric. Too wet to see	:	Water-	stained lea	, ,	_	:		ım of two required)
Depth Remarks: Assume hyc YDROLO Wetland Hy Primary Indi ✓ Surface	dric. Too wet to see	:	Water-		, ,	_	:	Surface soil cracks (B6)	
Depth Remarks: Assume hyc YDROLO Vetland Hy Primary Indi Surface High wa	dric. Too wet to see	:	Water- Aquati	stained lea	13)	_		Surface soil cracks (B6) Drainage patterns (B10)	
Depth Remarks: Assume hyc YDROLO Wetland Hy Primary Indi Surface High wa Saturat	dric. Too wet to see	:	Water- Aquati True a	stained lea c fauna (B	13) its (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Primary Indi Saturat Water r Sedime	dric. Too wet to see OGY rdrology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)	:	Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan	C2) al imagery (C9) ts (D1)
Primary Indi Saturat Water r Sedime Drift de	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)	:	Water- Aquati True a ✓ Hydroo Oxidiz- Preser	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) ts (B14) odor (C1) neres along ced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Primary Indi Value Saturat Water r Sedime Drift de Algal m	dric. Too wet to see	:	Water- Aquati True a ✓ Hydrog Oxidiz Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyc YDROLO Wetland Hy Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	dric. Too wet to see	: one required;	Water- Aquati True a ✓ Hydro Oxidiz Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	ats (B14) odor (C1) neres along ced iron (C ction in tiller e (C7)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyc /DROLO Vetland Hy Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	: one required; imagery (B7)	WaterAquatiTrue aOxidiziPreserRecenThin mGauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac e or well da	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Depth Remarks: Sssume hyc /DROLO Vetland Hy Primary Indi / Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	dric. Too wet to see OGY Indrology Indicators Cators (minimum of Water (A1) Indeer table (A2) Indicators (B1) Indicators (B2) Indicators (B3) Indicators (B4) Indicators (B4	: one required; imagery (B7)	WaterAquatiTrue aOxidiziPreserRecenThin mGauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Pepth Remarks: Assume hyc YDROLO Vetland Hy Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concaviryations:	: one required; imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyce Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concavirvations: ter Present?	one required; imagery (B7) e surface (B8)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da (Explain in	nts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks)	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyce Primary Indi ✓ Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Water Table	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) hat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity rvations: ter Present? Present?	imagery (B7) e surface (B8) Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Primary Indi Value Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Water Table Saturation F	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) hat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity rvations: ter Present? Present?	imagery (B7) e surface (B8) Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Primary Indi Volume Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Saturation F includes ca	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity rvations: ter Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a ✓ Hydroq Oxidiz- Preser Recen Thin m Gauge Other No No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyce Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Surface Wat Vater Table Saturation F includes ca	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concavity rvations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a ✓ Hydroq Oxidiz- Preser Recen Thin m Gauge Other No No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Depth Remarks: Assume hyce Portion of the control	dric. Too wet to see dric. Too wet to see drology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concavity rvations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a ✓ Hydroq Oxidiz Preser Recen Thin m Gauge Other S No No	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch poeth (i	nts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) Saturation visible on aeri Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	:: MN Sampling Point: adp53
Investigator(s): Maddie Humphrey	Secti		
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.06322		Long: -92.29955	Datum: WGS 84
Soil Map Unit Name: 369C: Waubeek silt loam, 6 to 12 percent slo	pes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes 🔎 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significan	tly disturbed?		Circumstances" present? Yes , No
	problematic?		plain any answers in Remarks.)
<u> </u>			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 1	No <u>✓</u>		
Hydric Soil Present? Yes 1		Is the Sampled Area within a Wetland?	Yes No <u>✔_</u>
Wetland Hydrology Present? Yes N	No <u>✓</u>		
Remarks: (Explain alternative procedures here or in a separate re	eport.)		
Road right of way			
VEGETATION - Use scientific names of plants.			
Troe Stratum (Diet eizer 20 ft (0.1 m) radius)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1.	70 COVE	Species: Status	
2			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3.			Total Number of Dominant Species
4.			Across All Strata:2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species0 x1 =0
4			FAC species 30 x1 = 90
5		Tabal Carran	FACU species 70 x1 = 280
Harbacana Chartura (Diet sizas f. (1.5 m) radius OD 2.20 hu. 2.		= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3. 1. <i>Bromus inermis</i> , Smooth Brome			Column Totals: 100 x1 = 370 (B)
Bromus inermis, Smooth Brome Poa pratensis, Kentucky Blue Grass	30%		Prevalence Index = B/A =3.700
3			Hudrophytic Veretation Indicators
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	100%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
	0%	= Total Cover	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)			

SOIL Sample Point: adp53

		color (moist)	%	Type ¹	Loc ²	Texture	Remark	KS .	
Type: C=Concentration, D=Depl	letion, RM=Red	luced Matrix, MS=	Masked S	Sand Grain	s. ² L	ocation: PL	=Pore Lining, M=Matrix.		
ydric Soil Indicators: Histosol (or Histel) (A1) und Histic Epipedon (A2) undefin Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S	ned ce (A11)		edox (S5 Matrix (S Mucky Mir Gleyed Ma Matrix (I ark Surfa) 66) heral (F1) hatrix (F2) F3) hace (F6) hrface (F7)			Indicators for Problematic Hy Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (I Very Shallow Dark Surface Other (Explain in Remarks ³ Indicators of hydrophytic hydrology must be present problematic.	F12) e (TF12) s) vegetation and	wetlar rbed o
restrictive Layer (if observed): Type: Depth (inches):	:				_ Hydr	ic Soil Pre	sent?	Yes N	lo <u> </u>
					nyurology	indicators.			
					Tryurology		acondany Indicators (minimum a	of two required	<u> </u>
etland Hydrology Indicators:		neck all that apply			Tyurology		econdary Indicators (minimum o Surface soil cracks (B6)	of two required))
etland Hydrology Indicators:		neck all that apply Water-sta)		Tyurology		econdary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10)	of two required))
etland Hydrology Indicators: rimary Indicators (minimum of c) ined leav	es (B9)	nyurology		Surface soil cracks (B6))
Vetland Hydrology Indicators: rimary Indicators (minimum of c Surface water (A1)		Water-sta) ined leav auna (B13	es (B9) 3)	Tydrology		Surface soil cracks (B6) Drainage patterns (B10))
Vetland Hydrology Indicators: rimary Indicators (minimum of o Surface water (A1) High water table (A2)		Water-stal) ined leav auna (B13 atic plants	es (B9) 3) s (B14)	Tydrology		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)))
Vetland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3)		Water-stal Aquatic fa True aqua Hydrogen) ined leav auna (B13 atic plants sulfide c	es (B9) 3) s (B14)		<u>S</u> - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	magery (C9))
High water table (A2) Saturation (A3) Water marks (B1)		Water-sta Aquatic fa True aqua Hydrogen Oxidized) ined leav auna (B13 atic plants sulfide o	es (B9) 3) s (B14) dor (C1)	iving roots	<u>S</u> - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in	magery (C9))
Vetland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water-sta Aquatic fa True aqua Hydrogen Oxidized) ined leav auna (B13 atic plants sulfide o rhizosphe of reduc	es (B9) 3) s (B14) odor (C1) eres along l	iving roots)	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I	magery (C9))
Vetland Hydrology Indicators: Primary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water-sta Aquatic fa True aqua Hydrogen Oxidized) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct	es (B9) 3) 5 (B14) 5 (C1) 6 (C2) 6 (C3) 6 (C4) 6 (C4) 6 (C4) 6 (C4) 6 (C4)	iving roots)	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9))
Vetland Hydrology Indicators: rrimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	one required; ct	Water-stal Aquatic fall True aqua Hydrogen Oxidized Presence Recent iro) ined leav auna (B13 atic plants sulfide o rhizosphe of reduce on reduct k surface	es (B9) 3) 5 (B14) bdor (C1) eres along led iron (C4) ion in tilled (C7)	iving roots)	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9))
Vetland Hydrology Indicators: rrimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	one required; cl	Water-stal Aquatic fall True aqua Hydrogen Oxidized Presence Recent iro) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct on reduct k surface well data	es (B9) 3) 5 (B14) bdor (C1) eres along led iron (C4) ion in tilled (C7) a (D9)	iving roots)	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9))
Vetland Hydrology Indicators: rrimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	one required; cl	Water-stal Aquatic fall True aqua Hydrogen Oxidized In Presence Recent ind Thin mucl Gauge or) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct on reduct k surface well data	es (B9) 3) 5 (B14) bdor (C1) eres along led iron (C4) ion in tilled (C7) a (D9)	iving roots)	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9))
Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	imagery (B7) e surface (B8)	Water-sta Aquatic fa True aqua Hydrogen Oxidized Presence Recent iro Thin mucl Gauge or Other (Ex) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct on reduct k surface well data plain in F	es (B9) 3) 5 (B14) 6 (C1) 6 eres along l 6 ed iron (C4) 6 ion in tilled 6 (C7) 6 (D9) 6 Remarks) 6 es):	iving roots	S S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9))
Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave Field Observations: Surface Water Present?	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water-sta Aquatic fa True aqua Hydrogen Oxidized Presence Recent iro Thin mucl Gauge or Other (Ex) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct on reduct k surface well data plain in F	es (B9) 3) 5 (B14) bdor (C1) eres along l ed iron (C4) ion in tilled (C7) a (D9) Remarks)	iving roots) soils (C6)	S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2)	magery (C9) D1))
Vetland Hydrology Indicators: rrimary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave rield Observations: Surface Water Present? Vater Table Present?	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water-sta Aquatic fa True aqua Hydrogen Oxidized Presence Recent iro Thin mucl Gauge or Other (Ex) ined leav auna (B13 atic plants sulfide o rhizosphe of reduct on reduct k surface well data plain in F	es (B9) 3) 5 (B14) bdor (C1) eres along l ed iron (C4) ion in tilled (C7) a (D9) Remarks)	iving roots) soils (C6)	S (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2) FAC-neutral test (D5)	magery (C9) D1)	
Vetland Hydrology Indicators: rrimary Indicators (minimum of continuous processes of the continuous processes of	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water-stal Aquatic fall True aqua Hydrogen Oxidized in Presence Recent inc Thin much Gauge or Other (Ex No) ined leavenua (B13 atic plants sulfide or reduce on reduce well data plain in Footh (inche oth (i	es (B9) 3) 5 (B14) 6dor (C1) 6res along led iron (C4) 6ion in tilled (C7) 6 (D9) 6Remarks) 6es): 6es):	iving roots) soils (C6)	S S S S S S S S S S S S S S S S S S S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2) FAC-neutral test (D5)	magery (C9) D1)	
Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	imagery (B7) e surface (B8) Yes _ Yes _ Yes _	Water-stal Aquatic fall True aqua Hydrogen Oxidized in Presence Recent inc Thin much Gauge or Other (Ex No) ined leavenua (B13 atic plants sulfide or reduce on reduce well data plain in Footh (inche oth (i	es (B9) 3) 5 (B14) 6dor (C1) 6res along led iron (C4) 6ion in tilled (C7) 6 (D9) 6Remarks) 6es): 6es):	iving roots) soils (C6)	S S S S S S S S S S S S S S S S S S S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (I) Geomorphic position (D2) FAC-neutral test (D5)	magery (C9) D1)	

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmst	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp54
Investigator(s): Maddie Humphrey	Secti		
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.05913			
Soil Map Unit Name: 176: Garwin silty clay loam		-	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time o	f year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significant	tly disturbed?		Circumstances" present? Yes , No
	roblematic?		plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N		Ic the Campled Area	
Hydric Soil Present? Yes N		Is the Sampled Area within a Wetland?	Yes No
Wetland Hydrology Present? Yes N			
Remarks: (Explain alternative procedures here or in a separate re Road right of way adjacent culvert	eport.)		
3			
VEGETATION - Use scientific names of plants.			
·	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2			
3			Total Number of Dominant Species Across All Strata:1 (B)
5			, , ,
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			
2			
3			FACW species 10 x1 = 20
4			FAC species 0 x1 = 0
5		Tatal Carran	FACU species 90 x1 = 360
Harbanaua Stratum (Blat aizaiE ff (1 E m) radius OD 2.20 by 2.2	0% 00 ft aguere (1	= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2 1. <i>Bromus inermis</i> , Smooth Brome			Column Totals: 100 x1 = 380 (B)
Phalaris arundinacea, Reed Canary Grass	100/		Prevalence Index = B/A = 3.800
3.			Hydrophytic Vegetation Indicators:
4.			
5			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9			sheet)
10.		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sheet.)			1

SOIL Sample Point: adp54

Depth (inches) Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	S
Type: C=Concentration, D=Depl	etion, RM=Re	educed Matrix, M	 S=Masked	Sand Grain	ns. ² L	ocation: Pl	L=Pore Lining, M=Matrix.	
ydric Soil Indicators: Histosol (or Histel) (A1) und Histic Epipedon (A2) undefine Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S	ned ee (A11)	Sandy Strippe Loamy Loamy Deplet Redox	Gleyed Matrix Dark Surf	(S6) (S6) (ineral (F1) Matrix (F2) (F3) (F3) face (F6) Surface (F7)			Indicators for Problematic Hyde Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (Four Very Shallow Dark Surface Other (Explain in Remarks) Indicators of hydrophytic very hydrology must be present problematic.	(TF12) (regetation and wetla
estrictive Layer (if observed):	:							Yes No •
Type: Depth (inches): emarks: o pit taken road ROW assume	non hydric du	e to lack of hydr	ophytic ve	getation and		ic Soil Pre		
Depth (inches): emarks:	non hydric du	e to lack of hydr	ophytic ve	getation and				
Depth (inches): emarks: o pit taken road ROW assume	non hydric du	ie to lack of hydr	ophytic ve	getation and		indicators	Secondary Indicators (minimum o	
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of common o		check all that app	ply)			indicators	Secondary Indicators (minimum o Surface soil cracks (B6)	
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of compared to the surface water (A1)		check all that ap	ply) stained lea	ives (B9)		indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comparts) Surface water (A1) High water table (A2)		check all that app Water-s Aquatic	ply) stained lea c fauna (B:	ives (B9)		indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (inches): emarks: o pit taken road ROW assume /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of comparts) Surface water (A1) High water table (A2) Saturation (A3)		check all that app Water-s Aquatic True ac	ply) stained lea c fauna (B: quatic plan	ives (B9) 13) its (B14)		indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	f two required)
Depth (inches): remarks:		check all that app — Water-s — Aquatio — True ao — Hydrog	ply) stained lea c fauna (B2 quatic plan len sulfide	oves (B9) 13) uts (B14) odor (C1)	hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in	of two required)
Depth (inches): remarks: remarks: remarks: remarks: remarks: remarks: remarks: remarks (AD) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		check all that ap Water-s Aquatio True ao Hydrog Oxidize	ply) stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph	aves (B9) 13) tts (B14) odor (C1) neres along	hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comparts) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		check all that app Water-s Aquation True ao Hydrog Oxidize	ply) stained lea c fauna (B3 quatic plan ien sulfide ed rhizosph ce of redu	aves (B9) 13) tts (B14) odor (C1) neres along ced iron (C2	I hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (C Geomorphic position (D2)	of two required)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comparts) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent	ply) stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu	oves (B9) 13) Its (B14) Odor (C1) Ineres along Ced iron (C4) Ction in tilled	I hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (E	of two required)
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Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comparts) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	one required; o	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu	oves (B9) 13) ats (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	I hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (C Geomorphic position (D2)	of two required)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comparts of comparts of comparts) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	one required; o	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan ien sulfide ed rhizosph ice of redu iron reduc uck surfac or well da	oves (B9) 13) ats (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	I hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (C Geomorphic position (D2)	of two required)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of of of of the color	magery (B7)	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu i iron reduc uck surfac or well da (Explain in	oves (B9) 13) ats (B14) odor (C1) neres along ced iron (C2 ction in tilled e (C7) tta (D9) Remarks)	I hydrology	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (C Geomorphic position (D2)	of two required)
Depth (inches): emarks: o pit taken road ROW assume /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of of of surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave ield Observations: urface Water Present?	magery (B7) surface (B8)	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu c iron reduc uck surfac or well da Explain in	oves (B9) 13) Its (B14) odor (C1) Ineres along ced iron (C4) ction in tilled e (C7) Ita (D9) Remarks) Ines):	living roots soils (C6)	(C3)	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of of of of the color	magery (B7) surface (B8) Yes _ Yes _	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu c iron reduc uck surfac or well da (Explain in	aves (B9) 13) ats (B14) odor (C1) neres along ced iron (C2 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	living roots soils (C6)	(C3)	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (C Geomorphic position (D2)	of two required)
Depth (inches): emarks: o pit taken road ROW assume //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of of of surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave ield Observations: urface Water Present? //ater Table Present? aturation Present?	magery (B7) surface (B8) Yes Yes Yes	check all that app Water-s Aquation True accomplished the second that applies	ply) stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ice of redu c iron reduc uck surfac or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	living roots i) soils (C6)	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)
Depth (inches): lemarks: lo pit taken road ROW assume POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of construction	magery (B7) surface (B8) Yes Yes Yes	check all that app Water-s Aquation True accomplished Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ice of redu c iron reduc uck surfac or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	living roots i) soils (C6)	indicators	Secondary Indicators (minimum o Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial in Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)

Project/Site: Lemon Hill	Citv/Co	untv: Farmington/Olmste	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp55
Investigator(s): Maddie Humphrey			
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.0518		Long: -92.29709	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of		Yes , No	
Are Vegetation , Soil , or Hydrology Significan	tly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally p			cplain any answers in Remarks.)
<u> </u>			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N		In the Complet Area	-
Hydric Soil Present? Yes N		Is the Sampled Area within a Wetland?	Yes No 🗸
Wetland Hydrology Present? Yes Yes N			
Remarks: (Explain alternative procedures here or in a separate re Depressional swale between agriculture fields	eport.)		
Depressional swale between agriculture holds			
VEGETATION - Use scientific names of plants.			
	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:
3			Total Number of Dominant Species Across All Strata: 1 (B)
4			
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- Iolai Covei	Prevalence Index worksheet:
1			
2.			Total % Cover of: Multiply by:
3			OBL species 0 x1 = 0
4			FACW species 0 x1 = 0
5			FAC species 0 x1 = 0 FACU species 100 x1 = 400
	0%	= Total Cover	FACU species
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2		, , ,	Column Totals: 100 x1 = 400 (B)
1. <u>Bromus inermis</u> , Smooth Brome			Prevalence Index = $B/A = 4.000$
2			
3			Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	100%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.)			

ofile Des	cription: (Describe Matrix	to the depth		<mark>ument the</mark> Redox Feati		r confirm	the absen	ce of indicators.)	
Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-12	10YR - 2/1	100	/				SiL		
								<u> </u>	
								_	
								_	
pe: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, N	 MS=Masked	Sand Grai	ns. ² I	Location: P	L=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problemati	c Hydric Soils ³ :
-	l (or Histel) (A1) und			ly Gleyed M				Coast Prairie Redox (A16)
-	pipedon (A2) undefi	ned		ly Redox (S	-			Dark Surface (S7)	
_	listi (A3) undefined			ped Matrix (Iron-Manganese Mass	` '
	en Sulfide (A4)			ny Mucky M				Very Shallow Dark Su	` '
_	d Layers (A5)			ny Gleyed N	` '			Other (Explain in Rem	arks)
_	uck (A10)	(411)		eted Matrix	` '			³ Indicators of hydroph	ytic vegetation and we
- '	d Below Dark Surfac	:e (AII)		ox Dark Sur				nydrology must be p problematic.	resent, unless disturbe
_	ark Surface (A12)				Surface (F7)			r	
	Mucky Mineral (S1) ucky Peat or Peat (S	S3)	Reuo	x Depressi	ulis (F6)				
trictive	Layer (if observed)	:							
Type:						Hyd	ric Soil Pr	esent?	Yes No _
Depth marks:	(inches): <u></u>					_			
•	(inches): <u></u>					_			
marks:	GY					_			
marks: DROLO tland Hy	GY drology Indicators:		cheek all that a	anh)				Secondary Indicators (minim	
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PROLO tland Hy mary Indi _ Surface	drology Indicators: cators (minimum of o		Water	-stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10))
PROLO tland Hy mary Indi Surface High wa	drology Indicators: cators (minimum of or water (A1) ater table (A2)		Water Aquat	-stained lea ic fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table)
DROLO tland Hy mary Indi _ Surface _ High wa _ Saturati	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)		Water Aquat True a	-stained lea ic fauna (B: aquatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
DROLO tland Hy mary Indi Surface High wa Saturati Water r	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1)		Water Aquat True a	-stained lea ic fauna (B: aquatic plan gen sulfide	13) nts (B14) odor (C1)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2)
DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water Aquat True a Hydro	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizospl	13) nts (B14) odor (C1) heres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	(C2) rial imagery (C9) nts (D1)
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DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in	one required;	Water Aquat True a Hydro Oxidiz Prese Recer Thin r	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizospl nce of redu nt iron reduc muck surfac e or well da	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
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Project/Site: Lemon Hill	City/Co	ounty: Farmingto	on/Olmsted	d County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power				MN Sampling Point: adp56
Investigator(s): Maddie Humphrey	Sect			
Lanform(hillslope, terrace, etc): Depression		[Local reliet	f (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05394		Long: -92.301	138	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	l, 0 to 2 per	rcent slopes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes	, No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "	"Normal Ci	ircumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			olain any answers in Remarks.)
_	<u></u>			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point lo	ocations	, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Samp	pled Area	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		within a We		Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate repo				
Swale between agriculture fields VEGETATION - Use scientific names of plants.				
VEGETATION - Use scientific flames of plants.		Dominant In		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? S	Status	Dominance Test Worksheet
1. 2.	<u> </u>			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3 4				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover		Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 x1 = 0
3				FACW species 0 x1 = 0
4				FAC species <u>5</u> x1 = <u>15</u>
5		- Total Cover		FACU species 95 x1 = 380
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		= Total Cover		UPL species
Lolium perenne, Perennial Rye Grass	95%	, , ,	FACU	Column Totals: <u>100</u> x1 = <u>395</u> (B)
Ambrosia trifida, Great Ragweed	5%		FAC	Prevalence Index = B/A = 3.950
3				Hydrophytic Vegetation Indicators:
4.				
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is > 50%
7				3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			-	sheet)
10		- Total Cover		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	100%	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Cover		Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	cription: (Describe to Matrix			Redox Feat			tile absert	oc or maioacoroly	
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-8	10YR - 3/2	100	/				SiL		
								_,	
							-	_	
pe: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, N	1S=Masked	Sand Grai	ns. ² I	Location: P	L=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problemati	c Hydric Soils ³ :
•	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
=	Epipedon (A2) undefi	nea		y Redox (S	-			Dark Surface (S7)	
-	Histi (A3) undefined			oed Matrix (Iron-Manganese Mass	` '
	en Sulfide (A4)			ny Mucky M				Very Shallow Dark Su	, ,
_	ed Layers (A5)			ny Gleyed N	` '			Other (Explain in Rem	arks)
_	fuck (A10)	- (444)	 ·	eted Matrix	` '			³ Indicators of hydroph	ytic vegetation and we
	ed Below Dark Surfac	:e (А11)		x Dark Sur				nydrology must be pi problematic.	esent, unless disturbe
_	Dark Surface (A12)				Surface (F7)			F	
-	Mucky Mineral (S1) lucky Peat or Peat (S	S3)	Redo	x Depression	ons (F8)				
trictive	Layer (if observed)	:							
Type:	<u> </u>					Hyd	ric Soil Pr	esent?	Yes No _
Depth marks:	(inches): <u></u>								
	(inches): <u></u>					_			
marks:	DGY								
narks: DROLC	DGY vdrology Indicators:		chack all that ar	noh)				Secondary Indicators (minim	
DROLC tland Hy	OGY vdrology Indicators: icators (minimum of c			• • •	ovec (RQ)	_		Surface soil cracks (B6)	
PROLO tland Hy nary Indi Surface	OGY /drology Indicators: icators (minimum of ce water (A1)		Water-	-stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	
PROLO tland Hy nary Indi Surface High w	OGY /drology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquati	-stained lea ic fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	
PROLC tland Hy mary Indi Surface High w Saturat	oddy Indicators: Identifications: Identifications (minimum of december (A1) Identification (A2) Identification (A3)		Water- Aquati True a	-stained lea ic fauna (B: aquatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
PROLO tland Hy mary Indi Surface High w Saturat Water r	oddy Indicators:		Water-Aquati True a	-stained lea ic fauna (B: aquatic plan gen sulfide	13) nts (B14) odor (C1)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2)
PROLO tland Hy nary Indi Surface High w Saturat Water r Sedime	order (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph	13) nts (B14) odor (C1) heres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
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DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water- Aquati True a Hydrog Oxidiz Presei Recen	-stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu	nts (B14) odor (C1) heres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
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Project/Site: Lemon Hill	City/Co	ounty: Farmi	naton/Olmste	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power	0.0,700			:: MN Sampling Point: adp57
Investigator(s): Maddie Humphrey	Sect			
				ef (concave, convex, none): concave
· · · · · · · · · · · · · · · · · · ·				Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y		Y		(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			<u> </u>	
<u> </u>		, ,		Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	biematic?	(1	r needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes No <u></u> ✓
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate report Roadside ditch along 70th Ave NE. VEGETATION - Use scientific names of plants.				
VECETATION OSC SOICHAID HAIRES OF PLANES	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2				Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species Across All Strata:1 (B)
5				, 、 ,
J	0%	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2.				OBL species0 x1 =0
3				FACW species0 x1 =0
4 5.				FAC species 90 x1 = 270
J	0%	= Total Co	/er	FACU species 10
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Poa pratensis, Kentucky Blue Grass	90%	yes	FAC	Column Totals: 100 x1 = 310 (B)
2. Medicago lupulina, Black Medick	5%	no	FACU	Prevalence Index = B/A = 3.100
3. Taraxacum officinale, Common Dandelion	5%	no	FACU	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10		- Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Co	vei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Co	/er	Vegetation Present? Yes ✓ No
Demorker (Include phote purchase here as a second of the				100110
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	cription: (Describe to Matrix		F	Redox Featu	ures	_				
nches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks	
								_		
								_		
pe: C=Co	ncentration, D=Deple	etion, RM=Re	educed Matrix, N	//S=Masked	Sand Grain	ns. ² L	ocation: F	PL=Pore Lining, M=Ma	trix.	
	Indicators:							Indicators for Prob	lematic Hydric Soils ³ :	
_	(or Histel) (A1) unde			ly Gleyed M				Coast Prairie R	edox (A16)	
•	pipedon (A2) undefin	ied		ly Redox (S	-			Dark Surface (S	•	
_	isti (A3) undefined			ped Matrix (Iron-Manganese	` '	
-	en Sulfide (A4)			ny Mucky M					ark Surface (TF12)	
_	d Layers (A5) uck (A10)			ny Gleyed M eted Matrix				Other (Explain i	*	
_	d Below Dark Surface	e (A11)		ox Dark Surf				Indicators of hy	drophytic vegetation and the present, unless dist	d we
-	ark Surface (A12)	, (, ,)		eted Dark S	` '			problematic.	t be present, unless dist	uibc
=	Mucky Mineral (S1)			x Depression	` ,					
	ucky Peat or Peat (S	3)			(-)					
	Layer (if observed):									
Type:								acant?	Yes	
Depth (i	inches): -hydric due to lack of	hydrology ir	ndicators. No pit	taken, loca	ated in road		ic Soil Pr	esent:	163	No _
Depth (i marks: ume non-	-hydric due to lack of	f hydrology ir	ndicators. No pit	taken, loca	ted in road		ic Soil Pi	esent:	163	No _
Depth (imarks: sume non-	-hydric due to lack of	f hydrology ir	ndicators. No pit	taken, loca	ated in road					
Depth (in marks: nume non-	-hydric due to lack of				ated in road			Secondary Indicators	(minimum of two required	
Depth (in marks: ume non-	-hydric due to lack of		check all that ay						(minimum of two required	
Depth (in marks: ume non- DROLOG tland Hydray Indic Surface	-hydric due to lack of GY drology Indicators: cators (minimum of or		check all that a	pply)	ıves (B9)			Secondary IndicatorsSurface soil crack	(minimum of two required (ss (B6)	
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: adp58
Investigator(s): Maddie Humphrey	Sect	ion, Township, Range: S	523 T107N S013W
Lanform(hillslope, terrace, etc): Depression		Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05374		Long: -92.33888	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	xplain any answers in Remarks.)
_			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Are	a
Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No		within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate repo			
Roadside ditch downslope adp57 approximately half of a foot. VEGETATION - Use scientific names of plants.			
		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species Across All Strata: 1 (B)
5.			、 ,
J	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species95 x1 =190
5.			FAC species 10 x1 = 30
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species 0 x1 = 0
Phalaris arundinacea, Reed Canary Grass	95%	yes FACW	Column Totals: <u>105</u> x1 = <u>220</u> (B)
2. Poa pratensis, Kentucky Blue Grass	10%	no FAC	Prevalence Index = B/A =2.095
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate
10.			sheet)
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. 2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes✓_ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	cription: (Describe to Matrix		F						
nches)	Color (moist)	% (Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	R	emarks
rpe: C=Co	oncentration, D=Deple	etion, RM=Re	duced Matrix, N	MS=Masked	Sand Grair	ns. ² Loca	ation: PL=I	Pore Lining, M=Matrix.	
	Indicators:		·					ndicators for Problema	tic Hydric Soils ³ :
_ Histosol	l (or Histel) (A1) unde	fined	Sand	ly Gleyed M	atrix (S4)			Coast Prairie Redox	-
Histic E	pipedon (A2) undefin	ed	Sand	ly Redox (S	5)		_	Dark Surface (S7)	
Black H	isti (A3) undefined		Stripp	ped Matrix (S6)			Iron-Manganese Mas	sses (F12)
_ Hydroge	en Sulfide (A4)		Loam	ny Mucky Mi	ineral (F1)		_	Very Shallow Dark S	urface (TF12)
_	d Layers (A5)			ny Gleyed M			_	Other (Explain in Re	marks)
_	uck (A10)			eted Matrix (³ Indicators of hydrop	hytic vegetation and we
-	d Below Dark Surface	: (A11)		ox Dark Surf				hydrology must be problematic.	present, unless disturbe
	ark Surface (A12)			eted Dark S	, ,			problemade	
	Mucky Mineral (S1) ucky Peat or Peat (S3	3)	Redo	x Depressio	ons (F8)				
trictive	Layer (if observed):								
Type:						Hydric :	Soil Prese	ent?	Yes _ 🗸 No _
Depth (inches): , located in road ROW	√, assume hy	dric due to pres	sence of hyd	drology indi				Yes <u>✓</u> No _
Depth (V, assume hy	rdric due to pres	sence of hy	drology indi				Yes <u>✓</u> No _
Depth (marks: pit taken	, located in road ROW	V, assume hy	rdric due to pres	sence of hy	drology indi		drophytic v	vegetation.	
Depth (marks: pit taken DROLO tland Hy	GY drology Indicators:				drology indi		drophytic v	vegetation. condary Indicators (mini	mum of two required)
Depth (marks: pit taken DROLO tland Hy mary India	GY drology Indicators:		check all that ap	pply)			drophytic v	vegetation. condary Indicators (mining Surface soil cracks (Br	mum of two required) 6)
Depth (marks: pit taken) DROLO tland Hymany India Surface	GY drology Indicators: cators (minimum of or water (A1)		check all that ap	oply) -stained lea	ves (B9)		drophytic v	vegetation. condary Indicators (mining Surface soil cracks (B1) Drainage patterns (B1)	mum of two required) 6) 0)
Depth (marks: pit taken) DROLO tland Hymary India Surface High wa	GY drology Indicators: cators (minimum of or water (A1) ater table (A2)		check all that ap Water Aquati	pply) stained lea ic fauna (B1	ves (B9)		drophytic v	vegetation. condary Indicators (mining Surface soil cracks (Butterns (B1) Dry-season water table	mum of two required) 6) 0)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3)		check all that ar Water Aquati True a	pply) stained lea ic fauna (B1 aquatic plant	ves (B9) 13) ts (B14)		drophytic v	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dry-season water table Crayfish burrows (C8)	mum of two required) 6) 0) e (C2)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of or water (A1) ater table (A2)		check all that ap Water Aquati True a	pply) -stained lea ic fauna (B1 aquatic plan gen sulfide	ves (B9) L3) ts (B14) odor (C1)		Sec	vegetation. condary Indicators (mining Surface soil cracks (Butterns (B1) Dry-season water table	mum of two required) 6) 0) e (C2) erial imagery (C9)
Depth (marks: pit taken.) DROLO tland Hymany India Surface High was Saturati Water n Sedimer	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1)		check all that ap Water Aquati True a Hydro Oxidiz	pply) stained lea ic fauna (B1 aquatic plan gen sulfide zed rhizosph	ves (B9) L3) ts (B14) odor (C1) neres along	cators and hyd	Sec	condary Indicators (mining Surface soil cracks (BI Drainage patterns (BI Dry-season water table Crayfish burrows (C8) Saturation visible on a	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High was Saturati Water n Sedimee Drift dep	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		check all that ap Water Aquati True a Hydro Oxidiz Prese	pply) -stained lea ic fauna (B1 aquatic plan gen sulfide	ves (B9) 13) ts (B14) odor (C1) neres along ced iron (C4)	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Bugger Drainage patterns (Bugger) Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken DROLO tland Hy mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		check all that ap Water Aquati True a Hydro Oxidiz Presee	oply) -stained lear ic fauna (B1 aquatic plant gen sulfide red rhizosph nce of reduc	ves (B9) 13) ts (B14) odor (C1) neres along ced iron (C4)	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Brundary Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken DROLO tland Hy mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	ne required; o	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n	oply) -stained lea ic fauna (B1 aquatic plant igen sulfide zed rhizosph nce of reduc nt iron reduc	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Brundary Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken) DROLO Itland Hydrary India Surface High was Saturati Water in Sedimer Drift der Algal malron der Inundati	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	ne required; c	check all that appeared to the control of the contr	pply) -stained leadic fauna (B1 aquatic plantingen sulfide the reduction of reduction	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Brundary Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken DROLO tland Hyden mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep Inundati Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations:	ne required; o	check all that ap Water Aquati True a Hydro Oxidiz Presee Recer Thin n Gauge	eply) -stained leader ic fauna (B1 aquatic plant gen sulfide ged rhizosph nce of reduce the iron reduce muck surface e or well dat (Explain in	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Brundary Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken DROLO tland Hy mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep Inundati Sparsel	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present?	nagery (B7) surface (B8)	check all that ap Water Aquati True a Hydro Oxidiz Presee Recer Thin n Gauge	eply) -stained lear ic fauna (B1 aquatic plant gen sulfide red rhizosph nce of reduc nt iron reduc muck surface e or well dat (Explain in	ves (B9) 13) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	cators and hydeliving roots (C4)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken DROLO tland Hy mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep Inundati Sparsele Id Obser face Wat ter Table	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present?	nagery (B7) surface (B8) Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presee Recer Thin n Gauge Other	eply) -stained leadic fauna (B1 aquatic plantingen sulfide eter reduction reduction reduction reduction (Explain in Depth (inches)	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): 1	cators and hydeliving roots (C4)	Sec	condary Indicators (mining Surface soil cracks (Brundary Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken DROLO tland Hy mary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep Inundati Sparsel Id Obser face Wat ter Table uration P	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present? Present?	nagery (B7) surface (B8) Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presee Recer Thin n Gauge Other	eply) -stained leadic fauna (B1 aquatic plantingen sulfide eter reduction reduction reduction reduction (Explain in Depth (inches)	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): 1	cators and hydeliving roots (C4)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Id Obser face Wat ter Table uration P	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present?	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken.) DROLO Itland Hymary India Surface High wa Saturati Water m Sedimen Drift dep Algal m Iron dep Inundati Sparsel Ind Obser face Water Table uration P Indes cap	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave : vations: er Present? Present? Present? pillary fringe)	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Id Obser face Wat ter Table uration P	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present? Present? present? present? present? present? corded Data (stream of	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmsto	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		-	: MN Sampling Point: adp59
Investigator(s): Maddie Humphrey			
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05192		Long: -92.30874	Datum: WGS 84
Soil Map Unit Name: 489A: Atkinson loam, 0 to 1 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes , No	
Are Vegetation , , Soil , or Hydrology Significan	tly disturbed?	Are "Normal 0	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?		plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N		In the Country of August	
Hydric Soil Present? Yes N		Is the Sampled Area within a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes Yes			
Remarks: (Explain alternative procedures here or in a separate re Slight depression in planted corn field	eport.)		
Sight depression in planed com neid			
VEGETATION - Use scientific names of plants.			
VECETATION Coe solenano mantes el planto.	Ahsoluta	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species
4			Across All Strata:2 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species <u>2</u> x1 = <u>2</u>
4			FACW species0 x1 =0
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species 5 x1 = 20 UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	. ,	, , ,	UPL species $0 \times 1 = 0$ Column Totals: $7 \times 1 = 22$ (B)
Chenopodium album, Lamb's-Quarters		yes FACU	Prevalence Index = $B/A = 3.143$
2. Rorippa sylvestris, Creeping Yellowcress		yes OBL	
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	7%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Planted corn			

Depth	cription: (Describe Matrix			edox Featu					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks
0-19	10YR - 2/1	100	/				SiCL		
19-30	10YR - 3/1	50	/				SiCL		
	10YR - 4/6	50	/						
Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, M		Sand Grain	ns. 2	Location: F	PL=Pore Lining, M=Mat	rix.
	Indicators:								ematic Hydric Soils ³ :
Histoso Histic E Black F Hydrog Stratifie 2 cm M Deplete Thick D Sandy	ol (or Histel) (A1) und Epipedon (A2) undefi- Histi (A3) undefined Hen Sulfide (A4) Ed Layers (A5) Muck (A10) Ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Mucky Peat or Peat (S1)	ined ce (A11)	Sandy Stripp Loam Loam Deple Redox	y Gleyed M y Redox (S ped Matrix (y Mucky M y Gleyed N oted Matrix x Dark Surf eted Dark S x Depressio	5) S6) ineral (F1) flatrix (F2) (F3) face (F6) urface (F7)			Coast Prairie Re Dark Surface (S' Iron-Manganese Very Shallow Da Other (Explain ir	edox (A16) 7) Masses (F12) ark Surface (TF12)
	Mucky Doot or Doot (S3)							
estrictive Type: Depth	Layer (if observed) (inches):	:				Hyd	lric Soil Pi	resent?	Yes No
Estrictive Type: Depth emarks:	Layer (if observed) (inches):	:				Hyc	lric Soil Pi	resent?	Yes No
Restrictive Type: Depth Remarks:	Layer (if observed) (inches):					Hyc	Iric Soil Pi		
restrictive Type: Depth Depth Demarks:	Layer (if observed) (inches): OGY vdrology Indicators:		; check all that ap	ply)		Hyc	Iric Soil Pi		minimum of two required)
estrictive Type: Depth emarks: 'DROLO /etland Hy	Layer (if observed) (inches):			ply) stained lea	ves (B9)	Hyd	Iric Soil Pi	Secondary Indicators (minimum of two required) s (B6)
rimary India Surface	Layer (if observed) (inches): OGY /drology Indicators: icators (minimum of		Water-	• • •	, ,	Hyc	Iric Soil Pi	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water	minimum of two required) s (B6) (B10) table (C2)
rimary Indi Surface High wa Saturat	Layer (if observed) (inches): OGY /drology Indicators: icators (minimum of ee water (A1) ater table (A2) icin (A3)		Water- Aquati True a	stained lea c fauna (B1 quatic plan	l3) ts (B14)	Hyc	Iric Soil Pi	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows	minimum of two required) s (B6) (B10) table (C2) (C8)
rimary Indi Surface High wa Saturat Water r	Cinches): OGY Vorology Indicators: icators (minimum of example (A2) atter table (A2) icion (A3) marks (B1)		Water- Aquati True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	ts (B14) odor (C1)			Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (✓ Saturation visible	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9)
rimary Indi Surface High water r Sedime	Cinches): OGY Varology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	ts (B14) odor (C1) neres along	living root		Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1)
Pestrictive Type: Depth Depth Demarks: Pemarks: Pemarks: Pomary Indi Surface High wa Saturat Water r Sedime Drift de	Cinches): OGY Ordrology Indicators: icators (minimum of exwater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	ts (B14) odor (C1) neres along ced iron (C	living root	es (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
Pestrictive Type: Depth Depth Demarks: TOROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	Cinches): OGY Indicators: Indicators		Water- Aquati True a Hydrog Oxidize Preser Recen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C- ction in tilled	living root	es (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
estrictive Type: Depth emarks: DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	Cinches): OGY Indicators: Indicators	: one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ts (B14) odor (C1) neres along ced iron (C- ction in tilled	living root	es (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
Pestrictive Type: Depth Depth Demarks: Permarks: Permarks: Permary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	Cinches): OGY Indicators: Indicators	: one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9)	living root	es (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	Cinches): (inches): (inche	: one required imagery (B7 e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks)	living root	es (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	Cinches): (inches): (inche	: one required imagery (B7 e surface (B8	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface e or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks)	living room	ss (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi FAC-neutral test (minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) on (D2) D5)
Pestrictive Type: Depth Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vield Obser Surface Wat Vater Table	Cinches): OGY Varology Indicators: icators (minimum of executors (Minimum of executors) Executors (Minimum of executors) Executors (Minimum of executors) Executors (Minimum of executors) Executors (Manimum of executors) Executors (Ma	imagery (B7 e surface (B8 Ye:	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S No No	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): nes):	living room	ss (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi	minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) ion (D2)
Pestrictive Type: Depth Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vater Table Saturation F	Cinches): OGY Varology Indicators: icators (minimum of executors (Minimum of executors) Executors (Minimum of executors) Executors (Minimum of executors) Executors (Minimum of executors) Executors (Manimum of executors) Executors (Ma	imagery (B7 e surface (B8 Ye:	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S No No	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact e or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) ta (D9) Remarks) nes): nes):	living room	ss (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi FAC-neutral test (minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) on (D2) D5)
rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel ield Obser urface Water Table aturation F ncludes ca	Layer (if observed) (inches): OGY rdrology Indicators: icators (minimum of example (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B8 Ye: Ye:		stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C2 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi FAC-neutral test (minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) on (D2) D5)
restrictive Type: Depth Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vetland Obser Sield Obser	Layer (if observed) (inches): (inches): OGY /drology Indicators: icators (minimum of exercity of exercity) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:		stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C2 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (Surface soil crack Drainage patterns Dry-season water Crayfish burrows (Saturation visible Stunted or stresse Geomorphic positi FAC-neutral test (minimum of two required) s (B6) (B10) table (C2) (C8) on aerial imagery (C9) ed plants (D1) on (D2) D5)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp60
Investigator(s): Maddie Humphrey	Secti		
Lanform(hillslope, terrace, etc): Depression		Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.04995		Long: -92.28532	Datum: WGS 84
Soil Map Unit Name: 369C: Waubeek silt loam, 6 to 12 percent slopes	3		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?		(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly	disturbed?		Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)
		(, ,
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes <u>✓</u> No		Is the Sampled Area within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate report Agriculture depression between swales VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species Across All Strata: 0 (B)
4. 5.			
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species $0 \times 1 = 0$
4.			FACW species $0 x1 = 0$
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = <u>NaN</u>
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
Woody Vino Stratum (Plot cizo:20 ft (0.1 m) radius)	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			must be present, unless disturbed or problematic.
2.		= Total Cover	Hydrophytic Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Planted corn. Assume hydrophytic due to presence of hydric soil an	d hydrology	indicators.	

Sample Point: adp60

SOIL

Profile Des	scription: (Describe Matrix	to the dept		ıment the edox Fea		r confirm	the absence	e of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-10	10YR - 2/1	98	10YR-3/6	2	C	M	SiL		
10-16		100	/				SiL	Gley1 2.5 N	
							<u> </u>		
¹ Type: C=C	concentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Maske	d Sand Grai	ns. ²	² Location: PL	=Pore Lining, M=Matrix.	
•	I Indicators:	dofin - d	01	, Clause II	Motrice (C.1)			Indicators for Problemati	•
	ol (or Histel) (A1) und			-	Matrix (S4)		,	Coast Prairie Redox (A16)
	Epipedon (A2) undef	inea		/ Redox (-		,	Dark Surface (S7)	
	Histi (A3) undefined			ed Matrix	` '		,	Iron-Manganese Mass	` '
	gen Sulfide (A4)				Mineral (F1)		,	Very Shallow Dark Su	` ,
· · · · · · · · · · · · · · · · · · ·	ed Layers (A5)			-	Matrix (F2)			Other (Explain in Rem	arks)
	Muck (A10)			ted Matrix				³ Indicators of hydroph	ytic vegetation and wetland
	ed Below Dark Surfa	ce (A11)			rface (F6)			hydrology must be p problematic.	resent, unless disturbed or
Thick D	Dark Surface (A12)		Deple	ted Dark	Surface (F7)			problematic.	
Sandy	Mucky Mineral (S1)		Redox	x Depress	ions (F8)				
5 cm M	Mucky Peat or Peat (S3)				•			
	Layer (if observed)	:							
Type:	<u></u> (inches): <u></u>					Hyd	dric Soil Pres	sent?	Yes _ 🗸 No
Remarks:	(inches).								
IYDROLC									
-	drology Indicators:						<u>S</u> (econdary Indicators (minim	
	icators (minimum of	one required			(5.6)			Surface soil cracks (B6)	
	e water (A1)				aves (B9)		_	Drainage patterns (B10)	
	ater table (A2)			c fauna (E	•		_	Dry-season water table	(C2)
	tion (A3)			quatic pla			_	Crayfish burrows (C8)	
	marks (B1)			•	e odor (C1)			Saturation visible on ae	rial imagery (C9)
Sedime	ent deposits (B2)		Oxidize	ed rhizosp	heres along	living roo	ts (C3)	Stunted or stressed pla	nts (D1)
Drift de	eposits (B3)		Preser	nce of red	uced iron (C	4)	_•	Geomorphic position (D	2)
Algal m	nat or crust (B4)		Recen	t iron redu	action in tilled	d soils (C	6)	FAC-neutral test (D5)	
Iron de	posits (B5)		Thin m	nuck surfa	ce (C7)				
Inunda	tion visible on aerial	imagery (B7	7) Gauge	or well d	ata (D9)				
Sparse	ly vegetated concave	e surface (B	8) Other	(Explain ir	n Remarks)				
Field Obse	rvations:								
Surface Wa	ter Present?	Ye	es No	Depth (ind	ches): <u></u>	_			
Water Table	Present?	Υe	es No	Depth (ind	ches): <u></u>	We	tland Hydrol	ogy Present?	Yes _ < No
Saturation F		Ye	es No	Depth (inc	ches): <u></u>	_			
	apillary fringe)								
Describe Re	ecorded Data (strean	n gauge, mo	onitoring well, aeria	I photos,	previous insp	pections),	ıt available:		
Remarks:									

Project/Site: Lemon Hill	City/Co	unty: <u>Farmington/Olmste</u>	ed County	Sampling Date: 20	24-06-05
Applicant/Owner: Ranger Power		State			
Investigator(s): Maddie Humphrey					
Lanform(hillslope, terrace, etc): Sideslope		Local relie			
Slope(%): 3-7 Lat: 44.04983		Long: -92.28551	•		5 84
Soil Map Unit Name: 369C: Waubeek silt loam, 6 to 12 per					
Are climatic / hydrologic conditions on the site typical for th				n in Remarks.)	
Are Vegetation , , Soil , or Hydrology S	Significantly disturbed?		——— Circumstances" preser	nt? Yes No 🗸	_
Are Vegetation , Soil , or Hydrology n	-		plain any answers in		<u></u>
<u> </u>					
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point location	s, transects, im	portant feature	s, etc.
	No <u></u> ✓_	In the Country of Aver			
	No <u>✓</u>	Is the Sampled Area within a Wetland?	l	Yes _	No <u> </u>
	No <u> </u>				
Remarks: (Explain alternative procedures here or in a se Agriculture side slope	parate report.)				
Agriculture state stope					
VEGETATION - Use scientific names of pla	nts				
VEGETATION OSC SOIEMENTO MAINES OF PICE		Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test W	Vorksheet	
1			Number of Domina		
2			Are OBL, FACW, or	r FAC:	<u>0</u> (A)
3			Total Number of Do	ominant Species	0 (D)
4.			Across All Strata:		<u>0</u> (B)
5			Percent of Dominar Are OBL, FACW, or		0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover			(12)
1			Prevalence Index	worksneet:	
2.			Total % Cove		tiply by:
3.			· -	<u>0</u> x1 = _	
4			·	<u>0</u> x1 = _	
5			-	0 x1 = _	
	0%	= Total Cover	· -	0 x1 = _	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.2	.8- by 3.28-ft square (1	-m²) quadrat)	UPL species Column Totals:	0 x1 =	
1.			_	nce Index = B/A =	
2.					IVAIV
3. 4.			Hydrophytic Veget	tation Indicators:	
5.			1 - Rapid Test	for Hydrophytic Veg	etation
6.	· -		2 - Dominance	e Test is > 50%	
7.			3 - Prevalence	e Index is <= 3.0 ¹	
8			4 - Morpholog	ical Adaptations ¹ (Pro	ovide
9			supporting dat sheet)	a in Remarks or on a	a separate
10			PROBLEMATI	C Hydrophytic Veget	ation ¹ (Explain)
	0%	= Total Cover		hydric soil and wetlar	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				ent, unless disturbed	
1.			Hydrophytic		
2	0%	= Total Cover	Vegetation	V	No.
		- Iolai Covei	Present?	Yes	No
Remarks: (Include photo numbers here or on a separate Recently planted corn	sheet.)				
, , , , , , , , , , , , , , , , , , , ,					

Depth	Matrix		ŀ	Redox Feati					
(inches) Col	or (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	<u> </u>	Remarks
0-12 10	YR - 2/1	100	/				SiL		
								_	
				·					
ype: C=Concentr		etion, RM=R	educed Matrix, N	MS=Masked	Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	
dric Soil Indica Histosol (or Hi		efined	Sand	ly Gleyed M	Matrix (S4)			Indicators for Problem	-
Histic Epipedo				ly Redox (S				Coast Prairie Redo	X (A16)
Black Histi (A3	. ,	104		ped Matrix (•			Dark Surface (S7)	20000 (F12)
Hydrogen Sulf	•			ny Mucky M				Iron-Manganese M	` '
Stratified Laye	7 7			ny Gleyed N				Very Shallow Dark	
2 cm Muck (A				eted Matrix	` '			Other (Explain in R	·
Depleted Below	•	e (Δ11)		x Dark Sur				Indicators of hydro	ophytic vegetation and wet e present, unless disturbed
Thick Dark Su		c (AII)			Surface (F7)			problematic.	present, unless disturbed
Sandy Mucky				x Depressi	, ,				
_ 5 cm Mucky P		3)		Deplessi	0113 (1 0)				
atriativa I avar	(if observed):								
Strictive Layer									
Type:						Hyd	ric Soil Pı	resent?	Yes No _
_):					Hyd	ric Soil Pi	resent?	Yes No _
Type: Depth (inchesemarks:):					Hyd	ric Soil Pi	resent?	Yes No _
Type: Depth (inchesemarks:						Hyd		resent?	
Type: Depth (inches emarks: DROLOGY etland Hydrolog	y Indicators:	ne required;	check all that a	pply)		Hyd			nimum of two required)
Type: Depth (inchesemarks: DROLOGY etland Hydrolog	y Indicators: (minimum of o	ne required;		pply) -stained lea	aves (B9)	Hyd		Secondary Indicators (min	nimum of two required) B6)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators	y Indicators: (minimum of o	ne required;	Water		, ,	Hyd		Secondary Indicators (min	nimum of two required) B6) 10)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators Surface water	y Indicators: (minimum of o (A1) ole (A2)	ne required;	Water Aquat	-stained lea	13)	Hyd		Secondary Indicators (min Surface soil cracks (Drainage patterns (B	nimum of two required) B6) 10) ble (C2)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators Surface water High water tab	y Indicators: (minimum of o (A1) ole (A2)	ne required;	Water Aquat True a	-stained lea ic fauna (B	13) nts (B14)	Hyd		Secondary Indicators (ming Surface soil cracks (grainage patterns (B) Dry-season water tal	nimum of two required) B6) 10) ble (C2)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators Surface water High water tab Saturation (A3	y Indicators: (minimum of o (A1) ole (A2)) B1)	ne required;	Water Aquat True : Hydro	-stained lea ic fauna (B: aquatic plan gen sulfide	13) nts (B14)			Secondary Indicators (ming Surface soil cracks (ming Drainage patterns (ming Dry-season water talm Crayfish burrows (CE	nimum of two required) B6) 10) ble (C2) c) aerial imagery (C9)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators _ Surface water _ High water tab _ Saturation (A3 _ Water marks (y Indicators: (minimum of o (A1) ole (A2)) B1) osits (B2)	ne required;	WaterAquatTrue aHydro	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizospl	13) its (B14) odor (C1) neres along	living root		Secondary Indicators (ming Surface soil cracks (ming Dry-season water tal Crayfish burrows (CS Saturation visible on Stunted or stressed)	nimum of two required) B6) 10) ble (C2) aerial imagery (C9) blants (D1)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators Surface water High water tab Saturation (A3 Water marks (Sediment depo	y Indicators: (minimum of o (A1) ble (A2)) B1) osits (B2) (B3)	ne required;	WaterAquatTrue :HydroOxidizPrese	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizospl nce of redu	13) ats (B14) odor (C1) neres along aced iron (C	living root	s (C3)	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CS Saturation visible on Stunted or stressed Geomorphic position	nimum of two required) B6) 10) ble (C2) c) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches emarks: DROLOGY etland Hydrolog imary Indicators Surface water High water tab Saturation (A3 Water marks (Sediment depo	y Indicators: (minimum of o (A1) ble (A2)) B1) bits (B2) (B3) rust (B4)	ne required;	Water Aquat True : Hydro Oxidiz Prese	r-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizospl nce of redu nt iron reduc	nts (B14) odor (C1) neres along aced iron (C	living root	s (C3)	Secondary Indicators (ming Surface soil cracks (ming Dry-season water tal Crayfish burrows (CS Saturation visible on Stunted or stressed)	nimum of two required) B6) 10) ble (C2) c) aerial imagery (C9) blants (D1) (D2)
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Project/Site: Lemon Hill	City/Cou	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		,	: MN Sampling Point: adp62
Investigator(s): Maddie Humphrey			
			ef (concave, convex, none): none
Slope(%): 0-2 Lat: 44.04899		Long: -92.28704	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification:
Are climatic / hydrologic conditions on the site typical for this ti	ime of year?		(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Signi	ificantly disturbed?		Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology natur			plain any answers in Remarks.)
<u> </u>			
SUMMARY OF FINDINGS - Attach site map sh	nowing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		
	No <u> </u>	Is the Sampled Area within a Wetland?	Yes No _ ✓
	No <u> </u>		
Remarks: (Explain alternative procedures here or in a separa Agriculture side slope above swale at ws88	ate report.)		
Agriculture side slope above swale at wsoo			
VEGETATION - Use scientific names of plants	2		
VEGETATION - Ose scientific flames of plants		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:
3			Total Number of Dominant Species
4			Across All Strata: 0 (B)
5		Tatal Causes	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Capling/Charle Charles (Diet sings/15 ft (4.0 mg) radius)	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species $0 \times 1 = 0$
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- t	by 3.28-ft square (1-	m²) quadrat)	UPL species $0 \text{ x1} = 0$
1.			Column Totals: $0 \times 1 = 0$ (B) Prevalence Index = B/A = NaN
2			
34.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2		- Total Cover	Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate she Recently planted corn	eet.)		

rofile Description:	· (Describe to	the denth	needed to doc	ument the	indicator o	r confirm	the abser	Sample nce of indicators.)	
Depth	Matrix	ne deptr		Redox Feat		- confirm	the abser	ice of indicators.)	
	r (moist)	%	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks	
0-10 10Y	′R - 3/2	100	/				SiL		
rpe: C=Concentra	tion, D=Deple	tion, RM=R	educed Matrix, N	MS=Masked	d Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
dric Soil Indicato		ofinad	Sand	ly Clayed N	Antriy (SA)			Indicators for Problematic Hydric Soils ³	³ :
Histosol (or Hist Histic Epipedon				ly Gleyed M ly Redox (S				Coast Prairie Redox (A16)	
Black Histi (A3)	` '	eu		ped Matrix	•			Dark Surface (S7)	
Hydrogen Sulfid				ny Mucky M	` '			Iron-Manganese Masses (F12)	
Stratified Layers				ny Gleyed N	` '			Very Shallow Dark Surface (TF12) Other (Explain in Remarks)	
2 cm Muck (A10				eted Matrix					
Depleted Below	-	e (A11)		x Dark Sur				³ Indicators of hydrophytic vegetation a hydrology must be present, unless d	and we listurbe
Thick Dark Surf	face (A12)		Depl	eted Dark S	Surface (F7)			problematic.	
Sandy Mucky M	Mineral (S1)		Redo	x Depressi	ons (F8)				
5 cm Mucky Pe	at or Peat (S	3)							
strictive Layer (if	f observed): Drain tile?					Used	rio Coil D	vecent?	No
Type:	Diam ule?					Hya	ric Soil Pi	resent? Yes	NO _
Depth (inches):	10								
Depth (inches): marks:	10								
Depth (inches): marks: DROLOGY								Secondary Indicators (minimum of two requi	red)
Depth (inches): marks: DROLOGY tland Hydrology	Indicators:	ne required	check all that a	only)				Secondary Indicators (minimum of two requi	red)
Depth (inches): marks: DROLOGY tland Hydrology mary Indicators (n	· Indicators: minimum of or	ne required;			aves (B9)			Surface soil cracks (B6)	red)
Depth (inches): marks: DROLOGY tland Hydrology	r Indicators: minimum of or A1)	ne required;	Water	-stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	red)
Depth (inches): marks: DROLOGY tland Hydrology mary Indicators (n _ Surface water (a)	r Indicators: minimum of or A1)	ne required;	Water Aquat		13)			Surface soil cracks (B6)	ired)
Depth (inches): marks: DROLOGY tland Hydrology mary Indicators (n Surface water (n High water table	r Indicators: minimum of or A1) e (A2)	ne required;	Water Aquat True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (inches): marks: DROLOGY tland Hydrology mary Indicators (n _ Surface water (n _ High water table _ Saturation (A3)	Indicators: minimum of or A1) e (A2)	ne required:	Water Aquat True a	r-stained lea ic fauna (B aquatic plar gen sulfide	13) nts (B14)		s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
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DROLOGY tland Hydrology mary Indicators (n Surface water (A High water table Saturation (A3) Water marks (B Sediment depose Drift deposits (B	r Indicators: minimum of or A1) e (A2) sit) sits (B2) a3) ust (B4)	ne required;	Water Aquat True a Hydro Oxidiz Prese Recer	-stained leatic fauna (B. aquatic plangen sulfide zed rhizosplance of redu	nts (B14) codor (C1) heres along uced iron (C ction in tilled	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
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Depth (inches): marks: DROLOGY tland Hydrology mary Indicators (n Surface water (n High water table Saturation (A3) Water marks (B Sediment deposits (B Algal mat or cru Iron deposits (B Inundation visible Sparsely vegeta Id Observations: face Water Present curration Present? cludes capillary fri	r Indicators: minimum of or A1) e (A2) sits (B2) sits (B4) sits (B4) sits (B4) site on aerial in ated concave : ent? ent?	nagery (B7) surface (B8 Yes Yes		-stained leadic fauna (B. aquatic planager sulfide zed rhizosplence of redunt iron reduct surface or well da (Explain in Depth (incl. Depth (incl.)	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	living root 4) d soils (C6	land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
Depth (inches): marks: DROLOGY etland Hydrology mary Indicators (n _ Surface water (n _ High water table _ Saturation (A3) _ Water marks (B _ Sediment deposits (B _ Algal mat or cru _ Iron deposits (B _ Inundation visibl _ Sparsely vegeta eld Observations: rface Water Present turation Present? cludes capillary fri scribe Recorded I	r Indicators: minimum of or A1) e (A2) sits (B2) sits (B4) sits (B4) sits (B4) site on aerial in ated concave : ent? ent?	nagery (B7) surface (B8 Yes Yes		-stained leadic fauna (B. aquatic planager sulfide zed rhizosplence of redunt iron reduct surface or well da (Explain in Depth (incl. Depth (incl.)	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	living root 4) d soils (C6	land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
Depth (inches): marks: DROLOGY etland Hydrology mary Indicators (n Surface water (r High water table Saturation (A3) Water marks (B Sediment deposits (B Algal mat or cru Iron deposits (B Inundation visibl Sparsely vegeta eld Observations: rface Water Present turation Present? cludes capillary fri scribe Recorded I	r Indicators: minimum of or A1) e (A2) sits (B2) sits (B4) sits (B4) sits (B4) site on aerial in ated concave : ent? ent?	nagery (B7) surface (B8 Yes Yes		-stained leadic fauna (B. aquatic planager sulfide zed rhizosplence of redunt iron reduct surface or well da (Explain in Depth (incl. Depth (incl.)	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	living root 4) d soils (C6	land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)))
Depth (inches): marks: DROLOGY etland Hydrology imary Indicators (n Surface water (n High water table Saturation (A3) Water marks (B Sediment depose Drift deposits (B Algal mat or cru Iron deposits (B Inundation visibi	r Indicators: minimum of or A1) e (A2) sits (B2) sits (B4) sits (B4) sits (B4) site on aerial in ated concave : ent? ent?	nagery (B7) surface (B8 Yes Yes		-stained leadic fauna (B. aquatic planager sulfide zed rhizosplence of redunt iron reduct surface or well da (Explain in Depth (incl. Depth (incl.)	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	living root 4) d soils (C6	land Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	•

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	d County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp63
Investigator(s): Maddie Humphrey			
Lanform(hillslope, terrace, etc): Sideslope			f (concave, convex, none): none
Slope(%): 0-2 Lat: 44.04875		Long: -92.28761	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification:
Are climatic / hydrologic conditions on the site typical fo	r this time of year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation 🗸 , Soil , or Hydrology	Significantly disturbed?	Are "Normal C	ircumstances" present? Yes No
Are Vegetation , Soil , or Hydrology	naturally problematic?	(If needed, exp	plain any answers in Remarks.)
	- 		
SUMMARY OF FINDINGS - Attach site m	ap showing sampli	ng point locations	s, transects, important features, etc.
	es No <u></u>	In the Complet Area	
	es No	Is the Sampled Area within a Wetland?	Yes No <u> </u>
	es No <u> </u>		
Remarks: (Explain alternative procedures here or in a Agriculture side slope, sloping into adjacent swale at v			
Agriculture side slope, sloping into dejacent swale at	W303		
VEGETATION - Use scientific names of p	nlants		
VEGETATION - Ose scientific flames of p		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4			Across All Strata:0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Garlian (Charle Charles (Diet sing 45 ft (4.0 m) and inch	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.			Prevalence Index worksheet:
1 2			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5			FAC species0 x1 =0
	0%	= Total Cover	FACU species <u>0</u> x1 = <u>0</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR	3.28- by 3.28-ft square (1-	-m²) quadrat)	UPL species <u>0</u> x1 = <u>0</u>
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = <u>NaN</u>
3			Hydrophytic Vegetation Indicators:
4 5.			1 - Rapid Test for Hydrophytic Vegetation
5 6			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separ Recently planted healthy corn.	ate sheet.)		
recently planted regulary cont.			

Depth	Matrix		R	edox Feat	ures				
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remai	rks
0-12	10YR - 2/1	98	10YR-3/6	2	C	M	SiL	_ =	
								_	
ne: C=C	oncentration, D=Depl	etion, RM=R	 educed Matrix, W	 IS=Masked	 d Sand Grai	ns. 2	Location: P	 L=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problematic H	lydric Soils ³ :
Histoso	l (or Histel) (A1) und	efined	Sandy	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16	-
	pipedon (A2) undefi	ned	Sandy	y Redox (S	S5)			Dark Surface (S7)	
•	isti (A3) undefined			ed Matrix				Iron-Manganese Masses	(F12)
	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface	ce (TF12)
•	d Layers (A5)				Matrix (F2)			Other (Explain in Remark	s)
•	uck (A10)			ted Matrix				³ Indicators of hydrophytic	vegetation and we
	d Below Dark Surfac	.e (A11)	_	x Dark Sur				hydrology must be prese problematic.	ent, unless disturbe
-	ark Surface (A12)				Surface (F7)			problemado	
	Mucky Mineral (S1) ucky Peat or Peat (S	33)	Redox	x Depressi	ons (F8)				
trictive	Layer (if observed):	 :							
Typo:						Hyd	ric Soil Pre	esent?	Yes _ 🗸 No
Type:									
	(inches):								
Depth marks:						_			
Depth narks:	GY								
Depth narks:	GY drology Indicators:	ne required:	check all that an	nlvl			<u> </u>	Secondary Indicators (minimum Surface soil cracks (B6)	of two required)
Depth narks: PROLO tland Hymary India	GY drology Indicators: cators (minimum of c	ne required;			aves (B9)		<u>\$</u>	Surface soil cracks (B6)	of two required)
Depth narks: PROLO tland Hy nary India Surface	GY drology Indicators: cators (minimum of compared water (A1)	ne required;	Water-	stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	
PROLO cland Hy mary Indi Surface High wa	GY drology Indicators: cators (minimum of compared (A1) ater table (A2)	one required;	Water- Aquati	stained lea c fauna (B	13)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2	
PROLO cland Hymary India Surface High wa Saturati	GY drology Indicators: cators (minimum of compared water (A1)	one required;	Water- Aquati True a	stained lea c fauna (B quatic plar	13)			Surface soil cracks (B6) Drainage patterns (B10)	2)
PROLO tland Hymary India Surface High was Saturati Water r	GY drology Indicators: cators (minimum of compared (A1) ater table (A2) on (A3)	one required;	Water- Aquati True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	2) imagery (C9)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime	GY drology Indicators: cators (minimum of compared (A1)) ater table (A2) on (A3) marks (B1)	one required;	Water- Aquati True a Hydroç Oxidiz	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial	2) imagery (C9)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of compared (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)	one required;	Water- Aquati True a Hydroo Oxidize Preser	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants	2) imagery (C9)
Depth on marks: DROLO tland Hymary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of compared (A1) atter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)	one required;	Water- Aquati True a Hydrog Oxidize Preser Recen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) codor (C1) heres along uced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of compared (Ma)) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) hts (B14) c odor (C1) heres along uced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
PROLO Cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of constant (Manuella (Manuell	magery (B7)	Water- Aquati True a Hydroç Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	13) hts (B14) c odor (C1) heres along uced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of compared (M2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations:	magery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge) Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obserface Wat	drology Indicators: cators (minimum of compared (M2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: er Present?	magery (B7) surface (B8)	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surface or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes):	4) d soils (C6	s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
Depth of marks: DROLO Itland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat Iter Table	drology Indicators: cators (minimum of compared to the cators (minimum of cator	magery (B7) surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inci	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)
Depth of marks: DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron del Inundat Sparsel do Obser face Water Table uration P	drology Indicators: cators (minimum of o water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial i y vegetated concave vations: er Present? Present?	magery (B7) surface (B8) Yes Yes	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inci	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s (C3) 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel d Obser face Wat er Table uration P ludes ca	drology Indicators: cators (minimum of compared to the cators (minimum of cator	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of the control of the c	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel d Obser face Wat er Table uration P ludes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial i y vegetated concave vations: er Present? Present? Present? pillary fringe)	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of the control of the c	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
PROLO cland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel d Obser face Wat er Table uration P ludes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial i y vegetated concave vations: er Present? Present? Present? pillary fringe)	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	stained lead of the control of the c	13) Ints (B14) Indoor (C1) Indoor (C1) Interes along Indoor (C1) Interes along Interes al	d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power				e: MN Sampling Point: adp64
Investigator(s): Maddie Humphrey				
Lanform(hillslope, terrace, etc): Depression			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.0491		Long: <u>-92</u>	.28076	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drain	ed, 0 to 2 per	rcent slopes	i	NWI classification: PEM1C, PFO1B
Are climatic / hydrologic conditions on the site typical for this time o	f year?	Y	es , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significant	ly disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally p	roblematic?	(1	f needed, ex	plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map show	ng sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ N		Is the S	ampled Area	a
Hydric Soil Present? Yes ✓ N Wetland Hydrology Present? Yes ✓ N			Wetland?	Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate re Stream fringe	port.)			
VEGETATION - Use scientific names of plants.				
		Dominant		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. Juglans nigra, Black Walnut	15%	yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. <u>Salix discolor</u> , Pussy Willow			FACW	
3				Total Number of Dominant Species Across All Strata:3 (B)
45.			-	
J		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 66.667% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	2070	10141 00	• • • • • • • • • • • • • • • • • • • •	Prevalence Index worksheet:
1.				
2.				Total % Cover of: Multiply by:
3				OBL species
4				FACW species 100 x1 = 200
5				FAC species 5 x1 = 15 FACU species 30 x1 = 120
	0%	= Total Co	ver	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2		m²) quadra	•	UPL species
Phalaris arundinacea, Reed Canary Grass	80%	yes	FACW	Prevalence Index = $B/A = 2.655$
2. Pastinaca sativa, Wild parsnip	10%	no	UPL	
Impatiens capensis, Spotted Touch-Me-Not Hackelia virginiana, Reggar's Lice	<u>5%</u> 5%	no	FACU	Hydrophytic Vegetation Indicators:
Hackelia virginiana, Beggar's-Lice Urtica dioica, Stinging Nettle	5%	no	FACW	1 - Rapid Test for Hydrophytic Vegetation
Urtica dioica, Stinging Nettle Parthenocissus quinquefolia, Virginia-Creeper	5%	no no	FACU FACU	✓ 2 - Dominance Test is > 50%
7 Oalfana anada Odiala Milla	F0/	no	FACU	3 - Prevalence Index is <= 3.0 ¹
Gailum aparine, Sticky-Willy Alliaria petiolata, Garlic-Mustard	5%	no	FAC	4 - Morphological Adaptations ¹ (Provide
9.		110	TAC	supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
		= Total Co	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	_			
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	Matrix		R	ledox Feat					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Rei	marks
0-7	10YR - 2/1	98	2.5/	2		<u>M</u>	SL	Redox is the iron man	ganese masses
ype: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, M	 IS=Masked	 I Sand Grai	ns. ²	Location: PL	=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problemati	c Hydric Soils ³ :
_	l (or Histel) (A1) und			y Gleyed N				Coast Prairie Redox (/	A16)
_	pipedon (A2) undefi	ned		y Redox (S	-			Dark Surface (S7)	
_	listi (A3) undefined			ed Matrix				✓ Iron-Manganese Mass	es (F12)
_ ′ °	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Su	rface (TF12)
	d Layers (A5)			y Gleyed N	` '			Other (Explain in Rem	arks)
_	uck (A10)	- (444)		ted Matrix	` '			³ Indicators of hydroph	
- '	d Below Dark Surfac	e (A11)		x Dark Sur	. ,			hydrology must be pi problematic.	resent, unless disturbe
_	ark Surface (A12)			x Depressi	Surface (F7)			,	
_	Mucky Mineral (S1) ucky Peat or Peat (S	:3)	Redo.	x Depressi	uris (Fo)				
	Layer (if observed):								
Type:	Bedrock					Hyd	lric Soil Pre	sent?	Yes _ 🗸 No _
Depth	(inches): 7								
Depth emarks:	(inches): 7								
marks:									
marks:							<u>s</u>	econdary Indicators (minim	
DROLO etland Hy mary Indi	GY drology Indicators: cators (minimum of o	ne required;		• • •			<u>§</u>	Surface soil cracks (B6)	
DROLO etland Hy mary Indi _ Surface	drology Indicators: cators (minimum of o	ne required;	Water-	stained lea	. ,		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10)	
DROLO etland Hy mary Indi Surface High wa	drology Indicators: cators (minimum of or water (A1) ater table (A2)	ne required;	Water- Aquati	stained lea c fauna (B	13)		<u>S</u> ————————————————————————————————————	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	
DROLO etland Hy mary Indi _ Surface _ High wa _ Saturat	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)	ne required;	Water- Aquati True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r	drology Indicators: cators (minimum of of the water (A1) atter table (A2) ion (A3) marks (B1)	ne required;	Water- Aquati True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)	living root	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)	ne required;	Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aei Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
DROLO ttland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3)	ne required;	Water-Aquati True a Hydro Oxidiz	stained leater fauna (Buquatic plangen sulfider ed rhizosplance of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plar Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of of extra table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	ne required;	Water- Aquati True a Hydro Oxidiz Preser Recen	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aei Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5)		Water- Aquati True a Hydro Oxidiz Preser Recen Thin m	estained lead control of the control	nts (B14) odor (C1) heres along uced iron (C ction in tilled the (C7)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plar Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of of extra table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	magery (B7)	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled the (C7)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plar Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO ttland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in	magery (B7)	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plar Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO etland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparseleld Obser	drology Indicators: cators (minimum of of exators (minimum of of exators (minimum of of exators (M1) atter table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave exations: er Present?	magery (B7) surface (B8 Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tilled ee (C7) ata (D9) Remarks)	4) d soils (C6	= - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present?	magery (B7) surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	= - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plar Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave vations: er Present? Present?	magery (B7) surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	= - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLO etland Hy mary Indi _ Surface _ High wa _ Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparsel eld Obsel rface Wat tter Table turation F cludes ca	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present?	magery (B7) surface (B8 Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes): 0	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLO etland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser rface Wat ater Table turation F cludes ca	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave vations: ter Present? Present? Present? present? present?	magery (B7) surface (B8 Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes): 0	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLO Itland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obsel Iface Wat ter Table turation F cludes ca	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave vations: ter Present? Present? Present? present? present?	magery (B7) surface (B8 Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m Gauge Other No No No	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes): 0	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D: FAC-neutral test (D5)	rial imagery (C9) nts (D1)

Project/Site: Lemon Hill	Citv/Cc	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power			e: MN Sampling Point: adp65
Investigator(s): Maddie Humphrey	Sect		
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.04916		Long: -92.28081	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	1, 0 to 2 per	rcent slopes	NWI classification: PEM1C, PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	rear?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		kplain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing		ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Are	a
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate repo Toeslope between forest and stream fringe	л.)		
VEGETATION - Use scientific names of plants.			
		Dominant Indicator	Basis and Tank Washington
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
Juglans nigra, Black Walnut 2.	80%	yes FACU	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3	·		Total Number of Dominant Species Across All Strata: 4 (B)
4 5.			
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species0 x1 =0
3 4			FACW species0 x1 =0
5			FAC species30 x1 =90
	0%	= Total Cover	FACU species 195 x1 = 780
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species0 x1 =0
Rubus idaeus, Common Red Raspberry	60%	yes FACU	Column Totals: <u>225</u> x1 = <u>870</u> (B)
2. Hackelia virginiana, Beggar's-Lice	40%	yes FACU	Prevalence Index = B/A = 3.867
3. Ribes cynosbati, Eastern Prickly Gooseberry	30%	yes FAC	Hydrophytic Vegetation Indicators:
4. Arctium minus, Lesser Burrdock	15%	no FACU	1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			3 - Prevalence Index is $\leq 3.0^{1}$
7			
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9		·	sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	145%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			I hadrowhatie
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth	cription: (Describe Matrix			edox Feat				•
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR - 2/1	100	/				SiL	
10-13	10YR - 2/1	98	2.5/	2	C	М	SiL	gley1 2.5/N Iron manganese
13-16	10YR - 2/1	95	10YR-4/6	5	C	M	SiL	
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	IS=Masked	d Sand Grai	ns. 2	Location: PL	_=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	(or Histel) (A1) und			y Gleyed N				Coast Prairie Redox (A16)
	pipedon (A2) undef	ined		y Redox (S	=			Dark Surface (S7)
	isti (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
′ ′	en Sulfide (A4)				/lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)			Other (Explain in Remarks)
	uck (A10)			eted Matrix				³ Indicators of hydrophytic vegetation and wet
Deplete	d Below Dark Surfa	ce (A11)		x Dark Sur	` '			hydrology must be present, unless disturbed
	ark Surface (A12)		Deple	eted Dark S	Surface (F7))		problematic.
	Mucky Mineral (S1) ucky Peat or Peat (S3)	Redo	x Depressi	ions (F8)			
	Layer (if observed)							
Restrictive	, (,							
Type:	Bedrock					Hyd	Iric Soil Pre	esent? Yes No
Type: Depth (Hyd	Iric Soil Pre	esent? Yes No
Type: Depth (Remarks:	Bedrock inches): <u>16</u>					Hyd	Iric Soil Pre	esent? Yes No
Type: Depth (Remarks:	Bedrock inches): <u>16</u>	:				Hyd		Secondary Indicators (minimum of two required)
Type: Depth (Remarks: YDROLO Wetland Hy	Bedrock (inches): 16		; check all that ap	oply)		Hyd		
Type: Depth (Remarks: YDROLO Wetland Hy Primary India	Bedrock (inches): 16			oply) estained lea	aves (B9)	Hyd		Secondary Indicators (minimum of two required)
Type: Depth (Remarks: YDROLO Vetland Hy Primary India Surface	Bedrock (inches): 16 GY drology Indicators: cators (minimum of		Water-	• • •	, ,	Hyd		Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Type: Depth (Remarks: POROLO Vetland Hy Primary India Surface	Bedrock finches): 16 GY drology Indicators cators (minimum of water (A1) ater table (A2)		Water- Aquati	stained lea	13)	Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Type: Depth (Remarks: Primary India Surface High wa Saturati	Bedrock finches): 16 GY drology Indicators cators (minimum of water (A1) ater table (A2)		Water Aquati True a	stained lea c fauna (B quatic plar	13)	Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water-Aquati True a Hydro	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)		<u>§</u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Type: Depth (Remarks: YDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) marks (B1)		Water- Aquati True a Hydro	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) e odor (C1)	living root	<u>S</u> - - - - - - - - - - - -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		Water-Aquati True a Hydroi Oxidiz	stained lead c fauna (Buquatic plan gen sulfide ed rhizosplance of redu	nts (B14) odor (C1) heres along	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift del Algal m	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquati True a Hydro Oxidiz Presei Recen	stained lead c fauna (Buquatic plan gen sulfide ed rhizosplance of redu	nts (B14) e odor (C1) heres along uced iron (C	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (Remarks: POROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Presei Recen Thin n	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) nts (B14) nts (C1) nteres along uced iron (C nction in tilled ce (C7)	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (Remarks: Primary India Surface High wa Saturati Water n Sedime Drift dej Algal m Iron deg Inundati	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquati True a Hydro Oxidiz Preset Recen Thin n Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) nts (B14) nts (C1) nteres along uced iron (C nction in tilled ce (C7)	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (Remarks: YDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations:	one required imagery (B7) e surface (B8	Water- Aquati True a Hydro Oxidiz Preset Recen Thin n Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9) a Remarks)	living root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (Remarks: YDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7) e surface (B8 Yes	Water- Aquati True a Hydron Oxidiz Presen Recen Thin n Gauge Other	stained lead of the control of the c	nts (B14) nodor (C1) heres along uced iron (C ction in tille ce (C7) ata (D9) hermarks) hes):	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth (Remarks: YDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydro Oxidiz Preset Recen Thin n Gauge Other No No V	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl	nts (B14) nts (B	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel Field Obser Surface Wate Water Table Saturation P includes cap	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water Aquati	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) nts (B	l living roof	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel Field Obser Surface Wate Water Table Saturation P includes cap	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water Aquati	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) nts (B	l living roof	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth (Remarks: YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel Field Obser Surface Wate Water Table Saturation P includes cap	Bedrock finches): 16 GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water Aquati	stained lead of fauna (Buquatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) nts (B	l living roof	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Cc	ounty: Farmii	naton/Olmste	ed County Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power	0.1,700	ounty. <u></u>		e: MN Sampling Point: adp66
Investigator(s): Maddie Humphrey	Sect	ion. Townsh		
				ef (concave, convex, none): none
Slope(%): 8-15 Lat: 44.04839		Long: -92.	.2804	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well drained	d, 0 to 2 per	rcent slopes	3	NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Ye	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Aı	re "Normal O	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			plain any answers in Remarks.)
<u> </u>				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		le the Sc	ampled Area	
Hydric Soil Present? Yes No			Wetland?	Yes No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate reposition between seep areas	ort.)			
Giope Between Goop areas				
VEGETATION - Use scientific names of plants.				
VEGETATION COC SCIENTING HARRIES OF PIGNESI	Ahsolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. <u>Juglans nigra</u> , Black Walnut	20%	yes	FACU	Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4				Across All Strata:
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 28.571% (A/B)
Condition (Observe Observer (District of A.S. ft (4.0 m)) and live)	20%	= Total Cov	ver	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	1006	yes	FACIL	Prevalence Index worksheet:
Prunus serotina, Black Cherry 2.		yes	FACU	Total % Cover of: Multiply by:
3				OBL species0 x1 =0
4				FACW species 0 x1 = 0
5.				FAC species30 x1 =90
	10%	= Total Cov	ver	FACU species80 x1 =320
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1	m²) quadra	at)	UPL species0 x1 =0
1. Glechoma hederacea, Groundivy	20%	yes	FACU	Column Totals: 110
2. Parthenocissus quinquefolia, Virginia-Creeper	15%	yes	FACU	Prevalence Index = B/A = 3.727
3. Ribes cynosbati, Eastern Prickly Gooseberry	15%	yes	FAC	Hydrophytic Vegetation Indicators:
4. Rubus idaeus, Common Red Raspberry	15%	yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. <u>Hydrophyllum virginianum</u> , Shawnee-Salad	15%	yes	FAC	2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9				sheet)
10		- Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	80%	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
	0%	= Total Cov	ver	Present? Yes No _ <
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	cription: (Describe : Matrix			Redox Feat			tric abscri	ce of maleators.)	
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	3
0-6	10YR - 2/2	100	/				SL		
	-								
					-				
								_	
pe: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, N	/IS=Masked	Sand Grai	ns. ² I	Location: P	L=Pore Lining, M=Matrix.	
	Indicators: I (or Histel) (A1) und	lefined	Sand	ly Gleyed M	Matriv (SA)			Indicators for Problematic Hyd	dric Soils ³ :
	Epipedon (A2) undefi			ly Redox (S				Coast Prairie Redox (A16)	
-	listi (A3) undefined	ileu		ped Matrix (•			Dark Surface (S7)	10)
_	en Sulfide (A4)			ny Mucky M				Iron-Manganese Masses (F Very Shallow Dark Surface	,
	ed Layers (A5)			ny Gleyed N				Other (Explain in Remarks)	(1F12)
_	luck (A10)			eted Matrix					
_	ed Below Dark Surfac	ce (A11)		x Dark Sur	` '			³ Indicators of hydrophytic vehicles of hydrology must be present	egetation and we t. unless disturbe
- '	ark Surface (A12)	,			Surface (F7)			problematic.	.,
Sandy	Mucky Mineral (S1)		Redo	x Depression	ons (F8)				
5 cm N	lucky Peat or Peat (53)							
	Layer (if observed)	:							
Type:	Bedrock 6					Hyd	ric Soil Pr	esent?	Yes No _
Depth marks:									
marks:	` · · -								
marks:	ogy							Secondary Indicators (minimum o	f two required)
narks: DROLC	` · · -		check all that ap	aply)				Secondary Indicators (minimum o	f two required)
DROLC tland Hy	DGY rdrology Indicators:			pply) -stained lea	aves (B9)				f two required)
PROLO tland Hy nary Indi Surface	PGY rdrology Indicators: cators (minimum of o		Water		, ,			Surface soil cracks (B6)	f two required)
PROLO tland Hy nary Indi Surface High w	ogy rdrology Indicators: cators (minimum of o		Water Aquat	-stained lea	13)			Surface soil cracks (B6) Drainage patterns (B10)	f two required)
PROLC tland Hy nary Indi Surface High w Saturat	ody rdrology Indicators: cators (minimum of ce water (A1) ater table (A2)		Water Aquati True a	-stained lea ic fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
PROLO tland Hy nary Indi Surface High w Saturat Water r	ordrology Indicators: cators (minimum of of example water (A1) ater table (A2) ion (A3)		Water Aquati True a Hydro Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	nagery (C9)
PROLO Itland Hy mary Indi Surface High w Saturat Water r Sedime	ordrology Indicators: cators (minimum of ore water (A1) ater table (A2) ion (A3) marks (B1)		Water Aquati True a Hydro Oxidiz	-stained lea ic fauna (B: aquatic plan gen sulfide zed rhizosph	13) nts (B14) odor (C1)	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im	nagery (C9)
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DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	redrology Indicators: cators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial of the concave tryations:	one required; imagery (B7) e surface (B8	Water Aquati True a Hydro Oxidiz Presei Recer Thin n Gauge	-stained lea ic fauna (B: aquatic plan gen sulfide red rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	redrology Indicators: cators (minimum of of exactors (minimum of	imagery (B7) e surface (B8	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge Other	-stained lea ic fauna (B: aquatic plan gen sulfide ced rhizosph nce of redu nt iron reduc muck surfac e or well da (Explain in	nts (B14) odor (C1) heres along iced iron (Citon in tilled e (C7) ata (D9) Remarks)	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9) 11)
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order order (A1) ater table (A2) ion (A3) marks (B1) ater deposits (B2) posits (B3) ater or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8 Yes	Water Aquati True a Hydro Oxidiz Presei Recer Thin n Gauge	-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphane of redunt iron reduction well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) hta (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
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PROLC tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obsel face Water Table uration F	pogy rdrology Indicators: cators (minimum of or e water (A1) ater table (A2) ion (A3) marks (B1) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in dy vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydro — Oxidiz — Presei — Recer- — Thin n — Gauge (i) — Other S _ No _ ✓ No _ ✓	-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphece of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)
PROLO Itland Hy nary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obser face Water Table uration F ludes ca	rdrology Indicators: cators (minimum of of exter (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in the concave rvations: ter Present? Present? Present? Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydro — Oxidiz — Presei — Recer- — Thin n — Gauge (i) — Other S _ No _ ✓ No _ ✓	-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphece of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9) 11)
PROLC tland Hy nary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse d Obsel face Water Table uration F	rdrology Indicators: cators (minimum of of exter (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial in the concave rvations: ter Present? Present? Present? Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydro — Oxidiz — Presei — Recer- — Thin n — Gauge (i) — Other S _ No _ ✓ No _ ✓	-stained leadic fauna (B: aquatic planagen sulfide zed rhizosphece of redunt iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9) 11)

D. J. WO'r. Laman Hill	0:: (0			ad County 2024 00 05
•				Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power				s: MN Sampling Point: adp67
Investigator(s): Maddie Humphrey				
				ef (concave, convex, none): concave Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled		_ Long: <u>-92.</u>		
·			es , No	NWI classification: PSS1B (If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of y			<u> </u>	
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	blematic?	(1	r needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	a sampl	ina point	location	s. transects. important features. etc.
<u> </u>				-,,
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No			ampled Area	
Wetland Hydrology Present? Yes ✓ No		within a	Wetland?	Yes _ 🗸 No
Remarks: (Explain alternative procedures here or in a separate repo				
Stream terrace floodplain forest	,			
VEGETATION - Use scientific names of plants.				
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. <u>Acer negundo</u> , Ash-Leaf Maple	90%	yes	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				Ale Obl., FACW, 01 FAC.
3				Total Number of Dominant Species Across All Strata:3 (B)
4 5.				
5	90%	= Total Cov	/er	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	3070	- 10tai 00	VCI	Prevalence Index worksheet:
Acer negundo , Ash-Leaf Maple	20%	yes	FAC	
2				Total % Cover of: Multiply by:
3.				OBL species 0 x1 = 0
4				FACW species105 x1 =210
5				FAC species 120 x1 = 360
	20%	= Total Co	ver	FACU species 10
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	it)	UPL species $0 \times 1 = 0$
Impatiens capensis, Spotted Touch-Me-Not	90%	yes	FACW	Column Totals: $\underline{235} \times 1 = \underline{610} (B)$ Prevalence Index = B/A = 2.596
2. Solidago gigantea, Late Goldenrod	15%	no	FACW	Prevalence index = B/A =
3. <u>Arctium minus</u> , Lesser Burrdock		no	FACU	Hydrophytic Vegetation Indicators:
4. <u>Hydrophyllum virginianum</u> , Shawnee-Salad	10%	no	<u>FAC</u>	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
		= Total Cov	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				, ,
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: adp67

Profile Desc	cription: (Describe Matrix	to the dep		iment the		r confirm	n the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-4	10YR - 2/1	100	/				SiL	
4-10	10YR - 2/1	95	10YR-4/6	5	С	М	SiL	
								- -
								- -
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	-Reduced Matrix, M	S=Masked	d Sand Grair	ns.	² Location: P	PL=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) und	defined	Sand	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef			Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	d Below Dark Surfa	ce (A11)	· 	x Dark Su	` '			hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	00)	Redox	x Depressi	ions (F8)			
	ucky Peat or Peat (
	Layer (if observed)	:						
Type:	Tree root					Hy	dric Soil Pr	esent? Yes 🔽 No
Remarks:	(inches): <u>10</u>							
HYDROLO	GY							
Wetland Hy	drology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one require		• • •				Surface soil cracks (B6)
	water (A1)			stained lea	` '			Drainage patterns (B10)
High wa	ater table (A2)			c fauna (B quatic plar	•			Dry-season water table (C2) Crayfish burrows (C8)
	narks (B1)				odor (C1)			Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	livina roc	ots (C3)	Stunted or stressed plants (D1)
	posits (B3)			•	uced iron (C	•	()	✓ Geomorphic position (D2)
	at or crust (B4)				ction in tilled	-	6)	FAC-neutral test (D5)
Iron de	oosits (B5)		Thin m	nuck surfac	ce (C7)			
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	surface (E	38) Other ((Explain in	Remarks)			
Field Obser	vations:							
Surface Wat		Y	es No 🔽 [Depth (inc	hes): <u></u>	_		
Water Table	Present?		es No 🗸 I			We	etland Hydro	ology Present? Yes _ ✓ No
Saturation P		Ye	es No 🔽 I	Depth (inc	hes): <u></u>	_ l		
(includes ca	pillary fringe)							
Describe Re	corded Data (stream	ı gauge, m	onitoring well, aeria	l photos, p	orevious insp	ections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Cou	unty: Farmington/Olmste	d County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power		State	: MN Sampling Point: adp68
Investigator(s): Maddie Humphrey			
			f (concave, convex, none): none
Slope(%): 0-2 Lat: 44.08906		Long: -92.33223	Datum: WGS 84
Soil Map Unit Name: 472C: Channahon loam, 6 to 12 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology , Significantly	disturbed?		ircumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	g samplii	ng point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		In the Consulted Asses	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No _✓ _
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate repo Sloped soybean field with tile drainage.	rt.)		
Sloped Soybean field with the dramage.			
VEGETATION - Use scientific names of plants.			
VEGETATION - Ose scientific flames of plants.	Abaaluta	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4			Across All Strata: 0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species $0 \text{ x1} = 0$
5.			FAC species $0 x1 = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1-	·m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 x1 = 0 (B)$
2			Prevalence Index = B/A = <u>NaN</u>
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
6. 7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hadaaalaata
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Recently planted soybean			
Necestary planted Soybean			

	cription: (Describe Matrix			edox Featı	ures				
Depth (inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR - 3/3	100	/				L		
8-12	10YR - 3/2	100	/				L		
ype: C=Co	oncentration, D=Dep	letion, RM=R	 Reduced Matrix, M	 S=Masked	Sand Grain	ns. 2	Location: F		
dric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :	
_ Histoso	l (or Histel) (A1) und	lefined	Sandy	Gleyed M	latrix (S4)			Coast Prairie Redox (A16)	
_ Histic E	pipedon (A2) undefi	ned	Sandy	/ Redox (S	5)			Dark Surface (S7)	
Black H	isti (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F12)	
	en Sulfide (A4)		Loam	y Mucky M	ineral (F1)			Very Shallow Dark Surface (TF12)	
Stratifie	d Layers (A5)		Loam	y Gleyed M	Matrix (F2)			Other (Explain in Remarks)	
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation an	d wetl
Deplete	d Below Dark Surfac	ce (A11)	Redox	Coark Surf	face (F6)			hydrology must be present, unless dist	urbed
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.	
_	Mucky Mineral (S1)		Redox	c Depression	ons (F8)				
_	ucky Peat or Peat (
estrictive	Layer (if observed)	:							
Turnor						Llval	ria Cail D	vocant2	No
	 (inches): <u></u>					Hyd	ric Soil Pi	resent? Yes	No _
Depth (emarks:	(inches): <u></u>					Hyd	ric Soil Pi	resent? Yes	No _
Depth (emarks:	(inches):					Hyd			
Depth (emarks:	GY drology Indicators:		oback all that an	ah à		Hyd		Secondary Indicators (minimum of two require	
Depth (emarks:	GY drology Indicators: cators (minimum of o				nyos (PO)	Hyd		Secondary Indicators (minimum of two require Surface soil cracks (B6)	
Depth (emarks: DROLO Vetland Hy rimary India Surface	GY drology Indicators: cators (minimum of o		Water-	stained lea	, ,	Hyd		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10)	
Depth (emarks: DROLO retland Hy rimary Indi Surface High wa	GY drology Indicators: cators (minimum of of water (A1) ater table (A2)		Water-	stained lea c fauna (B1	13)	Hyd		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3)		Water- Aquatio True a	stained lea c fauna (B1 quatic plan	13) its (B14)	Hyd		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) its (B14) odor (C1)			Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	living root		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquatio True a Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ts (B14) odor (C1) neres along ced iron (C	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (Depth	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquatio True a Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C-	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Depth (emarks: DROLO Tetland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron de	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required;	Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (emarks: DROLO Tetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required; imagery (B7) e surface (B8	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc iron surfac or well da (Explain in	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9) Remarks)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (emarks: Depth (emarks: Depth (emarks: Depth (depth Depth (depth (dept	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	imagery (B7)	Water- Aquation True accepted by the second	stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ace of redu t iron reduc auck surfac or well da (Explain in	nts (B14) odor (C1) neres along ced iron (Cction in tilled e (C7) ta (D9) Remarks)	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	d)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8) Yes	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lead control of the stained lead control of the stained lead of the stained le	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks) ness): ness):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	d)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel eld Obser urface Water Table aturation P	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8) Yes	Water- Aquation	stained lead control of the stained lead control of the stained lead of the stained le	tts (B14) odor (C1) neres along ced iron (C ction in tiller e (C7) tta (D9) Remarks) ness): ness):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	d)
Depth (Depth (Demarks: DROLO Tetland Hy Inimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel Teld Obser Urface Water Table aturation P Includes ca	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead control factorial facto	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) ta (D9) Remarks) nes): nes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	d)
Depth (Depth	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead control factorial facto	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) ta (D9) Remarks) nes): nes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	d)
Depth (Depth (Demarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat ater Table aturation Pacludes ca	GY drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe) corded Data (stream	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead control factorial facto	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) ta (D9) Remarks) nes): nes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	d)

Project/Site: Lemon Hill	City/Co	ounty: Olmst	ed County	Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power	·,			: MN Sampling Point: bdp01
Investigator(s): Andy Kranz	Sect			
				ef (concave, convex, none): concave
Slope(%): 8-15 Lat: 44.08485		_ Long: -92	.34868	Datum: WGS 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slop	pes, modera	ately eroded		NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
		_		
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		le the S	ampled Area	
Hydric Soil Present? Yes No Western Hydric Soil Present?			Wetland?	Yes <u> No</u>
Wetland Hydrology Present? Yes ✓ No				
Remarks: (Explain alternative procedures here or in a separate report Sedge meadow sampled at the edge of a stream valley.	ort.)			
Souge medicin campion at the cage of a choan valid.				
VEGETATION - Use scientific names of plants.				
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test Worksheet
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC:2 (A)
3				Total Number of Dominant Species Across All Strata:3 (B)
5.				, 、 ,
5	0%	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 66.667% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	Total Co	• • • • • • • • • • • • • • • • • • • •	Prevalence Index worksheet:
1. Cornus alba, Red Osier	1%	yes	FACW	
2.				Total % Cover of: Multiply by:
3				OBL species <u>42</u> x1 = <u>42</u>
4				FACW species $3 \times 1 = 6$
5				FAC species 20 x1 = 60 FACU species 47 x1 = 188
	1%	= Total Co		'
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, ,	,	UPL species0 x1 =0 Column Totals: 112 x1 = 296 (B)
1. Carex stricta, Uptight Sedge	40%	yes	OBL	Prevalence Index = $B/A = 2.643$
Solidago altissima, Tall Goldenrod Poa pratensis, Kentucky Blue Grass	40% 15%	yes	FACU	
Poa praterisis, Kentucky Blue Grass Ambrosia trifida, Great Ragweed	5%	no no	<u>FAC</u> FAC	Hydrophytic Vegetation Indicators:
Pastinica sati a, undefined	5%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
Agrimonia gryposepala, Tall Hairy Grooveburr		no	FACU	✓ 2 - Dominance Test is > 50%
7. Solidago gigantea, Late Goldenrod	2%	no	FACW	3 - Prevalence Index is <= 3.0 ¹
8. Angelica atropurpurea, Purple-Stem Angelica	201	no	OBL	4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	111%	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ _ No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: bdp01

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0.4	10VD 2/1	100	1				Mucky	
0-4	10YR - 2/1	100	/				Loam Mucky	
4-16	10YR - 2/1	95	5YR-3/4	5	C	M	Loam	
16-24	10YR - 2/1	100	/				Mucky Loam	
								_
Type: C=Co	oncentration, D=Dep	letion RM=	Reduced Matrix M	 IS=Masker	Sand Grai	ns ² I	ocation: P	 PL=Pore Lining, M=Matrix.
	Indicators:		Todassa maan, m	····				
	(or Histel) (A1) un	defined	Sand	/ Gleyed N	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	pipedon (A2) undef			/ Redox (S	` ,			
	isti (A3) undefined			ed Matrix	-			Dark Surface (S7) Iron-Manganese Masses (F12)
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				
	uck (A10)			ted Matrix	` '			Other (Explain in Remarks)
_	d Below Dark Surfa	ce (A11)		x Dark Sur				³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
	ark Surface (A12)	(Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depressi				
	ucky Peat or Peat (S3)			()			
	aver (if observed)	١٠						
estrictive L	Layer (if observed)):				Hydi	ric Soil Dr	esent? Yes 🗸 No
Type: Depth (i	inches):):				Hyd	ric Soil Pr	esent? Yes 🗸 No
estrictive L Type: Depth (i	inches):):				Hyd	ric Soil Pr	esent? Yes _ ✓ No _
estrictive I Type: Depth (i emarks:	inches):					Hydi		esent? Yes _ ✓ No Secondary Indicators (minimum of two required)
Type: Depth (iemarks:	 inches):	:	l; check all that ap	ply)		Hydi		
estrictive I Type: Depth (i emarks: 'DROLO' 'etland Hydrimary Indic Surface	GY drology Indicators cators (minimum of water (A1)	:		ply) stained lea	aves (B9)	Hydi		Secondary Indicators (minimum of two required)
estrictive I Type: Depth (i emarks: 'DROLO' 'etland Hydrimary Indic Surface	GY drology Indicators cators (minimum of	:	Water-	stained lea c fauna (B	13)	Hydi		Secondary Indicators (minimum of two required)Surface soil cracks (B6)
estrictive I Type: Depth (i emarks: 'DROLO' 'etland Hydrimary Indic Surface	GY drology Indicators cators (minimum of water (A1) tter table (A2)	:	Water- Aquation True a	stained lea c fauna (B quatic plar	13) nts (B14)	Hydi		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
rype: Depth (i emarks: DROLO etland Hydrimary Indic Surface High wa Saturatio	GY drology Indicators cators (minimum of water (A1) tter table (A2)	:	Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
rimary Indic Surface High wa Saturatic Water m Sedimer	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2)	:	Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living roots		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
rimary Indic Surface High wa Saturatic Water m Sedimer	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1)	:	Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living roots		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Vetland Hydrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	:	Water- Aquation True a Hydrog Oxidize Preser Recen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) odor (C1) heres along aced iron (C ction in tilled	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
rype: Depth (i emarks: DROLO Vetland Hyvrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	: one required	Water- Aquation True a Hydrog Oxidize Preser Receno	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Tetland Hydrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundati	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial	: one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9)	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO retland Hydrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundati	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	: one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Vetland Hydrimary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	GY drology Indicators cators (minimum of water (A1) titer table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concave	: one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9)	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Vetland Hyvrimary Indice Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concaver vations:	: one required imagery (B7 e surface (B	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C ction in tilled e (C7) ata (D9) Remarks)	living roots	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Vetland Hydrimary Indice High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely ield Observ urface Water Vater Table	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concave vations: er Present? Present?	imagery (B7 e surface (B	Water- Aquation	stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of reduction reductio	nts (B14) odor (C1) heres along iced iron (C ction in tiller e (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
rype: Depth (i emarks: DROLO Vetland Hydrimary Indice High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely ield Observ urface Water Table aturation Pi	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concave vations: er Present? Present?	imagery (B7 e surface (B	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of reduction reductio	nts (B14) odor (C1) heres along iced iron (C ction in tiller e (C7) ata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
estrictive I Type: Depth (i emarks: 'DROLO' /etland Hyo rimary Indio Surface High wa Saturatio Water m Sedimer Drift dep Algal ma Iron dep Inundatio Sparsely ield Observ urface Water /ater Table aturation Pincludes cap	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concavity vations: er Present? Present? present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation Aquation True a Hydrogon Oxidizer Preser Recent Thin more Gauge S	stained lead of fauna (B quatic plar gen sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rype: Depth (i emarks: //DROLOG //etland Hydrimary Indic Surface High wa Saturatio Water m Sedimer Drift dep Algal ma Iron dep Inundation Sparsely ield Observ urface Water //ater Table aturation Pincludes cap	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation Aquation True a Hydrogon Oxidizer Preser Recent Thin more Gauge S	stained lead of fauna (B quatic plar gen sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rype: Depth (includes capital	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concavity vations: er Present? Present? present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation Aquation True a Hydrogon Oxidizer Preser Recent Thin more Gauge S	stained lead of fauna (B quatic plar gen sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rype: Depth (i emarks: Depth	GY drology Indicators cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial of vegetated concavity vations: er Present? Present? present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation Aquation True a Hydrogon Oxidizer Preser Recent Thin more Gauge S	stained lead of fauna (B quatic plar gen sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) hata (D9) Remarks) hes): hes):	living roots 4) d soils (C6)	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-05-28
Applicant/Owner: Ranger Power		-		: MN Sampling Point: bdp02
Investigator(s): Andy Kranz	Secti	ion, Townsh		
				ef (concave, convex, none): convex
Slope(%): 8-15 Lat: 44.08494				Datum: WGS 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slop				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y				(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly				
Are Vegetation , Soil , or Hydrology naturally pro				Circumstances" present? Yes No plain any answers in Remarks.)
Are vegetation , 30ii , of Flydrology	Diematic:	(11)	i needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		l		
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate report Upland meadow on shoulder of slope at edge of stream valley. VEGETATION - Use scientific names of plants.				
		Dominant		
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Status	Dominance Test Worksheet
Acer negundo , Ash-Leaf Maple 2.	1%	yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
3				Total Number of Dominant Species Across All Strata:
5.				Percent of Dominant Species That
		= Total Cov	ver	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
Cornus alba, Red Osier	2%	yes	FACW	
2. Rosa blanda, Smooth Rose	1%	yes	FACU	Total % Cover of: Multiply by:
3				OBL species 2 x1 = 2
4				FACW species $\frac{17}{2}$ x1 = $\frac{34}{2}$
5				FAC species 31 x1 = 93
	3%	= Total Cov	ver	FACU species 56 x1 = 224
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadra	ıt)	UPL species <u>0</u> x1 = <u>0</u>
Elymus repens, Creeping Wild Rye	35%	yes	FACU	Column Totals: <u>106</u> x1 = <u>353</u> (B)
2. Poa pratensis, Kentucky Blue Grass	20%	yes	FAC	Prevalence Index = B/A = 3.330
3. Solidago altissima, Tall Goldenrod	20%	yes	FACU	Hydrophytic Vegetation Indicators:
4. <u>Vitis riparia</u> , River-Bank Grape	15%	no	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Equisetum arvense, Field Horsetail	10%	no	FAC	2 - Dominance Test is > 50%
6. Angelica atropurpurea, Purple-Stem Angelica	2%	no	OBL	3 - Prevalence Index is <= 3.0 ¹
7				
8				 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	102%	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
	0%	= Total Cov	ver	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: bdp02

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-30	10YR - 2/2	100	/				SiL	
30-40	10YR - 4/2	95	7.5YR-4/4	5		M	SiCL	
30 40	10111 4/2		7.511(4/4			- 141		
							· (
						-		
								-
								-
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masker	d Sand Grai	ns. 2	Location: Pl	 _=Pore Lining, M=Matrix.
	Indicators:							Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) une	defined	Sandy	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef			/ Redox (S				Dark Surface (S7)
Black F	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)
	luck (A10)	(444)	 ·	ted Matrix	` '			³ Indicators of hydrophytic vegetation and wet
	ed Below Dark Surfa	ce (A11)		x Dark Sur				hydrology must be present, unless disturbed problematic.
	Park Surface (A12) Mucky Mineral (S1)			k Depressi	Surface (F7)			
_ ′	lucky Peat or Peat (S3)	Redo	Depressi	iulis (Fo)			
	Layer (if observed)	-						
Type:		•				Hyr	dric Soil Pre	esent? Yes No
ijpe.								
•	(inches): <u></u>							
emarks:								
remarks:	o G Y						S	Secondary Indicators (minimum of two required)
emarks: 'DROLO Vetland Hy			I; check all that ap	ply)			<u> </u>	Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Permarks: POROLO Petland Hy rimary Indi Surface	drology Indicators: cators (minimum of			ply) stained lea	aves (B9)		<u> </u>	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `
Permarks: POROLO Petland Hy rimary Indi Surface	OGY drology Indicators: cators (minimum of		Water-				-	Surface soil cracks (B6)
Pemarks: POROLO Petland Hy rimary Indi Surface High wa Saturat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Pemarks: POROLO Petland Hy rimary Indi Surface High wa Saturat Water r	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)		- - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
TOROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	nts (B14) odor (C1) heres along	-	- - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
/DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3)		Water- Aquatic True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) e odor (C1) heres along uced iron (C	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			:: MN Sampling Point: bdp03
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08348		Long: -92.34012	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significant	tly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?		plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ N		La dia Camania di Ama	
Hydric Soil Present? Yes ✓ N		Is the Sampled Area within a Wetland?	Yes _ • No
Wetland Hydrology Present? Yes _ ✓ N			
Remarks: (Explain alternative procedures here or in a separate re Wet meadow in a depression within a pasture.	eport.)		
wet included in a depression within a pastare.			
VEGETATION - Use scientific names of plants.			
VECETATION COSC SOICHAING HAINES OF PIANTSI	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:2 (A)
3			Total Number of Dominant Species
4			Across All Strata:2 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species 50
5			FAC species 40
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	. ,	, , , , , , , , , , , , , , , , , , ,	UPL species
Phalaris arundinacea, Reed Canary Grass		yes FACW	Column Totals: $90 \times 1 = 220 \times 1$ (B) Prevalence Index = B/A = 2.444
2. Poa pratensis, Kentucky Blue Grass			Prevalence index = B/A =
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
5. 6.			✓ 2 - Dominance Test is > 50%
7.			<u>✓</u> 3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	90%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
	0%	= Total Cover	Present? Yes _ Vo
Remarks: (Include photo numbers here or on a separate sheet.) Senesced Persicaria amphibia from previous year is present.			
Sensossa i Grandaria arripriidia from providus your is present.			

SOIL Sample Point: bdp03

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR - 2/1	95	5YR-4/4	5	С	М	SiCL		
4-12	10YR - 3/1	93	5YR-4/4	5	С	М	CL		
			10YR-5/1	2		M			
			10111 3/1			141			
				-			·		
				-			· <u></u>		
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grain	ns. 2	Location: P	L=Pore Lining, M=Matrix.	
lydric Soil	Indicators:		-					Indicators for Problematic Hydric	Soils ³ :
Histoso	l (or Histel) (A1) und	lefined	Sandy	Gleyed N	//atrix (S4)			Coast Prairie Redox (A16)	
Histic E	pipedon (A2) undef	ned	Sandy	Redox (S	65)			Dark Surface (S7)	
Black H	listi (A3) undefined		Strippe	ed Matrix	(S6)			Iron-Manganese Masses (F12)	
Hydrog	en Sulfide (A4)		Loamy	Mucky M	lineral (F1)			Very Shallow Dark Surface (TF	12)
Stratifie	d Layers (A5)		Loamy	/ Gleyed I	Matrix (F2)			Other (Explain in Remarks)	
	luck (A10)		Deplet	ted Matrix	(F3)			³ Indicators of hydrophytic vege	tation and wetlar
	ed Below Dark Surface	:e (A11)	<u></u> Redox		` '			hydrology must be present, ur problematic.	nless disturbed o
	Park Surface (A12)				Surface (F7)			problematic.	
	Mucky Mineral (S1)	20)	Redox	Depressi	ons (F8)				
5 CIII IVI	lucky Peat or Peat (53)							
	Layer (if observed)	:							
Type:		:				Нус	dric Soil Pre	esent? Ye	es <u></u> No
Type:	Layer (if observed) (inches):	:				Hyd	dric Soil Pro	esent? Yo	es <u>/</u> No
Type: Depth		:				Hyd	dric Soil Pro	esent? Ye	es 🗸 No
Type: Depth	 (inches):	:				Hyc	dric Soil Pro	esent? Yo	es 🗸 No
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Type: Depth of the control of the co	inches): GGY drology Indicators: cators (minimum of				nuce (PO)	Нус		Secondary Indicators (minimum of twoSurface soil cracks (B6)	
Type: Depth Remarks: YDROLO Vetland Hy Primary Indi Surface	GGY drology Indicators: cators (minimum of example)		Water-s	stained lea		Hyc		Secondary Indicators (minimum of two Surface soil cracks (B6) Drainage patterns (B10)	
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Type: Depth of Depth	inches): Grading Indicators: cators (minimum of exators (minimum of exators (minimum of exators (minimum of exators (B1)) ater table (A2) ion (A3) marks (B1) marks (B1) marks (B3) marks (B3) marks (B4) posits (B3) marks (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B Ye Ye	Water-s	stained leader fauna (Beguatic plansuffice plansuffice ed rhizospice of reduction reduction well defended in the company of th	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimum of two Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	o required) ery (C9)
Type: Depth of Depth	inches): OGY Idrology Indicators: cators (minimum of externable (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? Present? Present?	imagery (B7 e surface (B Ye Ye	Water-s	stained leader fauna (Beguatic plansuffice plansuffice ed rhizospice of reduction reduction well defended in the company of th	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimum of two Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	o required)
Type: Depth of Depth	inches): OGY Idrology Indicators: cators (minimum of externable (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? Present? Present?	imagery (B7 e surface (B Ye Ye	Water-s	stained leader fauna (Beguatic plansuffice plansuffice ed rhizospice of reduction reduction well defended in the company of th	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimum of two Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	o required)

Project/Site: Lemon Hill	City/Co	ounty: Olmsted County	Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power		-	e: MN Sampling Point: bdp04
Investigator(s): Andy Kranz			
			ief (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08346		_ Long: -92.33996	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 N	lo (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?		xplain any answers in Remarks.)
	_		
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ing point locatior	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		lo the Compled Are	
Hydric Soil Present? Yes No No No No No No No No No N		Is the Sampled Are within a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate rep Upland pasture.	ort.)		
opiala pastare.			
VEGETATION - Use scientific names of plants.			
	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3. 4.			Total Number of Dominant Species Across All Strata: 2 (B)
5.		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- Iolai Covei	Prevalence Index worksheet:
1			
2			Total % Cover of:Multiply by:
3			OBL species 0 x1 = 0
4			FACW species $0 \times 1 = 0$
5			FAC species 35 x1 = 105 FACU species 62 x1 = 248
		= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28		, , ,	Column Totals: 97 x1 = 353 (B)
Bromus inermis, Smooth Brome Real protection, Kentucky Phys. Cross.	40%	yes FACU	Prevalence Index = B/A = 3.639
Poa pratensis, Kentucky Blue Grass Trifolium ropogo, White Clayer	30%	yes FAC	
Trifolium repens, White Clover Taraxacum officinale, Common Dandelion		no FACU	Hydrophytic Vegetation Indicators:
5 Disease manalii Disease Const Disease in		no FAC	1 - Rapid Test for Hydrophytic Vegetation
C. Ctallania mariia Cammana Okialamand			2 - Dominance Test is > 50%
Stellaria media, Common Cnickweed 7			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	97%	= Total Cover	I —
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1.			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)			•

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rei	marks
0-12	10R - 2/1	95	5YR-4/4	5	С	М	SiCL		
_									
								_	
ype: C=C	oncentration, D=Dep	letion, RM=F	educed Matrix, M	S=Masked	Sand Grain	ns. 2	Location: P	L=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problemati	c Hydric Soils ³ :
_ Histoso	ol (or Histel) (A1) und	lefined	Sandy	/ Gleyed M	latrix (S4)			Coast Prairie Redox (
	Epipedon (A2) undef i	ned		/ Redox (S	-			Dark Surface (S7)	
	Histi (A3) undefined			ed Matrix (-			Iron-Manganese Mass	` '
	en Sulfide (A4)			y Mucky M				Very Shallow Dark Su	, ,
	ed Layers (A5)			y Gleyed M	` '			Other (Explain in Rem	·
	luck (A10) ed Below Dark Surfac	co (Λ11)		ted Matrix x Dark Surf				³ Indicators of hydroph	ytic vegetation and we resent, unless disturbe
	Dark Surface (A12)	Æ (AII)			ace (F0) Surface (F7)			problematic.	resent, unless disturbe
_	Mucky Mineral (S1)			x Depressio	` '				
	fucky Peat or Peat (S3)		. 2 ор. осо.	oo (i. o)				
strictive	Layer (if observed)	 :							
Туре:	· · · · · ·					Hyd	lric Soil Pre	esent?	Yes <u>✓</u> No _
Donth									
	(inches): <u></u>								
emarks:						_			
emarks:	DGY							Secondary Indicators (minim	um of two required)
DROLC			check all that ap	ply)				Secondary Indicators (minim Surface soil cracks (B6)	
DROLC etland Hy	DGY vdrology Indicators:			ply) stained lea	ives (B9)		<u> </u>)
DROLC etland Hy mary Indi Surface	OGY vdrology Indicators: icators (minimum of o		Water-		` '		<u> </u>	Surface soil cracks (B6))
DROLC etland Hy mary Indi Surface High w Saturat	OGY Adrology Indicators: icators (minimum of ee water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao	stained lea c fauna (B1 quatic plan	13) its (B14)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water i	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) its (B14) odor (C1)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water r _ Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ts (B14) odor (C1) neres along ced iron (C	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLO etland Hy imary Indi _ Surface _ High w _ Saturat _ Water n _ Sedime _ Drift de _ Algal m	order (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	ts (B14) odor (C1) neres along ced iron (C-	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required;	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de	pogy Idrology Indicators: Idrology Indicat	one required;	Water Aquatio True an Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc ouck surfac	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse	order variable (A2) control (A3) control (A3	one required;	Water Aquatio True an Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indrology Indicators: icators (minimum of execute (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required; imagery (B7) e surface (B8	Water Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct ouck surfact or well da (Explain in	tts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) tta (D9) Remarks)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indicators:	imagery (B7) e surface (B8	Water Aquatio True ao Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surfact or well da (Explain in	nts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) ta (D9) Remarks)	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Algal m Iron de Inundat Sparse eld Obset	pogy Idrology Indicators: Idrology Indicat	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plan Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Algal m Iron de Inundat Sparse eld Obset irface Wa ater Table turation F	pogy Indrology Indicators: Indicators (minimum of experiment) Independent (A2) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (B4) I	imagery (B7) e surface (B8 Yes Yes	Water Aquatio True ao Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along ced iron (C ction in tilled e (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse eld Obse urface Wa ater Table aturation F icludes ca	pogy Indrology Indicators: Indicators (minimum of of extra (A1) Indicators (A2) Indicators (A3) Indicators (B4) Indicators (B3) Indicators (B3) Indicator (B4) Indicator	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
emarks: DROLC etland Hy imary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse eld Obse urface Wa ater Table turation F cludes ca	pogy Indrology Indicators: Indicators (minimum of experiment) Independent (A2) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (A3) Indicator (B4) I	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
emarks: DROLC etland Hy imary Indi _ Surface _ High w _ Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundar _ Sparse eld Obse urface Wa ater Table sturation F cludes ca	pogy Indrology Indicators: Indicators (minimum of of extra (A1) Indicators (A2) Indicators (A3) Indicators (B4) Indicators (B3) Indicators (B3) Indicator (B4) Indicator	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse eld Obse rface Wa ater Table turation F cludes ca	pogy Indrology Indicators: Indicators (minimum of of extra (A1) Indicators (A2) Indicators (A3) Indicators (B4) Indicators (B3) Indicators (B3) Indicator (B4) Indicator	imagery (B7) e surface (B8 Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed plat Geomorphic position (D FAC-neutral test (D5)	rial imagery (C9) nts (D1)

Project/Site: Lemon Hill	City/Cou	unty: Olmsted County	Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp05
Investigator(s): Andy Kranz			
			ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08128		Long: -92.34872	Datum: WGS 84
Soil Map Unit Name: 333: Vasa silt loam			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantl	y disturbed?	Are "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pr	roblematic?		plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showi	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Ic the Campled Area	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No 🛂
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate repulping to the top than bottom		stigated because of aer	ial signature.
		3	
VEGETATION - Use scientific names of plants.			
,	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3.			Total Number of Dominant Species Across All Strata: 0 (B)
4			
J		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			
2			Total % Cover of: Multiply by:
3			OBL species0 x1 =0 FACW species0 x1 =0
4			FAC species0 x1 =0
5			FACU species0 x1 =0
		= Total Cover	UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.24		·m²) quadrat)	Column Totals: 0 x1 = 0 (B)
1			Prevalence Index = B/A = NaN
3.			Hydrophytic Vegetation Indicators:
4.			
5			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	090	- Iolai Covei	¹ Indicators of hydric soil and wetland hydrology
1			must be present, unless disturbed or problematic.
2.			Hydrophytic
		= Total Cover	Vegetation Present? Yes No _ ✓_
Remarks: (Include photo numbers here or on a separate sheet.)			
Vegetation is absent. Surrounding vegetation is dominated by Bror	nus inermis aı	nd Poa pratensis.	

Depth (inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture	Remarks
Type: C=Concentration, D=Depletion, DM=	Reduced Matrix, MS=Masked Sand Grains.	21 continus D	L=Pore Lining, M=Matrix.
	Reduced Matrix, M5=Masked Sand Grains.	-Location: P	
ydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed of problematic.
estrictive Layer (if observed):		Hydria Sail Dr	esent? Yes No 🗸
Type: <u></u>		Hydric Soil Pro	esent? 165 NO•
Depth (inches): emarks: oul sampling unnecessary.		Hyunc Son Ph	eseint? 1eS1NU _▼
Depth (inches): emarks: oul sampling unnecessary. 'DROLOGY			
Depth (inches): emarks: oul sampling unnecessary. /DROLOGY /etland Hydrology Indicators:	d: check all that apply)		Secondary Indicators (minimum of two required)
Depth (inches): remarks: oul sampling unnecessary. /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface water (A1) High water table (A2) Saturation (A3)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14)		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (inches): emarks: oul sampling unnecessary. /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required Surface water (A1) High water table (A2)	Water-stained leaves (B9) Aquatic fauna (B13)	ing roots (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (inches): emarks: oul sampling unnecessary. DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along liv Presence of reduced iron (C4) Recent iron reduction in tilled s Thin muck surface (C7) Gauge or well data (D9)	ing roots (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: oul sampling unnecessary. //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B) ield Observations: urface Water Present? //ater Table Present?	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along liv Presence of reduced iron (C4) Recent iron reduction in tilled s Thin muck surface (C7) Gauge or well data (D9)	ing roots (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): remarks: oul sampling unnecessary. Por Company Indicators: rimary Indicators (minimum of one required surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B1) ield Observations: urface Water Present? Very aturation Present? Very aturation Present? Very acturation visible on the present of the	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along liv Presence of reduced iron (C4) Recent iron reduction in tilled s Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) S No _ ✓ _ Depth (inches): S No _ ✓ _ Depth (inches):	ing roots (C3) oils (C6) Wetland Hydro	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): remarks: oul sampling unnecessary. Por Company Indicators: rimary Indicators (minimum of one required surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B1) ield Observations: urface Water Present? Very aturation Present? Very aturation Present? Very acturation visible on the present of the	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along liv Presence of reduced iron (C4) Recent iron reduction in tilled s Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) S No Depth (inches): S No Depth (inches): S No Depth (inches):	ing roots (C3) oils (C6) Wetland Hydro	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	Citv/Co	unty: Olmsted Cou	nty	Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power				Sampling Point: bdp06
Investigator(s): Andy Kranz				
Lanform(hillslope, terrace, etc): Depression				
Slope(%): 0-2 Lat: 44.0813				
Soil Map Unit Name: <u>333: Vasa silt loam</u>			NWI classi	ification: <u></u>
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸	No (If no, exp	olain in Remarks.)
Are Vegetation , Soil , or Hydrology Significar	itly disturbed?		- —— mal Circumstances" pre	esent? Yes , No
Are Vegetation , Soil , or Hydrology naturally	problematic?		d, explain any answers	•
_				
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point loca	tions, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes I		is the Sampled	Aron	
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		Is the Sampled within a Wetlar		Yes No
Remarks: (Explain alternative procedures here or in a separate rulpland margin of crop field. Investigated due to aerial signature.		ocated outside of s	signature at lowest elev	ation locally where a wetland would be
most likely.			3	,
VEGETATION - Use scientific names of plants.				
	Absolute	Dominant Indica	tor	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Statu		t Worksheet
1				inant Species That
2			Are OBL, FACW	/, or FAC:1 (A)
3			Total Number of Across All Strata	Dominant Species a: 2 (B)
5				
3. <u> </u>		= Total Cover	Are OBL, FACW	inant Species That /, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Inde	ex worksheet:
1.				
2				Cover of: Multiply by:
3			OBL species	<u> </u>
4			FACW species FAC species	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
5			FACU species	$\frac{40}{55}$ x1 = 220
		= Total Cover	UPL species	$\frac{0}{0} \times 1 = \frac{220}{0}$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.	28-ft square (1- 40%		Oalissas Tatalas	105 x1 = 360 (B)
Ambrosia trifida, Great Ragweed Bromus inermis, Smooth Brome	40%	yes FAC	<u></u>	alence Index = B/A = 3.429
Chenopodium album, Lamb's-Quarters Urtica dioica, Stinging Nettle	100/	no FAC		egetation Indicators:
5. Pastinica sati a, undefined	5%	no FAC	1 - Rapid T U	Test for Hydrophytic Vegetation
6			2 - Domina	ance Test is > 50%
7.			3 - Prevale	ence Index is <= 3.0 ¹
8				ological Adaptations ¹ (Provide data in Remarks or on a separate
9			sheet)	data in Remarks of on a separate
10			PROBLEM	ATIC Hydrophytic Vegetation ¹ (Explain)
	105%	= Total Cover	¹ Indicators	of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be p	resent, unless disturbed or problematic.
1			Hydrophytic	
2		- Total Cover	Vegetation	Voc. No. 4
		= Total Cover	Present?	Yes No
Remarks: (Include photo numbers here or on a separate sheet.) Wetness signature located in field planted with corn. Crop appea	rs healthy.			
				· ·

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks	
0-16	10YR - 3/2	100	/				SiL		
16-24	10YR - 3/4	70	/				SiCL		
10-24	10YR - 3/2	30	/				3101		
	101K - 3/2								
							-	_	
								_	
								_	
Type: C=C	oncentration, D=Depl	etion, RM=F	 Reduced Matrix, M	IS=Masked	Sand Grair	ıs. ²	Location: PI	 L=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils	3.
Histoso	ol (or Histel) (A1) und	efined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	Epipedon (A2) undefi	ned	Sandy	y Redox (S	65)			Dark Surface (S7)	
Black H	Histi (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F12)	
	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)	
	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
	luck (A10)			ted Matrix	` '			³ Indicators of hydrophytic vegetation	
	ed Below Dark Surfac	:e (A11)		x Dark Sur	` ,			hydrology must be present, unless of problematic.	disturbed or
	Dark Surface (A12)				Surface (F7)			problematio.	
	Mucky Mineral (S1) lucky Peat or Peat (S	53)	Redox	x Depressi	ulis (Fo)				
	Layer (if observed):								
						Hvd	ric Soil Pre	sent? Yes	No 🗸
Type:	 (inches):					_ Hyd	ric Soil Pre	sent? Yes	No / _
Type:	<u> </u>					Hyd	ric Soil Pre	sent? Yes	No <u> </u>
Type: Depth	<u> </u>					Hyd	ric Soil Pre	esent? Yes	No 🗸
Type: Depth Remarks:	 (inches):					Hyd			
Type: Depth Remarks: YDROLO Wetland Hy	(inches):		k about all that an	nh/)		Hyd		Secondary Indicators (minimum of two requ	
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi	(inches): OGY vdrology Indicators: icators (minimum of company)				aves (RQ)	Hyd		Secondary Indicators (minimum of two requ Surface soil cracks (B6)	
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface	OGY vidrology Indicators: icators (minimum of ce water (A1)		Water-	stained lea		Hyd		Secondary Indicators (minimum of two requ Surface soil cracks (B6) Drainage patterns (B10)	
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa	OGY vidrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B:	13)	Hyd		Secondary Indicators (minimum of two requ Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat	OGY vidrology Indicators: icators (minimum of ce water (A1)		Water- Aquatio True a	stained lea	13) nts (B14)	Hyd		Secondary Indicators (minimum of two requ Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r	inches): OGY Idrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14)		- - - -	Secondary Indicators (minimum of two requ Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime	inches): OGY rdrology Indicators: cators (minimum of compared (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de	inches): OGY rdrology Indicators: cators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquation True ao Hydrog Oxidize Presen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) nts (B14) odor (C1) heres along	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	OGY vdrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquatic True a Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	pogy vdrology Indicators: icators (minimum of context) water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required	Water- Aquation True and Hydrogon Oxidized Present Recent Thin m () Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	inches): OGY vdrology Indicators: icators (minimum of control of contro	one required	Water- Aquation True and Hydrogon Oxidized Present Recent Thin m () Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	OGY vdrology Indicators: icators (minimum of context) e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial in	one required	Water- Aquation True and Hydrogon Oxidized Present Recent Thin m () Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	OGY vdrology Indicators: icators (minimum of context) e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial in	one required imagery (B7 e surface (B8	Water- Aquatic True a Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	living root	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Surface Wat Water Table	inches): OGY rdrology Indicators: icators (minimum of control of contro	one required imagery (B7 e surface (B8 Ye:	— Water- — Aquatir — True a — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge 8) — Other (s _ No	estained lead of fauna (B: quatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes):	living root i) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Surface Wat Water Table Saturation F	(inches): OGY Inches): Inches inc	one required imagery (B7 e surface (B8 Ye:	Water- Aquatic True a Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (estained lead of fauna (B: quatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes):	living root i) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Water Table Saturation F Gincludes ca	inches): OGY rdrology Indicators: cators (minimum of of exators (minimum of	one required imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (estained lead of fauna (B: quatic plan gen sulfide ed rhizosphone of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Water Table Saturation F Gincludes ca	(inches): OGY Inches): Inches inc	one required imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (estained lead of fauna (B: quatic plan gen sulfide ed rhizosphone of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation F Gincludes ca	inches): OGY rdrology Indicators: cators (minimum of of exators (minimum of	one required imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (estained lead of fauna (B: quatic plan gen sulfide ed rhizosphone of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Water Table Saturation F Gincludes ca	inches): OGY rdrology Indicators: cators (minimum of of exators (minimum of	one required imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (estained lead of fauna (B: quatic plan gen sulfide ed rhizosphone of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	s (C3)	Secondary Indicators (minimum of two requestions Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (CS) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)

Project/Site: Lemon Hill	City/Co	unty: Olmste	ed County		Sampling Date: 2	024-05-29
Applicant/Owner: Ranger Power	City/Co	unty. Similar		: MN		
Investigator(s): Andy Kranz	Secti	on Townshi				- 1
				ef (concave, convex,		
Slope(%): 3-7 Lat: 44.07823			_	, , ,	,	S 84
Soil Map Unit Name: 333: Vasa silt loam		3		NWI classifica		
Are climatic / hydrologic conditions on the site typical for this time o	of vear?	Υe	es , No		n in Remarks.)	
, ,	tly disturbed?			ircumstances" prese	nt? Yes No	
Are Vegetation , Soil , or Hydrology naturally p	•			olain any answers in	•	
		`	,		,	
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point	location	s, transects, im	portant feature	es, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> N	10					
Hydric Soil Present? Yes <u>✓</u> N			ampled Area Wetland?	l	Yes	✓ No
Wetland Hydrology Present? Yes Yes N	lo					
Remarks: (Explain alternative procedures here or in a separate re	port.)					
Wet meadow in a swale within a crop field.						
VEGETATION - Use scientific names of plants.						
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test V	Vorksheet	
1				Number of Domina	nt Species That	
2.				Are OBL, FACW, o		<u>2</u> (A)
3				Total Number of Do	ominant Species	
4				Across All Strata:	· –	2 (B)
5				Percent of Domina		1000/ (1/5)
	0%	= Total Cov	/er	Are OBL, FACW, o	r FAC:	100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1. 2.				Total % Cove	er of: Mu	Itiply by:
3				OBL species	<u>0</u> x1 =	0
4.				FACW species	40 x1 =	80
5.				FAC species	<u>15</u> x1 =	
	0%	= Total Cov	/er	FACU species	<u>5</u> x1 =	20
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	28-ft square (1-	-m²) quadra	t)	UPL species	<u>0</u> x1 =	0
Phalaris arundinacea, Reed Canary Grass	40%	yes	FACW	Column Totals:	60 x1 =	
Ambrosia trifida, Great Ragweed	15%	yes	FAC	Prevaler	nce Index = B/A =	2.417
Dactylis glomerata, Orchard Grass	5%	no	FACU	Hydrophytic Vege	tation Indicators:	
4				1 - Rapid Test	for Hydrophytic Ve	getation
56.				✓ 2 - Dominance	e Test is > 50%	
6				3 - Prevalence	e Index is <= 3.0 ¹	
8					ical Adaptations ¹ (P	
9.				supporting dat sheet)	ta in Remarks or on	a separate
10					C Hydrophytic Vege	atation ¹ (Evoluin)
	60%	= Total Cov	/er			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					hydric soil and wetla ent, unless disturbe	
1				Lhudrophytic		
2				Hydrophytic Vegetation		
	0%	= Total Cov	/er	Present?	Yes	S No
Remarks: (Include photo numbers here or on a separate sheet.)						

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR - 3/1	75	7.5YR-4/4	15	С	М	SiC		
	/		10YR-4/2	10	D	М			
4-12	10YR - 4/1	85	7.5YR-4/4	15	С	М	SiC	- -	
								_	
-								-	
								_	
							·	_	
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grair	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :	
	ol (or Histel) (A1) unc			-	Matrix (S4)			Coast Prairie Redox (A16)	
	Epipedon (A2) undefi	ned		Redox (S	•			Dark Surface (S7)	
	Histi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
	en Sulfide (A4)			-	fineral (F1)			Very Shallow Dark Surface (TF12)	
	ed Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)	
	fuck (A10)	(0.11)	 '	ted Matrix	` '			³ Indicators of hydrophytic vegetation ar	
	ed Below Dark Surface	;e (A11)		Dark Sur	` ,			hydrology must be present, unless dis problematic.	sturbed o
	Dark Surface (A12) Mucky Mineral (S1)			ted Dark s Depressi	Surface (F7)			p. 3.2.3	
	lucky Peat or Peat (53)	Kedox	. Deplessi	ons (Fo)				
	Layer (if observed)								
	Layer (ii observed)	•							
Type:						l Hvc	dric Soil Pr	esent? Yes	No
Type: Depth	(inches):					Hyd 	dric Soil Pr	esent? Yes _ ✓	_ No
	(inches):					Hyd	dric Soil Pr	esent? Yes	_ No
Depth	(inches):					Hyd	dric Soil Pr	esent? Yes _V_	_ No
Depth						Hyd	dric Soil Pr	esent? Yes _V_	_ No
Depth Remarks: /DROLO Vetland Hy	OGY vdrology Indicators:					Hyd		Secondary Indicators (minimum of two require	
Depth Remarks: /DROLC Vetland Hy Primary India	OGY /drology Indicators: icators (minimum of d				(0.0)	Hyd		Secondary Indicators (minimum of two require Surface soil cracks (B6)	
Depth Remarks: /DROLC Vetland Hy Primary IndiSurface	OGY /drology Indicators: icators (minimum of de water (A1)		Water-s	stained lea		Hyc		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10)	
Depth Remarks: /DROLC Vetland Hy Primary Indi Surface High wa	OGY rdrology Indicators: icators (minimum of ee water (A1) ater table (A2)		Water-s	stained lea c fauna (B	13)	Hyc		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High w Saturat	OGY rdrology Indicators: icators (minimum of of experiment) experiments with the water (A1) ater table (A2) icion (A3)		Water-s Aquatio True ac	stained lea c fauna (B quatic plar	13) nts (B14)	Hyc		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High was Saturat Water r	or various indicators: icators (minimum of or example water (A1) ater table (A2) ion (A3) marks (B1)		Water-s Aquatio True ao Hydrog	stained lea c fauna (B quatic plar jen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	
Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High was Saturat Water r Sedime	ody /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		— Water- Aquatio — True ao — Hydrog — Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) nts (B14) odor (C1) heres along	living roo		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High w. Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water Aquatic True ac Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu	13) hts (B14) hodor (C1) heres along uced iron (C4)	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth Remarks: /DROLC Vetland Hy Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m	ordrology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water-s Aquatic True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	ordrology Indicators: icators (minimum of executions) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one require	— Water-t Aquatio True ac Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu t iron redu auck surfac	13) hts (B14) codor (C1) heres along uced iron (C4 ction in tilled	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of execution (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial	one required	— Water-t Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m 7) — Gauge	stained lead control factorial	nts (B14) nodor (C1) heres along uced iron (C4 ction in tillect ce (C7) ata (D9)	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	ordrology Indicators: icators (minimum of executate (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required	— Water-t Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m 7) — Gauge	stained lead control factorial	13) hts (B14) codor (C1) heres along uced iron (C4 ction in tilled	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order various (B4) posits (B5) tion visible on aerial ly vegetated concave	one required imagery (B) e surface (B	Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m 7) Gauge Other (stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu t iron redu ack surfac or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (Caction in tilled ce (C7) ata (D9) heres (C7) heres (C8) heres (C9) heres (C9) heres (C9)	living roo	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparse	ordrology Indicators: icators (minimum of of executions) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present?	one required imagery (B7 e surface (B	— Water Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 38) — Other (stained lead of fauna (B quatic plan gen sulfide ed rhizospice of reduction reduction well da (Explain in Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)
Primary Indi Surface High water range Sedime Drift de Algal mar Iron de Inundat Sparse Field Obser Vater Table	ordrology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present?	imagery (B) e surface (B) Ye	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — S8) — Other (— Other (— Presen — Other (— Oth	stained lead of fauna (B quatic plan gen sulfide ed rhizospice of reduction reduction well da (Explain in Depth (inc Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	ed)
Depth Remarks: /DROLC Vetland Hy Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Gurface Wat Vater Table Saturation F	order of the content	imagery (B) e surface (B) Ye Ye	— Water Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 38) — Other (stained lead of fauna (B quatic plan gen sulfide ed rhizospice of reduction reduction well da (Explain in Depth (inc Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)
Depth Remarks: //DROLO Vetland Hy Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Wat Vater Table Saturation F includes ca	ordrology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present?	imagery (B: e surface (B Ye Ye		stained lead of fauna (Buguatic plan sulfide lead rhizospusce of reduction reduction well data (Explain in Depth (incondended potential)	nts (B14) rodor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) r Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3) 6) tland Hydr	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)
Depth Remarks: //DROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Gield Obset Surface Wat Vater Table Saturation F includes ca	pogy Indicators:	imagery (B: e surface (B Ye Ye		stained lead of fauna (Buguatic plan sulfide lead rhizospusce of reduction reduction well data (Explain in Depth (incondended potential)	nts (B14) rodor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) r Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3) 6) tland Hydr	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)
Depth Remarks: /DROLC Vetland Hy Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obser Gurface Water Table Gaturation F includes ca	pogy Indicators:	imagery (B: e surface (B Ye Ye		stained lead of fauna (Buguatic plan sulfide lead rhizospusce of reduction reduction well data (Explain in Depth (incondended potential)	nts (B14) rodor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) r Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3) 6) tland Hydr	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)
Depth Remarks: //DROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Gield Obset Surface Water Table Saturation F Includes ca	pogy Indicators:	imagery (B: e surface (B Ye Ye		stained lead of fauna (Buguatic plan sulfide lead rhizospusce of reduction reduction well data (Explain in Depth (incondended potential)	nts (B14) rodor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) r Remarks) hes): hes):	living roo 4) I soils (C6	ts (C3) 6) tland Hydro	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ed)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			: MN Sampling Point: bdp08
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.07818		Long: -92.34759	Datum: WGS 84
Soil Map Unit Name: 333: Vasa silt loam			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?		(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro			plain any answers in Remarks.)
		,	,
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	t Yes No <u>✓</u>
Wetland Hydrology Present? Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate repo Upland crop field.	rt.)		
оріана стор нега.			
VECETATION Has aciontific names of plants			
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5	· ·		Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.			Prevalence Index worksheet:
1. 2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species $0 \times 1 = 0$
5			FAC species $\underline{}$
	0%	= Total Cover	FACU species85 x1 =340
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1-	-m²) quadrat)	UPL species <u>0</u> x1 = <u>0</u>
Bromus inermis, Smooth Brome		yes FACU	Column Totals: $90 \text{ x1} = 355 \text{ (B)}$
2. Ambrosia trifida, Great Ragweed	5%	no FAC	Prevalence Index = B/A = 3.944
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	90%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			· · · · · · · · · · · · · · · · · · ·
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)			
Corn crop is healthy.			

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks	
0-14	10YR - 2/2	100	/		Туре	LUC	SiCL	Kemaks	
14-24	10YR - 3/4	100	/				SiCL		
14-24	10TK - 3/4						SICL	_ = = = = = = = = = = = = = = = = = = =	
							-		
								-	
	-								
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	IS=Masked	Sand Grair	ns. 2	Location: Pl	_=Pore Lining, M=Matrix.	
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils	3.
Histoso	l (or Histel) (A1) und	defined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	
	pipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)	
	ed Layers (A5) luck (A10)			y Gleyed N eted Matrix				Other (Explain in Remarks)	
	ed Below Dark Surfa	ce (A11)		x Dark Sur				³ Indicators of hydrophytic vegetation a hydrology must be present, unless d	and wetlar disturbed o
Thick D	ark Surface (A12)	` '			Surface (F7)			problematic.	
Sandy	Mucky Mineral (S1)		Redox	x Depressi	ons (F8)				
5 cm M	lucky Peat or Peat (S3)							
estrictive	Layer (if observed)	i.							
Type:	<u></u>					Hyd	ric Soil Pre	sent? Yes	No _
Danath	(in ala a a).								
Depth Remarks:	(inches): <u></u>								
emarks:						_			
emarks:	oGY					_			
emarks: /DROLO	OGY rdrology Indicators:		t shock all that an	oh)			V.	Secondary Indicators (minimum of two requi	ired)
Pemarks: /DROLO Vetland Hy rimary Indi	OGY rdrology Indicators: cators (minimum of				aves (B9)		<u> </u>	Surface soil cracks (B6)	ired)
Pemarks: /DROLO Vetland Hy Primary Indi Surface	OGY rdrology Indicators:		Water-	oply) -stained lea c fauna (B		_	5		ired)
Pemarks: /DROLO Vetland Hy Primary Indi Surface	ody odrology Indicators: cators (minimum of e water (A1) ater table (A2)		Water- Aquati	-stained lea	13)		<u>S</u> -	Surface soil cracks (B6) Drainage patterns (B10)	ired)
Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat	ody odrology Indicators: cators (minimum of e water (A1) ater table (A2)		Water- Aquati True a	-stained lea c fauna (B	13) nts (B14)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	·
Pemarks: Primary Indi Surface High wa Saturat Water r Sedime	ordrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydrog Oxidize	stained lea c fauna (B. Iquatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	_	- - - - 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	·
Primary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water- Aquati True a Hydroo Oxidizu Preser	stained lea c fauna (B. aquatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C4)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
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Project/Site: Lemon Hill	City/Co	unty: Olmsted County		Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power				Sampling Point: bdp09
Investigator(s): Andy Kranz				
		Local rel		
Slope(%): <u>3-7</u> Lat: <u>44.07696</u>		Long: -92.34788		Datum: WGS 84
Soil Map Unit Name: 333: Vasa silt loam			NWI classific	ation:
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 N	o (If no, explai	n in Remarks.)
Are Vegetation , Soil , or Hydrology Signification	antly disturbed?		Circumstances" prese	ent? Yes , No
Are Vegetation , Soil , or Hydrology naturally	problematic?		xplain any answers in	_ -
			_	_
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point locatior	is, transects, im	iportant features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Are	2	
Hydric Soil Present? Wetland Hydrology Present? Yes Yes		within a Wetland?	a	Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate Upland swale within a crop field.	report.)			
opiala shale main a stop ilsta.				
VEGETATION - Use scientific names of plants.				
ришие	Absolute	Dominant Indicator		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test \	N orksheet
1			Number of Domina	
2			Are OBL, FACW, o	or FAC:1 (A)
3			Total Number of De Across All Strata:	ominant Species <u>3</u> (B)
4				
G		= Total Cover	Percent of Domina Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index	worksheet:
1.				
2				or of: Multiply by: 0 x1 = 0
3			· ·	0 x1 = 0
4			FAC species	30 x1 = 90
5			FACU species	80 x1 = 320
Harbarana Chatana (Diataina F. fr. (4. F. ar.) and inc. OD 0.00 hard		= Total Cover	UPL species	0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3 1. <i>Bromus inermis</i> , Smooth Brome		yes FACU	Column Totals:	110 x1 = 410 (B)
Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass	40%	yes FACU		ence Index = B/A = 3.727
Ambrosia trifida, Great Ragweed	2007		Hydronhytic Vege	etation Indicators:
4				
5.			l — '	t for Hydrophytic Vegetation
6			2 - Dominanc	
7			3 - Prevalenc	
8			4 - Morpholog	gical Adaptations ¹ (Provide Ita in Remarks or on a separate
9			sheet)	
10		- Total Causer	PROBLEMAT	TC Hydrophytic Vegetation ¹ (Explain)
Weady Vine Stratum (Plot circi20 ft (0.1 m) radius)	110%	= Total Cover		hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			must be pres	sent, unless disturbed or problematic.
2			Hydrophytic	
	0%	= Total Cover	Vegetation Present?	Yes No
Remarks: (Include photo numbers here or on a separate sheet.				
Tremains, (include prioto numbers nere or on a separate sneet.	J			

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks
0-3	10YR - 2/2	100	/				SiCL	
3-12	10YR - 3/4	95	10YR-4/2	5		М	SiC	
						-		
							-	
							-	
Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grai	ns. 2	Location: PI	L=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol	l (or Histel) (A1) une	defined	Sandy	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	/ Redox (S	S5)			Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed I ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	uck (A10) d Below Dark Surfa	ce (A11)	 ·	c Dark Sur	` '			³ Indicators of hydrophytic vegetation and vegetation and vegetation and vegetation and vegetation and vegetation.
	ark Surface (A12)	3C (AII)			Surface (F7)			problematic.
	Mucky Mineral (S1)			c Depressi				
5 cm M	ucky Peat or Peat (S3)						
estrictive	Layer (if observed)):						
T						Hvr	dric Soil Pre	esent? Yes No
Type:						'''y'		· · · · · · · · · · · · · · · · · · ·
	 (inches): <u></u>							
Depth ('''		
Depth (Remarks:	GY							
Depth (Pemarks: /DROLO Vetland Hy	GY drology Indicators:		1' check all that an	nlv				Secondary Indicators (minimum of two required)
Depth (Remarks: /DROLO Vetland Hy rimary India	GY			ply) stained lea	aves (B9)	'''		
Depth (Pemarks: /DROLO Vetland Hy Primary India Surface	GY drology Indicators: cators (minimum of		Water-					Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Depth (Pemarks: /DROLO Vetland Hy Primary India Surface	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-: Aquatio	stained lea	13)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
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Depth (Depth	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (— Oth	stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redutiron redunuck surfactor well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) n Remarks) hes): hes):	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wate /ater Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosphore of reduction reduction well date (Explain in Depth (incode)	nts (B14) reduction of the control o	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wate Vater Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosphore of reduction reduction well date (Explain in Depth (incode)	nts (B14) reduction of the control o	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel Vetled Obser urface Water Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosphore of reduction reduction well date (Explain in Depth (incode)	nts (B14) reduction of the control o	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Olmst	ed County		Sampling Date: 2	024-05-29
Applicant/Owner: Ranger Power		-			Sampling Point: b	
Investigator(s): Andy Kranz						•
				ef (concave, convex		
Slope(%): 0-2 Lat: 44.07797		Long: -92.	.34109	•	Datum: WC	GS 84
Soil Map Unit Name: 333: Vasa silt loam					cation:	
Are climatic / hydrologic conditions on the site typical for this time o	of year?	Ye			in in Remarks.)	
Are Vegetation , Soil , or Hydrology Significant	tly disturbed?			ircumstances" pres	ent? Yes . No	
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?			olain any answers i	<u></u>	
						
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point	location	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes N	1o <u> </u>	1- 4 0-				
Hydric Soil Present? Yes N			ampled Area Wetland?	l	Yes	No <u> </u>
Wetland Hydrology Present? Yes N						
Remarks: (Explain alternative procedures here or in a separate re Upland meadow in a swale within a crop field. Investigated due to		ıre Samnle	noint locate	d in the most moist	nortion of the swale	
Opiana meadow in a swale within a crop neid. Investigated due to	acriai signatu	ire. Sample	point locate	a in the most moist	portion of the swale.	
VEGETATION - Use scientific names of plants.						
VEGETATION - 03e scientific flames of plants.	Absoluto	Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover			Dominance Test	Worksheet	
1				Number of Domin		
2				Are OBL, FACW,	or FAC:	<u>1</u> (A)
3. 4.				Total Number of D Across All Strata:		3 (B)
5.				Percent of Domina		00.0000/ (***
	0%	= Total Cov	ver	Are OBL, FACW,	or FAC: _	33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1				Total % Cov	ver of: Mu	ultiply by:
2				OBL species	0 x1 =	0
4.				FACW species	<u>10</u> x1 =	20
5.				FAC species	<u>25</u> x1 =	75
	0%	= Total Cov	ver	FACU species	<u>85</u> x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	28-ft square (1-	-m²) quadra	nt)	UPL species	0 x1 =	0
Phleum pratense, Common Timothy	50%	yes	FACU	Column Totals:	<u>120</u> x1 =	<u>435</u> (B)
Trifolium pratense, Red Clover	35%	yes	FACU	Prevale	ence Index = B/A =	3.625
3. Poa pratensis, Kentucky Blue Grass	25%	yes	FAC	Hydrophytic Veg	etation Indicators:	
4. Carex vulpinoidea, Common Fox Sedge	10%	no	FACW	1 - Ranid Te	st for Hydrophytic Ve	netation
5				2 - Dominan	, , ,	gotation
6					ce Index is $\leq 3.0^1$	
7	<u> </u>			· 	gical Adaptations ¹ (F	Provido
8				supporting da	ata in Remarks or or	a separate
9.				sheet)		_
10		= Total Cov	ver	PROBLEMA	TIC Hydrophytic Vege	etation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		Total Co	voi		f hydric soil and wetla esent, unless disturbe	
1.				Hydrophytic		
2		= Total Cov	ver	Vegetation Present?	Ye	s No <u> </u>
Remarks: (Include photo numbers here or on a separate sheet.)				-		
Tremarks. (melude prioto numbers nere or on a separate sheet.)						

Profile Desc	cription: (Describe Matrix	to the dep		ment the		r confir	n the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	– Texture	Remarks
0-2	10YR - 2/2	100	/				CL	
2-6	10YR - 2/1	90	7.5YR-3/4	10	С	M	CL	
							_	_ =
6-12	10YR - 3/1	90	7.5YR-3/4	10	<u> </u>	M	C	_ ====
								<u> </u>
					-		_	- -
					-		_	- -
¹ Type: C=Co	ncentration, D=Dep	 letion_RM=	Reduced Matrix M	S=Maske	d Sand Grain	ns.	² I ocation: F	PL=Pore Lining, M=Matrix.
Hydric Soil			Troduced mains, m		<u> </u>		200000000000000000000000000000000000000	
-	(or Histel) (A1) und	defined	Sandy	Gleved I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ :
	pipedon (A2) undef			Redox (Coast Prairie Redox (A16) Dark Surface (S7)
Black H	isti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loamy	/ Mucky N	Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)
	uck (A10)			ted Matrix	` '			³ Indicators of hydrophytic vegetation and wetland
	d Below Dark Surfa	ce (A11)			rface (F6)			hydrology must be present, unless disturbed or problematic.
	ark Surface (A12) Mucky Mineral (S1)		 ·	Depress	Surface (F7)			F
	ucky Peat or Peat (S3)		Depiess	ions (Fo)			
Type:		•				H	dric Soil Pr	resent? Yes _ ✓ No
	inches):					_ ``		
HYDROLO								
_	drology Indicators:		d: abook all that an	ah ()				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	cators (minimum of o	one require			aves (B9)			Drainage patterns (B10)
	iter table (A2)			fauna (E	. ,			Dry-season water table (C2)
Saturati	on (A3)		True a	quatic pla	nts (B14)			Crayfish burrows (C8)
Water m	narks (B1)		Hydrog	en sulfide	e odor (C1)			✓ Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	_	ots (C3)	Stunted or stressed plants (D1)
	posits (B3)		_		uced iron (C	•		Geomorphic position (D2)
	at or crust (B4)		_		uction in tilled	I SOIIS (C	(6)	FAC-neutral test (D5)
	oosits (B5) on visible on aerial	imagery (B		uck surfa or well d				
	y vegetated concave				n Remarks)			
Field Obser	vations		<u> </u>					
Field Obser Surface Water		Ye	es No 🖍 [Denth (inc	:hes):			
Water Table			es No I			_ w	etland Hydro	ology Present? Yes 🗸 No
Saturation P (includes cap			es No 🗸 [_		
	corded Data (stream	n dalide m	onitoring well agric	nhotos	nrevious incr	ections)	if available	
Describe Re	colueu Dala (Sileali	r gauge, m	Jillolling Well, aeria	priotos,	previous irisp	ections)	, ii avaliable.	
Domonto								
Remarks:								

Project/Site: Lemon Hill	Citv/Cc	ounty: Olmst	ed County		Sampling Date:	2024-05-31
Applicant/Owner: Ranger Power		· —			Sampling Point: b	
Investigator(s): Andy Kranz						
				ef (concave, convex,		
Slope(%): 3-7 Lat: 44.07026		Long: -92.	.32963		Datum: W	GS 84
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes				NWI classific	cation:	
Are climatic / hydrologic conditions on the site typical for this time o	f year?	Y	es 🔎 No	(If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Significant	tly disturbed?	Α	re "Normal C	ircumstances" pres	ent? Yes . No	
Are Vegetation , Soil , or Hydrology naturally p	roblematic?			plain any answers ir	<u></u>	
						
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ing point	location	s, transects, in	nportant featur	res, etc.
Hydrophytic Vegetation Present? Yes N	lo <u> </u>					
Hydric Soil Present? Yes <u>✓</u> N	·		ampled Area Wetland?	L	Yes	s No <u> </u>
Wetland Hydrology Present? Yes N	.0					
Remarks: (Explain alternative procedures here or in a separate re Swale within a crop field.	port.)					
Swale within a crop field.						
VEGETATION - Use scientific names of plants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test	Worksheet	
1			Status			
2.				Number of Domina Are OBL, FACW,		<u>0</u> (A)
3.				Total Number of D	Ominant Species	
4.				Across All Strata:		<u>1</u> (B)
5				Percent of Domina	ant Species That	
	0%	= Total Co	ver	Are OBL, FACW,	or FAC:	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1.				Total % Cov	ver of: M	ultiply by:
2				OBL species	0 x1 =	
34.				FACW species	<u>10</u> x1 =	20
5.				FAC species	<u>25</u> x1 =	75
	0%	= Total Cov	ver	FACU species	55 x1 =	220
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2				UPL species	0 x1 =	0
Bromus inermis, Smooth Brome	50%	yes	FACU	Column Totals:	<u>90</u> x1 =	<u>315</u> (B)
2. Phalaris arundinacea, Reed Canary Grass	10%	no	FACW	Prevale	ence Index = B/A =	3.500
3. Ambrosia trifida, Great Ragweed	10%	no	FAC	Hydronhytic Veg	etation Indicators:	
4. Apocynum cannabinum, Indian-Hemp		no	FAC			
5. <i>Poa pratensis</i> , Kentucky Blue Grass		no	FAC	· ·	st for Hydrophytic Ve	egetation
6. <u>Helianthus tuberosus</u> , Jerusalem-Artichoke	5%	no	FACU		ce Test is > 50%	
7					ce Index is <= 3.0 ¹	
8				4 - Morpholo	gical Adaptations ¹ (l ata in Remarks or o	Provide
9				sheet)	ata iii itomano oi oi	ii a soparate
10				PROBLEMAT	TIC Hydrophytic Veg	getation ¹ (Explain)
	90%	= Total Co	ver	¹ Indicators of	f hydric soil and wet	land hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be pre	esent, unless disturb	ed or problematic.
1				Hydrophytic		
2				Vegetation	.,	
	0%	= Total Co	ver	Present?	Y6	es No
Remarks: (Include photo numbers here or on a separate sheet.)						

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR - 3/2	100	/				SiCL		
4-16	10YR - 3/1	90	5YR-4/6	10	С	М	SiCL		
						-			
Гуре: С=С	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grai	ns. ²	Location: P	_=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :	
	l (or Histel) (A1) und			/ Gleyed N				Coast Prairie Redox (A16)	
	pipedon (A2) undef	ined		/ Redox (S	•			Dark Surface (S7)	
_	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
_ ′ ′	en Sulfide (A4) d Layers (A5)			y Mucky IV y Gleyed N	lineral (F1)			Very Shallow Dark Surface (TF12)	
	uck (A10)			ted Matrix				Other (Explain in Remarks)	
_	d Below Dark Surfa	ce (A11)		k Dark Sur				³ Indicators of hydrophytic vegetation and hydrology must be present, unless distu	wetla urbed
	ark Surface (A12)	()	_		Surface (F7)			problematic.	iibou
Sandy	Mucky Mineral (S1)			x Depressi					
5 cm M	ucky Peat or Peat (S3)							
estrictive	Layer (if observed)):							
Type:						Нус	dric Soil Pre	esent? Yes 🗸 N	Jo.
									NO
Depth emarks:	(inches): <u></u>								, vo
emarks:									
emarks:	GY								
emarks: 'DROLO 'etland Hy	GY drology Indicators:		t' check all that an	nlv)			<u> </u>	Secondary Indicators (minimum of two required Surface soil cracks (B6)	
emarks: 'DROLO 'etland Hy rimary Indi	GY			ply) stained lea	aves (B9)	_	<u> </u>	Secondary Indicators (minimum of two required Surface soil cracks (B6) Drainage patterns (B10)	
emarks: 'DROLO 'etland Hy rimary Indi Surface	GY drology Indicators: cators (minimum of		Water-		, ,	_	<u> </u>	Surface soil cracks (B6)	
emarks: 'DROLO 'etland Hy rimary Indi Surface	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)	
POROLO Petland Hy rimary Indi Surface High wa Saturat	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water- Aquatio True ao	stained lea c fauna (B quatic plar	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
PROLO Petland Hy rimary Indi Surface High wa Saturat Water r	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
POROLO Petland Hy rimary Indi Surface High wa Saturat Water r Sedime	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		— Water- Aquatio — True a — Hydrog — Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	-	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial imagery (C9)	
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lead control factorial	nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)	
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m 7) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)	
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m 7) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)	
rDROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m 7) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)	
Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7 e surface (B	Water Aquatio True ao Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (Ce	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5))
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	— Water — Aquatio — True ao — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (— Oxidize — Oxidize — Oxidize — Presen — Recent — Thin m — Gauge — No ✓ I	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (Ce	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2))
Emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vetland Observater Table aturation F	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: eer Present? Present?	imagery (B7 e surface (B Ye Ye	Water Aquatio True ao Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (Ce	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5))
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Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		-	e: MN Sampling Point: bdp12
Investigator(s): Andy Kranz	Secti	ion, Township, Range:	S13 T107N S013W
			ef (concave, convex, none): concave
Slope(%): <u>8-15</u> Lat: 44.06957		Long: -92.32547	Datum: WGS 84
Soil Map Unit Name: 369C: Waubeek silt loam, 6 to 12 percent sl	opes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significa	intly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally	problematic?		xplain any answers in Remarks.)
_			
SUMMARY OF FINDINGS - Attach site map show	wing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Are	2
Hydric Soil Present? Yes		within a Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes <u>✓</u>			
Remarks: (Explain alternative procedures here or in a separate Upland vegetated swale. Investigated due to aerial signature.	report.)		
Opinia regelated swate. Investigated due to defini signature.			
VEGETATION - Use scientific names of plants.			
VEGETATION OSC SCIENCING Harnes of plants.	Ahsoluta	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 1 (A)
3. 4.			Total Number of Dominant Species Across All Strata:2 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3			OBL species0 x1 =0
4.			FACW species 5 x1 = 10
5.			FAC species55 x1 =165
	0%	= Total Cover	FACU species 35 x1 = 140
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3	3.28-ft square (1	-m²) quadrat)	UPL species 10 x1 = 50
Ambrosia trifida, Great Ragweed	40%	yes FAC	Column Totals: <u>105</u> x1 = <u>365</u> (B)
Cirsium arvense, Canadian Thistle	20%	yes FACU	Prevalence Index = B/A = 3.476
Barbarea vulgaris, Garden Yellow-Rocket	15%	no FAC	Hydrophytic Vegetation Indicators:
4. Solidago altissima, Tall Goldenrod	10%	no FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Silene latifolia, Bladder Campion	10%	no UPL	2 - Dominance Test is > 50%
6. Phalaris arundinacea, Reed Canary Grass	5%	no FACW	3 - Prevalence Index is <= 3.0 ¹
7. <u>Taraxacum officinale</u> , Common Dandelion	5%	no FACU	4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9.			sheet)
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	105%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydronhytio
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes No 🗸
Remarks: (Include photo numbers here or on a separate sheet.))		

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	P.	emarks
0-12	10YR - 3/3	100	/				SiL		Smarks
0 12	10111 0/0						OIL		
ype: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grair	ns. ² Lo	cation: PL	=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problemat	ic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox	(A16)
	pipedon (A2) undef	ined		Redox (S	-			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (Iron-Manganese Mas	,
	en Sulfide (A4) ed Layers (A5)			y Mucky Mi y Gleyed M				Very Shallow Dark Si	
	luck (A10)			ted Matrix (Other (Explain in Rer	•
	ed Below Dark Surfa	ce (A11)		x Dark Surf				Indicators of hydrop	hytic vegetation and wet present, unless disturbed
	ark Surface (A12)	,			urface (F7)			problematic.	oresent, unicos distarbet
	Mucky Mineral (S1)			x Depressio					
5 cm M	lucky Peat or Peat (S3)							
estrictive	Layer (if observed)):							
		·-							
Type:						Hydrid	c Soil Pres	sent?	Yes No _
Depth	<u></u> (inches): <u></u>					Hydrid	c Soil Pre	sent?	Yes No
Depth	 (inches):					Hydrid	c Soil Pres	sent?	Yes No _
Depth emarks:	-					Hydrid	c Soil Pre	sent?	Yes No _
Depth emarks: DROLO fetland Hy	OGY rdrology Indicators:	:				Hydrid		econdary Indicators (minir	num of two required)
Depth emarks: DROLO /etland Hy rimary Indi	OGY rdrology Indicators: cators (minimum of	:		. ,,	was (RA)	Hydrid		econdary Indicators (minir Surface soil cracks (B6	num of two required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface	ody rdrology Indicators: cators (minimum of water (A1)	:	Water-	stained lea	` '	Hydrid		econdary Indicators (minir Surface soil cracks (B6 Drainage patterns (B10	num of two required)
Depth emarks: DROLO retland Hy rimary Indi Surface High wa	oddy odrology Indicators: cators (minimum of e water (A1) ater table (A2)	:	Water-	stained lea c fauna (B1	13)	Hydrid		econdary Indicators (minir Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati	rdrology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)	:	Water- Aquatio True ao	stained lea c fauna (B1 quatic plant	13) ts (B14)	Hydrid	<u>S</u>	econdary Indicators (minir Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required) (5) (5) (6) (C2)
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DROLO etland Hy imary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obsei urface Water Table aturation F includes ca	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water	stained lead control from the control fr	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living roots (4) I soils (C6)	(C3)	econdary Indicators (minir Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (I FAC-neutral test (D5)	num of two required) i) c (C2) erial imagery (C9) ants (D1) D2)

Project/Site: Lemon Hill	City/Co	ounty: Farmir	ngton/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power	0,, 00	, 		: MN Sampling Point: bdp13
Investigator(s): Andy Kranz	Sect			
				ef (concave, convex, none): none
		Long: -92.	_ 32396	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled		_		NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye		(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol				plain any answers in Remarks.)
		,		,
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No				
Hydric Soil Present? Yes No _			mpled Area Wetland?	Yes No <u></u> ✓
Wetland Hydrology Present? Yes No	<u> </u>			
Remarks: (Explain alternative procedures here or in a separate repo	rt.)			
Shrub-dominated moist upland on a sloped stream terrace.				
VEGETATION - Use scientific names of plants.				
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?	Indicator Status	Dominance Test Worksheet
1. Salix X fragilis, Whitecrack Willow		yes		
2.			170	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
3.				Total Number of Dominant Species
4.				Across All Strata: 5 (B)
5				Percent of Dominant Species That
	5%	= Total Cov	er	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
Sambucus nigra, Black Elder	15%	yes	FAC	Total % Cover of: Multiply by:
2. Acer negundo , Ash-Leaf Maple	5%	yes	FAC	OBL species 0 x1 = 0
3. Juglans nigra, Black Walnut	2%	no	FACU	FACW species 90 x1 = 180
4				FAC species 25 x1 = 75
5				FACU species 2 x1 = 8
				UPL species5 x1 =25
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, .	<i>'</i>	Column Totals: 122 x1 = 288 (B)
1. <u>Urtica dioica</u> , Stinging Nettle	80%	yes	FACW	Prevalence Index = B/A = 2.361
2. Ribes missouriense, Missouri Gooseberry	5%	no	<u>UPL</u>	
		·		Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
5. 6.				✓ 2 - Dominance Test is > 50%
7.				3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide
9				supporting data in Remarks or on a separatesheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	85%	= Total Cov	er er	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Vitis riparia, River-Bank Grape	10%	yes	FACW	
2				Hydrophytic Vegetation
	10%	= Total Cov	er er	Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Profile Desc	cription: (Describe Matrix	to the dep		ment the edox Feat		r confirm	tne absenc	e of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	10YR - 2/2	100	/				SiL		
14-30	10YR - 2/1	100	/		· ——		SiC		
									
30-38	10YR - 3/2	95	7.5YR-4/6	5	<u> </u>	M	<u> </u>	- 	
38-42	10YR - 4/3	95	7.5YR-4/6	5	<u> </u>	M	C		
							-	• ;———	
							-	• ;———	
¹ Type: C=Co	oncentration, D=Dep	 letion. RM=	Reduced Matrix. M	S=Maske	d Sand Grain	 ns. 2	Location: PL	.=Pore Lining, M=Matrix.	
Hydric Soil		<u> </u>	*					•	
-	l (or Histel) (A1) un o	defined	Sandy	Gleved N	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)	
l —	pipedon (A2) undef			Redox (S				Dark Surface (S7)	
Black H	isti (A3) undefined		Strippe	ed Matrix	(S6)			Iron-Manganese Masses (F12)	
Hydroge	en Sulfide (A4)		Loamy	Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)	
l —	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)	
	uck (A10)	(444)	 ·	ed Matrix	` '			³ Indicators of hydrophytic vegetation and wetland	
	d Below Dark Surface (A12)	ce (A11)			rface (F6) Surface (F7)			hydrology must be present, unless disturbed or problematic.	
l —	Mucky Mineral (S1)			Depress				P	
	ucky Peat or Peat (S3)	11640X	Бергезз	10113 (1 0)				
Restrictive	Layer (if observed)	:							
Type:	- · · · · ·					Hyd	Iric Soil Pre	sent? Yes No _ ✓	
Depth ((inches): <u></u>					_			
HYDROLO	GY								
HYDROLO Wetland Hy	GY drology Indicators:						<u>s</u>	econdary Indicators (minimum of two required)	
Wetland Hy			d; check all that app	oly)				econdary Indicators (minimum of two required)Surface soil cracks (B6)	
Wetland Hyden Primary India Surface	drology Indicators: cators (minimum of water (A1)		Water-s	stained le	aves (B9)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10)	
Wetland Hyder Primary India Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-s	stained le fauna (B	313)		<u>9</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Wetland Hyde Primary India Surface High was Saturati	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water-s Aquatic True ac	stained le fauna (B quatic pla	313) nts (B14)		<u>§</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Wetland Hyder Primary India Surface High was Saturati Water n	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1)		Water-s Aquatio True ac Hydrog	stained le fauna (E quatic pla en sulfide	813) nts (B14) e odor (C1)	livina rool	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	
Wetland Hy Primary India Surface High wa Saturati Water n	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water-sAquatioTrue aoHydrogOxidize	stained le fauna (B quatic pla en sulfide ed rhizosp	313) nts (B14)	•	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Wetland Hy: Primary India Surface High wa Saturati Water n Sedimee	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		Water-s Aquatic True ac Hydrog Oxidize	stained le fauna (E quatic pla en sulfide ed rhizosp ce of redi	B13) Ints (B14) e odor (C1) Theres along	4)	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Wetland Hy: Primary India Surface High wa Saturati Water n Sedimei Drift dep Algal m.	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water-s Aquatic True ac Hydrog Oxidize Presen Recent	stained le fauna (E quatic pla en sulfide ed rhizosp ce of redi	e odor (C1) cheres along uced iron (C	4)	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Wetland Hyr Primary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one require	Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m 7) Gauge	stained le fauna (E quatic pla en sulfide ed rhizosp ce of redu iron redu uck surfad or well de	ata (D9)	4)	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
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Wetland Hyr Primary India Surface High wa Saturati Water n Sedimee Drift dep Algal m Iron dep	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one require	Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge S8) Other (stained le fauna (B quatic pla en sulfide d rhizosp ce of redu iron redu uck surfa or well de Explain ir	ata (D9) and Remarks)	4)	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
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Wetland Hyr Primary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Field Obser Surface Wat Water Table	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B e surface (B Ye Ye	— Water-s — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — S8) — Other (— Oth	stained le fauna (B quatic pla en sulfide d rhizosp ce of redi iron redu uck surfa or well de Explain ir Depth (inc	ata (D9)	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Wetland Hyr Primary India Surface High wa Saturati Water n Sedimer Drift dep Algal m Iron dep Inundati Sparsel	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B e surface (B Ye Ye	— Water-s — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — S8) — Other (stained le fauna (B quatic pla en sulfide d rhizosp ce of redi iron redu uck surfa or well de Explain ir Depth (inc	ata (D9)	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
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Wetland Hydeliand Hydelian	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present? pillary fringe)	imagery (B' e surface (E Ye Ye		stained le fauna (E f	stata) nts (B14) e odor (C1) cheres along uced iron (C uction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
Wetland Hydeliand Hydelian	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present? pillary fringe)	imagery (B' e surface (E Ye Ye		stained le fauna (E f	stata) nts (B14) e odor (C1) cheres along uced iron (C uction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
Wetland Hy Primary India Surface High wa Saturati Water n Sedimer Algal m Iron dep Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes cap	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present? pillary fringe)	imagery (B' e surface (E Ye Ye		stained le fauna (E f	stata) nts (B14) e odor (C1) cheres along uced iron (C uction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
Wetland Hyr Primary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Field Obser Surface Wate Water Table Saturation P (includes car	drology Indicators: cators (minimum of orwater (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present? pillary fringe)	imagery (B' e surface (E Ye Ye		stained le fauna (E f	stata) nts (B14) e odor (C1) cheres along uced iron (C uction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	

Project/Site: Lemon Hill	Citv/Co	unty: Farmington/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		,	e: Sampling Point: bdp14
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.07167		Long: -92.3244	Datum: WGS 84
Soil Map Unit Name:		_	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of			o (If no, explain in Remarks.)
, ,	ly disturbed?		Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	-		splain any answers in Remarks.)
		,	,
SUMMARY OF FINDINGS - Attach site map showi	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	o <u> </u>		
Hydric Soil Present? Yes N	0	Is the Sampled Are within a Wetland?	a. YesNo_✔_
Wetland Hydrology Present? Yes ✓ N	0		
Remarks: (Explain alternative procedures here or in a separate re	port.)		
Upland meadow in a swale within a crop field.			
VEGETATION - Use scientific names of plants.			
		Dominant Indicator	Daminanas Tast Warlahast
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1.			Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2.			
3. 4.			Total Number of Dominant Species Across All Strata: 2 (B)
5			Percent of Dominant Species That
		= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			
2			Total % Cover of: Multiply by:
3			OBL species0 x1 =0
4			FACW species 2 x1 = 4
5			FAC species 10 x1 = 30 FACU species 90 x1 = 360
		= Total Cover	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	. ,	, , , , , , , , , , , , , , , , , , ,	UPL species0 x1 =0 Column Totals: 102 x1 = 394 (B)
Dactylis glomerata, Orchard Grass	40%	yes FACU	(/
2. <u>Medicago sativa</u> , Alfalfa	35%	yes FACU	Prevalence Index = B/A = 3.863
Poa pratensis, Kentucky Blue Grass		no FAC	Hydrophytic Vegetation Indicators:
4. Parthenocissus quinquefolia, Virginia-Creeper	5%	no FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Taraxacum officinale, Common Dandelion		no FACU	2 - Dominance Test is > 50%
6. <u>Cirsium arvense</u> , Canadian Thistle	5%	no FACU	3 - Prevalence Index is <= 3.0 ¹
7. <u>Solidago gigantea</u> , Late Goldenrod	2%		4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9. 10.			sheet)
10.		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	10270	- Total Cover	¹ Indicators of hydric soil and wetland hydrology
1.			must be present, unless disturbed or problematic.
2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _ ✓
		Total Cover	100100
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-12	10YR - 3/3	100	/				SiL		marks
0 12	10111 0/0						OIL	-	
ype: C=C	oncentration, D=Dep	letion, RM=R	leduced Matrix, M	S=Masked	Sand Grair	ns. ² Lo	cation: PL	=Pore Lining, M=Matrix.	
dric Soil	Indicators:							Indicators for Problemat	ic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox	(A16)
	pipedon (A2) undef	ined		Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (Iron-Manganese Mas	,
	en Sulfide (A4) ed Layers (A5)			y Mucky Mi y Gleyed M			,	Very Shallow Dark Si	
	luck (A10)			ted Matrix				Other (Explain in Rer	,
	ed Below Dark Surfa	.ce (A11)		x Dark Surf				Indicators of hydropl hydrology must be r	nytic vegetation and wet present, unless disturbed
	ark Surface (A12)	, ,			Surface (F7)			problematic.	,
Sandy	Mucky Mineral (S1)		Redox	x Depressio	ons (F8)				
5 cm N	lucky Peat or Peat (S3)							
estrictive	Layer (if observed)):							
_									
Type:						Hydrid	c Soil Pres	sent?	Yes No
Depth	 (inches): <u></u>					Hydrid	c Soil Pres	sent?	Yes No _
Depth	<u></u> (inches): <u></u>					Hydrid	c Soil Pres	sent?	Yes No _
Depth emarks:	-					Hydric	c Soil Pres	sent?	Yes No _
Depth emarks: 'DROLO 'etland Hy	OGY rdrology Indicators:					Hydric		econdary Indicators (minin	num of two required)
Depth emarks: DROLO Vetland Hy rimary India	OGY rdrology Indicators: cators (minimum of				woo (DO)	Hydric		econdary Indicators (minin Surface soil cracks (B6	num of two required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface	ody rdrology Indicators: cators (minimum of water (A1)		Water-	stained lea	, ,	Hydric		econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10	num of two required)
Depth emarks: DROLC retland Hy rimary Indi Surface High wa	oddy odrology Indicators: cators (minimum of e water (A1) ater table (A2)		Water-	stained lea c fauna (B1	13)	Hydric		econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two required)
Depth emarks: DROLC Vetland Hy rimary Indi Surface High wa Saturat	rdrology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True a	stained lea c fauna (B1 quatic plan	13) its (B14)	Hydric	<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required) i) i) i (C2)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High was Saturat Water r	ordrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a	stained lea c fauna (B1 quatic plan gen sulfide	13) its (B14) odor (C1)		<u>S</u>	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac	num of two required) i) i) i (C2) erial imagery (C9)
Depth emarks: DROLO Tetland Hy rimary Indi Surface High was Saturat Water r Sedime	rdrology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1)	living roots (<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: 'DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de	ordrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquation True and Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) its (B14) odor (C1) neres along	living roots (4)	<u>Si</u> 	econdary Indicators (mininSurface soil cracks (B6Drainage patterns (B10Dry-season water tableCrayfish burrows (C8)Saturation visible on acStunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: DROLO Vetland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m	order (A1) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water- Aquation True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots (4)	<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: DROLO Tetland Hy rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)	one required;	Water- Aquation True and Hydrogon Oxidize Present Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ats (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots (4)	<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: DROLC Tetland Hy rimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots (4)	<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: //DROLO /etland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots (4)	<u>Si</u> 	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: //DROLC //etland Hy rimary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser	order of the content	one required; imagery (B7) e surface (B8 Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well dat (Explain in	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks)	living roots (4)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)
Depth emarks: TDROLC Tetland Hy rimary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Tield Obser Urface Water Table	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) hat or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface e or well dan (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	living roots (4)	(C3)	econdary Indicators (minin Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla	num of two required) (i) (i) (i) (i) (i) (i) (i) (i) (ii) (ii) (iii) (ii
Depth emarks: //DROLC /etland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser urface Water Table aturation F	redrology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) lat or crust (B4) posits (B5) ion visible on aerial by vegetated concave revations: ter Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface e or well dan (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	living roots (4)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)
Depth emarks: DROLC Vetland Hy rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obset vater Table aturation F ncludes ca	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living roots (4) I soils (C6)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)
Depth emarks: DROLC letland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse letd Obset later Table atturation F noludes ca	redrology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) lat or crust (B4) posits (B5) ion visible on aerial by vegetated concave revations: ter Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living roots (4) I soils (C6)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)
Depth emarks: DROLO detland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse detlaturation F includes ca escribe Re	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living roots (4) I soils (C6)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)
DROLC etland Hy imary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse eld Obset atturation F includes ca	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	living roots (4) I soils (C6)	(C3)	econdary Indicators (mining Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on action Stunted or stressed play ✓ Geomorphic position (I FAC-neutral test (D5)	num of two required) i) i) i) c (C2) erial imagery (C9) unts (D1)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County		Sampling Date: 20)24-05-31
Applicant/Owner: Ranger Power		Sta			
Investigator(s): Andy Kranz					•
			lief (concave, convex,		
Slope(%): 8-15 Lat: 44.07113		Long: -92.327	•	Datum: WG	S 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent	t slopes, modera	tely eroded	NWI classific	cation:	
Are climatic / hydrologic conditions on the site typical for this time	e of year?	Yes 🧳 1	No (If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Signification	antly disturbed?		Circumstances" prese	ent? Yes . No	
Are Vegetation , Soil , or Hydrology naturally	y problematic?		xplain any answers ir		
<u> </u>					
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point location	ns, transects, in	nportant feature	es, etc.
Hydrophytic Vegetation Present? Yes		In the Country of Au			
Hydric Soil Present? Yes		Is the Sampled Are within a Wetland?	ea	Yes _	No <u></u> ✓_
Wetland Hydrology Present? Yes <u>✓</u>					
Remarks: (Explain alternative procedures here or in a separate Upland meadow in a swale within a crop field.	report.)				
opiana meadow in a swale within a crop heid.					
VEGETATION - Use scientific names of plants.					
VEGETATION OSC SCIENTING HARRIES OF PIANTSI	Aheoluto	Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet	
1			Number of Domina	ant Species That	
2			Are OBL, FACW, o	or FAC:	<u>0</u> (A)
3			Total Number of D	ominant Species	1 (D)
4			Across All Strata:	_	<u>1</u> (B)
5		- Total Cover	Percent of Domina		0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover		·	(12)
1			Prevalence Index	worksneet:	
2.			Total % Cov	ver of: Mul	tiply by:
3.			OBL species	0 x1 =	
4			FACW species	0 x1 =	
5			FAC species	<u>0</u> x1 =	
	0%	= Total Cover	FACU species	<u>85</u> x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by	3.28-ft square (1-	-m²) quadrat)	UPL species	15 x1 =	75
Trifolium pratense, Red Clover		yes FACU	Column Totals:	100 x1 =	
Securigera varia, Crown Vetch	10%	no UPL	Prevais	ence Index = B/A =	4.150
3. <u>Vicia villosa, Hairy Vetch</u>		no UPL	Hydrophytic Vege	etation Indicators:	
5.			1 - Rapid Tes	st for Hydrophytic Veg	getation
5			2 - Dominano	ce Test is > 50%	
7			3 - Prevalenc	ce Index is <= 3.0 ¹	
8.			4 - Morpholo	gical Adaptations ¹ (Pi	rovide
9.			supporting da sheet)	ata in Remarks or on	a separate
10			PROBLEMAT	TIC Hydrophytic Vege	tation ¹ (Explain)
	100%	= Total Cover			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				hydric soil and wetla sent, unless disturbed	
1			Hydrophytic		
2			Vegetation		
	0%	= Total Cover	Present?	Yes	No
Remarks: (Include photo numbers here or on a separate sheet. Write in nonfunctional, SECCER, VICVIL	.)				
Winte in nonuncuonal, SECCER, VICVIE					

Depth (inches) Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks	;
0-2 10YR - 2/2	100	/				SiL		
2-12 10YR - 3/3	100	/				SiL		
						<u> </u>	-	
		-					-	
· ·		-					-	
·						-		
Type: C=Concentration, D=	 Depletion, RM=	=Reduced Matrix, M	1S=Masked	Sand Grain	ns. 2	Location: Pl	 _=Pore Lining, M=Matrix.	
lydric Soil Indicators:							Indicators for Problematic Hyd	Iric Soils ³ :
Histosol (or Histel) (A1)	undefined	Sandy	y Gleyed N	/latrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedon (A2) ur	defined	Sandy	y Redox (S	65)			Dark Surface (S7)	
Black Histi (A3) undefi	ed		ed Matrix				Iron-Manganese Masses (F2	12)
Hydrogen Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface	(TF12)
Stratified Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
2 cm Muck (A10) Depleted Below Dark S	urfaco (A11)	 :	eted Matrix x Dark Sur	` '			³ Indicators of hydrophytic ve hydrology must be present	egetation and wetla
Thick Dark Surface (A1	, ,			Surface (F7)			problematic.	i, uriless disturbed (
Sandy Mucky Mineral (x Depressi					
5 cm Mucky Peat or Pe	•	_		- (- /				
Restrictive Layer (if observ	ed):							
	-					lric Soil Pre		Van Na d
Type: <u></u>					нус	ilic Juli Fie	sent?	Yes No <u></u>
Type: <u></u> Depth (inches): <u></u> Remarks:					Hyd	inc 30ii Fre	sent?	res No v
Depth (inches): <u></u> Remarks:					Hyd	inc 30ii Fre	sent?	res No •
Depth (inches): Remarks: /DROLOGY					Hyd			
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicat		d: check all that an	olv)		Hyd		Secondary Indicators (minimum of	
Depth (inches): Remarks: /DROLOGY			oply) -stained lea	aves (B9)	Hyd			
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum		Water-			Hyd		Secondary Indicators (minimum of Surface soil cracks (B6)	
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1)		Water- Aquati	-stained lea	13)	Hyd		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inches): Remarks: /DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2)		Water- Aquati True a	-stained lea c fauna (B	13) nts (B14)	Hyd		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B aquatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root	<u>§</u> - - - - - - - - - - - -	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water- Aquati True a Hydrog Oxidize	stained lead control of the control	13) hts (B14) hodor (C1) heres along uced iron (C	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: Proposition of the pr		Water- Aquati True a Hydrog Oxidize Preser Recen	estained lead of fauna (B aquatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) codor (C1) heres along uced iron (Ca	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	of one require	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac	13) hts (B14) codor (C1) heres along uced iron (C- ction in tilled	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on accept	of one require	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac e or well da	nts (B14) nodor (C1) heres along uced iron (C- ction in tilled te (C7) ata (D9)	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: Proposition of the pr	of one require	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac e or well da	13) hts (B14) codor (C1) heres along uced iron (C- ction in tilled	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: Proposition of the pr	of one require rial imagery (B cave surface (B	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge 38) Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surfac e or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (Citon in tilled ce (C7) ata (D9) heres (C1) heres along heres (C2) heres (C3) heres (C4) heres (C5) heres (C6) heres (C7) heres (C6) heres	living root		Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on ae Sparsely vegetated considered Observations: Surface Water Present?	of one require	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge B8) Other	estained lead content of the content	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) hesh:	living root 4) 1 soils (C6	S (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D V Geomorphic position (D2) FAC-neutral test (D5)	f two required) nagery (C9)
Depth (inches): Remarks: Proposition of the pr	of one require rial imagery (B cave surface (B	— Water————————————————————————————————————	estained lead of fauna (Budatic planagen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	living root 4) 1 soils (C6	S (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial im Stunted or stressed plants (D ✓ Geomorphic position (D2)	f two required)
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on acceptable of the Sparsely vegetated constituted of the Sparsely vegetated of the Sparsely vegetated constituted of the Sparsely vegetated constituted of the Sparsely veget	of one require rial imagery (B cave surface (B	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge B8) Other	estained lead of fauna (Budatic planagen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	living root 4) 1 soils (C6	S (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D V Geomorphic position (D2) FAC-neutral test (D5)	f two required) nagery (C9)
Depth (inches): Remarks: Proposition of the pr	of one require	Water-	estained lead of fauna (Beau and a (Beau a	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roof 4) d soils (C6	ss (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D V Geomorphic position (D2) FAC-neutral test (D5)	f two required) nagery (C9)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on active Sparsely vegetated constituted on the Sparsely vegetated constituted on	of one require	Water-	estained lead of fauna (Beau and a (Beau a	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roof 4) d soils (C6	ss (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D V Geomorphic position (D2) FAC-neutral test (D5)	f two required) nagery (C9)
Depth (inches): temarks: **TOROLOGY **Vetland Hydrology Indicate trimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on ac Sparsely vegetated con field Observations: Surface Water Present? **Vater Table Present?** **vater Table Present?** **vater Table Present?*	of one require	Water-	estained lead of fauna (Beau and a (Beau a	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roof 4) d soils (C6	ss (C3)	Secondary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) V Saturation visible on aerial im Stunted or stressed plants (D V Geomorphic position (D2) FAC-neutral test (D5)	f two required) nagery (C9)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County		Sampling Date: 20	24-05-31
Applicant/Owner: Ranger Power		Stat	e: MN	Sampling Point: bd	p16
Investigator(s): Andy Kranz					
			ief (concave, convex,		
Slope(%): <u>3-7</u> Lat: <u>44.07429</u>		Long: -92.32552		Datum: WGS	S 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent	slopes, modera	tely eroded	NWI classific	ation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 N	o (If no, explai	n in Remarks.)	
Are Vegetation , Soil , or Hydrology Signification	antly disturbed?	Are "Normal	Circumstances" prese	ent? Yes , No	
Are Vegetation , Soil , or Hydrology naturally	problematic?		xplain any answers in	<u></u>	
					
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point locatior	is, transects, im	iportant feature	s, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Are	2		
Hydric Soil Present? Yes		within a Wetland?	d	Yes_	No _ <
Wetland Hydrology Present? Yes					
Remarks: (Explain alternative procedures here or in a separate Upland meadow in a swale within a crop field.	report.)				
opiana meadow in a swate within a drop field.					
VEGETATION - Use scientific names of plants.					
TECENTION COCCUMENT NAMES OF PRIME	Δhsolute	Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test \	Norksheet	
1			Number of Domina		
2			Are OBL, FACW, o	or FAC:	<u>0</u> (A)
3			Total Number of D	ominant Species	1 (D)
4.			Across All Strata:		<u>1</u> (B)
5		- Total Cover	Percent of Domina Are OBL, FACW, o		0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	090	= Total Cover			(/
1			Prevalence Index		
2.				rer of: Mult	
3			· ·	0 x1 =	
4			1	0 x1 =	
5			FAC species	5 x1 = _	
	0%	= Total Cover	FACU species	90 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by		, , ,	UPL species	0 x1 =	0 375 (B)
1. Bromus inermis, Smooth Brome	70%	yes FACU	Column Totals:	ence Index = B/A =	
2. Arctium minus, Lesser Burrdock	10%	no FACU		-	0.541
Poa pratensis, Kentucky Blue Grass Taraxacum officinale, Common Dandelion	F0/	no FAC	Hydrophytic Vege	etation Indicators:	
Taraxacum officinale, Common Dandellon Solidago altissima, Tall Goldenrod	<u>5%</u> 5%	no FACU	1 - Rapid Tes	t for Hydrophytic Veg	etation
6.	390	no FACU	2 - Dominanc	e Test is > 50%	
7			3 - Prevalenc	e Index is $\leq 3.0^1$	
8.				gical Adaptations ¹ (Pr	
9.			supporting da	ta in Remarks or on	a separate
10			1	TC Hydrophytic Veget	tation ¹ (Evolain)
	95%	= Total Cover			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be pres	hydric soil and wetlar sent, unless disturbed	nd nydrology I or problematic.
1			Llydrophyd:-		
2			Hydrophytic Vegetation		
	0%	= Total Cover	Present?	Yes	No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks	
0-3	10YR - 3/2	100	/				SiL		
3-12	10YR - 3/3	100	/				SiL		
0 12	10111 0/0						<u> </u>		
	-								
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	1S=Masked	Sand Grair	ns. 2	Location: Pl	_=Pore Lining, M=Matrix.	
lydric Soil	Indicators:							Indicators for Problematic Hydric So	ils ³ :
Histoso	ol (or Histel) (A1) un o	defined	Sandy	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	Epipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)	
	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
	luck (A10) ed Below Dark Surfa	co (A11)		eted Matrix x Dark Sur				³ Indicators of hydrophytic vegetation hydrology must be present, unles	on and wetlar
	oark Surface (A12)	re (VII)			Surface (F7)			problematic.	s disturbed t
	Mucky Mineral (S1)			x Depressi					
_ ′	lucky Peat or Peat (S3)			(-/				
Restrictive	Layer (if observed)):							
Type:	<u></u>					Hyd	lric Soil Pre	esent? Yes _	No _ ✓
Donth	(' l) ·								
Remarks:	(inches): <u></u>					_			
emarks:						_			
Remarks:	OGY					_			animad)
Remarks: /DROLO Vetland Hy	DGY rdrology Indicators:		t' check all that an	nlvì		_	<u> </u>	Secondary Indicators (minimum of two re Surface soil cracks (B6)	equired)
Pemarks: /DROLO Vetland Hy Primary Indi	OGY				aves (B9)	_	<u> </u>	Surface soil cracks (B6)	equired)
Pemarks: /DROLO Vetland Hy Primary IndiSurface	OGY vdrology Indicators: icators (minimum of		Water-	oply) -stained lea c fauna (B			9	,	equired)
Pemarks: /DROLC Vetland Hy Primary Indi Surface High wa	OGY vdrology Indicators: icators (minimum of e water (A1)		Water- Aquation	-stained lea	13)	_	<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)	equired)
Primary Indi Surface High w Saturat	ordrology Indicators: icators (minimum of e water (A1) ater table (A2)		Water- Aquation True a	-stained lea c fauna (B	13) nts (B14)	_	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Primary Indi Surface High w. Saturat Water r	oddy rdrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1)	
Primary Indi Surface High w. Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water-Aquation True a Hydrog Oxidize	stained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C4)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water- Aquation True a Hydrog Oxidizo Preser Recen	estained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1)	
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquation True a Hydrog Oxidize Preser Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
Permarks: Portland Hy Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial	one required	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
Permarks: Portland Hy Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospi nce of redu it iron redu nuck surfac	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
Pemarks: Proposition of the control	order variable (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required imagery (B7 e surface (B	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along iced iron (Cotton in tilled ce (C7) ata (D9) Remarks)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
Pemarks: Proposition of the control	order various in the content of the	imagery (B7 e surface (B	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T) Gauge SS No	estained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surface or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Sield Obsel	order of the content	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Thin m Gauge State No	estained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Gurface Water Table Saturation F	order of the content	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T) Gauge SS No	estained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Water Table Saturation F includes ca	pogy rdrology Indicators: icators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T Gauge 8) Other S No	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu ti iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Water Table Saturation F includes ca	order of the control	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T Gauge 8) Other S No	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu ti iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Surface Water Table Saturation F Includes ca	order of the control	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T Gauge 8) Other S No	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu ti iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
Emarks: DROLO Vetland Hy rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obset urface Wat /ater Table aturation F ncludes ca	order of the control	imagery (B7 e surface (B Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m T Gauge 8) Other S No	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu ti iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)

Project/Site: Lemon Hill	City/Co	unty: Olmst	ed County	Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		, <u> </u>	State	: MN Sampling Point: bdp17
Investigator(s): Andy Kranz	Secti	ion, Townsh	nip, Range: S	13 T107N S013W
	<u> </u>			ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.07537		_Long: -92	.32654	Datum: WGS 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slo	pes, modera	itely eroded		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		lo the C	ampled Area	
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes <u>✓</u> No				
Remarks: (Explain alternative procedures here or in a separate rep Upland meadow in a swale within a crop field.	ort.)			
Opiana meadow in a sware within a crop heid.				
VEGETATION - Use scientific names of plants.				
VEGETATION - Ose scientific flames of plants.	Absolute	Daminant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test Worksheet
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species
4				Across All Strata: 5 (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Continue (Charles Charles (Diet cine 45 ft (4 C as) and inc)	0%	= Total Co	ver	Ale OBE, LACW, OF LAC.
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species 10 x1 = 20
5				FAC species 5 x1 = 15
	0%	= Total Co	ver	FACU species 95 x1 = 380
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1	-m²) quadra	at)	UPL species <u>0</u> x1 = <u>0</u>
Schedonorus arundinaceus, Tall False Rye Grass	20%	yes	FACU	Column Totals: $\underline{110}$ x1 = $\underline{415}$ (B)
2. <u>Bromus inermis</u> , Smooth Brome	15%	yes	FACU	Prevalence Index = B/A = 3.773
3. <u>Cirsium arvense</u> , Canadian Thistle		yes	FACU	Hydrophytic Vegetation Indicators:
4. Pastinica sati a, Wild Parsnip		yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Glechoma hederacea, Groundivy	100/	yes	FACU	2 - Dominance Test is > 50%
6. Dactylis glomerata, Orchard Grass		no	FACU_	$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
7. Phalaris arundinacea, Reed Canary Grass		no	FACW	4 - Morphological Adaptations ¹ (Provide
Poa pratensis, Kentucky Blue Grass Taraxacum officinale, Common Dandelion	F0/	no no	<u>FAC</u> FACU	supporting data in Remarks or on a separate sheet)
	<u> </u>	110	FACO	l ,
10.	110%	= Total Co	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		10101 00	VOI	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2				Vegetation
	0%	= Total Co	ver	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)				

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10YR - 3/2	100	/				SiL		
2-12	10YR - 3/3	100	/				SiL		
								-	
								-	
								-	
Гуре: С=С	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	Sand Grair	ns. ² L	ocation: PL	=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problematic Hydr	ric Soils ³ :
Histoso	l (or Histel) (A1) un	defined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	pipedon (A2) undef	ined	Sandy	y Redox (S	65)			Dark Surface (S7)	
Black H	listi (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F1	2)
Hydrog	en Sulfide (A4)		Loamy	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
	uck (A10)			ted Matrix				³ Indicators of hydrophytic ve	getation and wet
	d Below Dark Surfa	ce (A11)		x Dark Sur	` ,			hydrology must be present, problematic.	unless disturbed
	ark Surface (A12)				Surface (F7)			problematic.	
	Mucky Mineral (S1)	C2)	Redox	x Depression	ons (F8)				
	ucky Peat or Peat (
	Layer (if observed)	1=							
							ic Soil Pre	sent?	Yes No
Type: Depth	 (inches):								10010
Depth	 (inches): <u></u>					Hyui			160 <u></u> 110_
Depth (Hyui			
Depth emarks:	GY					Hyui			
Depth demarks: DROLO Setland Hy	GY drology Indicators		l: chock all that an	nh/)				econdary Indicators (minimum of	
Depth of the period of the per	GY drology Indicators cators (minimum of				aves (R9)	Hyui		econdary Indicators (minimum of Surface soil cracks (B6)	
Depth of the property of the p	drology Indicators cators (minimum of		Water-	stained lea	` '			econdary Indicators (minimum ofSurface soil cracks (B6)Drainage patterns (B10)	
Depth of the property of the p	drology Indicators cators (minimum of water (A1) ater table (A2)		Water-:	stained lea c fauna (B	13)	Hyui		econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
DROLO etland Hy imary Indi Surface High wa Saturati	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao	stained lea c fauna (B: quatic plan	13) nts (B14)			econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	two required)
Depth of the property of the p	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True ao Hydrog	stained lea c fauna (Bí quatic plan gen sulfide	13) nts (B14) odor (C1)		<u>s</u> 	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image	two required)
Depth of the property of the p	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water-:AquatioTrue aoHydrogOxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) hts (B14) odor (C1) heres along	living roots	<u>S</u>	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima	two required)
DROLO etland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) hts (B14) odor (C1) heres along uced iron (C4)	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
Depth of the marks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B. quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) odor (C1) heres along aced iron (C4) ction in tilled	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima	two required)
Depth of the property of the p	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B. quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) odor (C1) heres along aced iron (C4 ction in tilled te (C7) ata (D9)	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
DROLO etland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct nuck surface or well da	nts (B14) odor (C1) heres along aced iron (C4 ction in tilled te (C7) ata (D9)	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
Depth of the marks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations:	one required imagery (B7) e surface (B8)	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc e or well da (Explain in	ats (B14) odor (C1) heres along aced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	living roots	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
Depth of the marks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7 e surface (B8 Ye:	Water	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C- ction in tillect e (C7) ata (D9) Remarks)	living roots 4) I soils (C6)	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	agery (C9)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat ater Table aturation P	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B8 Ye:	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of reduct iron reduct surface or well da (Explain in Depth (inch	nts (B14) odor (C1) heres along nced iron (C4 ction in tillect the (C7) ata (D9) Remarks) hes):	living roots 4) I soils (C6)	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2) FAC-neutral test (D5)	two required)
DROLO etland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Water Table aturation P ncludes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water Aquation	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C4 ction in tillect ne (C7) heres (C9) Remarks) hes): hes):	living roots 4) I soils (C6) Wetla	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)
DROLO etland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Water Table aturation P ncludes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B8 Ye: Ye:	Water Aquation	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C4 ction in tillect ne (C7) heres (C9) Remarks) hes): hes):	living roots 4) I soils (C6) Wetla	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat atter Table atturation P includes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water Aquation	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C4 ction in tillect ne (C7) heres (C9) Remarks) hes): hes):	living roots 4) I soils (C6) Wetla	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)
DROLO etland Hy imary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat atter Table cludes ca	drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water Aquation	stained lead c fauna (B: quatic plan gen sulfide ed rhizosphace of redut t iron reduct surface or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) heres along nced iron (C4 ction in tillect ne (C7) heres (C9) Remarks) hes): hes):	living roots 4) I soils (C6) Wetla	S (C3)	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)

Project/Site: Lemon Hill	City/Cc	untv: Farmi	naton/Olmste	ed County	Sampling Date: 2	2024-05-31
Applicant/Owner: Ranger Power	City/Co	. —			Sampling Point: b	
Investigator(s): Andy Kranz	Sect			·		-1
• • • •				ef (concave, convex,		
Slope(%): 0-2 Lat: 44.07716					Datum: WC	GS 84
Soil Map Unit Name: 285A: Port Byron silt loam, 0 to 2 percent s		_			cation:	
Are climatic / hydrologic conditions on the site typical for this tim		Y	es , No	(If no, expla	uin in Remarks.)	
Are Vegetation , Soil , or Hydrology Signific	antly disturbed?	А	re "Normal C	 Circumstances" prese	ent? Yes . No	
Are Vegetation , Soil , or Hydrology natural	ly problematic?			plain any answers ir	<u> </u>	<u></u>
						
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ing point	location	s, transects, in	nportant featur	es, etc.
	No <u> </u>	la tha C				
	No		ampled Area Wetland?	L	Yes	No <u> </u>
Wetland Hydrology Present? Yes						
Remarks: (Explain alternative procedures here or in a separate Upland meadow in a swale within a crop field.	report.)					
Opiana meadow in a swale within a crop held.						
VECTATION Has accordific names of plants						
VEGETATION - Use scientific names of plants.						
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test	Worksheet	
1				Number of Domina	ant Species That	
2				Are OBL, FACW,		<u>0</u> (A)
3				Total Number of D	ominant Species	_
4				Across All Strata:	-	2 (B)
5				Percent of Domina		0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Co	vei			(/
1				Prevalence Index		
2.						ultiply by:
3				OBL species	0 x1 =	
4				FACW species	10 x1 =	
5				FAC species FACU species	10 x1 = 50 x1 =	
		= Total Co		UPL species	20 x1 =	100
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by		, ,	•	Column Totals:	90 x1 =	350 (B)
Dactylis glomerata, Orchard Grass Pastinica sativa, Wild Parsnip	<u>35%</u> 20%	yes	FACU UPL		ence Index = B/A =	3.889
Austinus maisus I assau Brumdasla	150/	yes no	FACU			
Arctium minus, Lesser Burroock Phalaris arundinacea, Reed Canary Grass	10%	no	FACW	Hydropnytic veg	etation Indicators:	
5. Ambrosia trifida, Great Ragweed	10%	no	FAC		st for Hydrophytic Ve	egetation
					ce Test is > 50%	
7					ce Index is <= 3.0 ¹	
8					gical Adaptations ¹ (F ata in Remarks or or	
9				sheet)	ata iii Nemarks or or	i a separate
10				PROBLEMAT	TIC Hydrophytic Veg	etation ¹ (Explain)
	90%	= Total Co	ver	¹ Indicators of	f hydric soil and wetl	and hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be pre	esent, unless disturbe	ed or problematic.
1.				Hydrophytic		
2	0%	= Total Co		Vegetation Present?	Vc	s No _ -/ _
Demander (Institute whether were been		10101 00	¥-01	. resent:		140
Remarks: (Include photo numbers here or on a separate sheet)					

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-12	10YR - 3/3	100	/				SiL		marks
<u> </u>	10111 0/0						O.L		
				-					
 Гуре: C=С	oncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grair	ns. ² Lo	cation: PL:	=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problemati	c Hvdric Soils ³ :
Histoso	ol (or Histel) (A1) und	defined	Sandy	Gleyed M	latrix (S4)		_	Coast Prairie Redox (-
Histic E	Epipedon (A2) undef	ined	Sandy	Redox (S	5)		- -	Dark Surface (S7)	•
	Histi (A3) undefined			ed Matrix (-	Iron-Manganese Mass	ses (F12)
	en Sulfide (A4)			y Mucky Mi			-	Very Shallow Dark Su	rface (TF12)
	ed Layers (A5)			y Gleyed M			-	Other (Explain in Rem	narks)
	fluck (A10)	(111)		ted Matrix				³ Indicators of hydroph	nytic vegetation and wetl
	ed Below Dark Surfa Dark Surface (A12)	ce (ATT)		x Dark Surf ted Dark S	ace (F6) Surface (F7)			hydrology must be p problematic.	resent, unless disturbed
	Mucky Mineral (S1)			k Depressio				•	
	lucky Peat or Peat (S3)		(Dopiess.	Jiio (i o,				
	Layer (if observed)	•							
Type:						Hydrid	c Soil Pres	sent?	Yes No
	(inches):					Hydrid	c Soil Pres	sent?	Yes No
Depth (-					Hydrid	c Soil Pres	sent?	Yes No
Depth (Remarks:	DGY					Hydrid			
Depth (Permarks:	DGY /drology Indicators:		aback all that an	-1.0		Hydrid		econdary Indicators (minim	num of two required)
Depth (Remarks:	OGY vdrology Indicators: icators (minimum of			. ,,	was (RQ)	Hydrid		econdary Indicators (minim Surface soil cracks (B6	num of two required)
Depth (Remarks: /DROLO Vetland Hy Primary India Surface	OGY /drology Indicators: icators (minimum of e water (A1)		Water-	stained lea	` '	Hydrid		econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10	num of two required)
Depth (Pemarks: /DROLO Vetland Hy rimary Indi Surface High wa	OGY vdrology Indicators: icators (minimum of		Water-	stained lea c fauna (B1	13)	Hydrid		econdary Indicators (minim Surface soil cracks (B6	num of two required)
Depth (DROLO Vetland Hy rrimary Indi Surface High wa Saturati	OGY /drology Indicators: icators (minimum of e water (A1) ater table (A2)		Water- Aquatio True a	stained lea	13) ts (B14)	Hydrid	Se	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two required))) (C2)
Depth (Depth	OGY /drology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) ts (B14) odor (C1)	Hydrid	<u>Se</u>	econdary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required))) (C2) erial imagery (C9)
Depth (Depth (Demarks:	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquation True and Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	ts (B14) odor (C1) neres along ced iron (C4)	living roots (4)	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth (Demarks: Demarks:	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquation True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ts (B14) odor (C1) neres along ced iron (C4)	living roots (4)	<u>Se</u> 	econdary Indicators (minimSurface soil cracks (B6Drainage patterns (B10Dry-season water tableCrayfish burrows (C8) / Saturation visible on aeStunted or stressed pla	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth (Pemarks: /DROLO /etland Hy rimary Indi Surface High wa Saturati Water n Sedime Drift del Algal m Iron del	order (Manager Manager	one required;	Water- Aquation True and Hydrogon Oxidize Present Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots (4)	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
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Depth (Demarks: /DROLO /etland Hy /erimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel	order votations: icators (minimum of e water (A1) ater table (A2) cion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave rvations: ter Present?	one required; imagery (B7) e surface (B8 Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct or well dan (Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	living roots (4)	Se 	econdary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two required))) (C2) erial imagery (C9) nts (D1)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp19
Investigator(s): Andy Kranz	Secti	ion, Township, Range: <u>S</u>	18 T107N S012W
Lanform(hillslope, terrace, etc): Backslope		Local relie	ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.07736		Long: -92.31831	Datum: WGS 84
Soil Map Unit Name: 285A: Port Byron silt loam, 0 to 2 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	a sampli	ing point location	s. transects. important features. etc.
	-		-, ······, ·····
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No		Is the Sampled Area	
Wetland Hydrology Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate repo Upland meadow on back slope of a depression VEGETATION - Use scientific names of plants.	irt.)		
		Dominant Indicator Species? Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species: Status	Number of Dominant Species That
3.			Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species
4			Across All Strata: 1 (B)
	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species $100 \text{ x1} = 200$
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, , ,	UPL species $0 \times 1 = 0$
Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: $100 \text{ x1} = 200 \text{ (B)}$
2.			Prevalence Index = B/A =2.000
3			Hydrophytic Vegetation Indicators:
5.			✓ 1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
7			$_{\underline{\hspace{1cm}}}$ 3 - Prevalence Index is <= 3.0 ¹
8.	·		4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	100%	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			. ,
2	0%	= Total Cover	Hydrophytic Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

	Matrix	pth needed to docu	ment the edox Fea				e of mulcators.
Depth (inches) Color	(moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	R - 3/2 100	/				SiCL	
	R - 3/2 98	10YR-4/2	2		M	SiCL	
							-
<u>18-42</u> <u>10YF</u>	R - 3/2 90	10YR-4/2	10	<u>D</u>	M	SiCL	
						· ·	
							_
							_
¹ Type: C=Concentrati	on, D=Depletion, RM	======================================	S=Maske	d Sand Grair	ns. 2	Location: PI	
Hydric Soil Indicator		,					
_	el) (A1) undefined	Sandy	Gleved I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
Histic Epipedon (Redox (Dark Surface (S7)
Black Histi (A3)	undefined	Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrogen Sulfide	e (A4)	Loamy	/ Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratified Layers			-	Matrix (F2)			Other (Explain in Remarks)
2 cm Muck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and wetland
Thick Dark Surfa	Dark Surface (A11)			rface (F6) Surface (F7)			hydrology must be present, unless disturbed or problematic.
Sandy Mucky Mi			Depress				•
5 cm Mucky Pea				()			
Restrictive Layer (if	observed):						
Type:	·				Нус	dric Soil Pre	esent? Yes No 🗸
Depth (inches):					_		
I							
	Indicators						Coondon: Indicators (minimum of two required)
Wetland Hydrology		ad: check all that any	nlv)			<u> </u>	Secondary Indicators (minimum of two required)
Wetland Hydrology Primary Indicators (m	inimum of one requir			aves (B9)		<u> </u>	Surface soil cracks (B6)
Wetland Hydrology	inimum of one requir 1)	Water-		aves (B9)		<u>§</u>	
Wetland Hydrology Primary Indicators (m Surface water (A	inimum of one requir 1)	Water-: Aquatio	stained le	313)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)
Wetland Hydrology Primary Indicators (m Surface water (A High water table Saturation (A3) Water marks (B1	inimum of one requir 1) (A2))	Water- Aquatio True ao Hydrog	stained le fauna (E quatic pla jen sulfide	813) nts (B14) e odor (C1)		 - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
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Wetland Hydrology Primary Indicators (m Surface water (A High water table Saturation (A3) Water marks (B1 Sediment deposi Drift deposits (B3 Algal mat or crus	inimum of one requir 1) (A2) ts (B2) 3) st (B4)	Water Aquatio True ao Hydrog Oxidize Presen Recent	stained le c fauna (E quatic pla len sulfide ed rhizosp ce of redi i iron redu	e odor (C1) cheres along uced iron (C4) diction in tilled	1)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
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Wetland Hydrology I Primary Indicators (m Surface water (A High water table Saturation (A3) Water marks (B1 Sediment deposit Drift deposits (B3 Algal mat or crus Iron deposits (B5 Inundation visible Sparsely vegetat Field Observations: Surface Water Preser Water Table Present? Saturation Present? (includes capillary frin	inimum of one requir (A2) (S) (S) (S) (S) (S) (S) (S) (Water	stained le c fauna (E quatic pla gen sulfide ed rhizosp ce of redu iron redu uck surfa or well d (Explain ir Depth (inc	stata) nts (B14) e odor (C1) cheres along uced iron (Cauction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	1) I soils (CC	ts (C3) - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hydrology Primary Indicators (m	inimum of one requir (A2) (S) (S) (S) (S) (S) (S) (S) (Water	stained le c fauna (E quatic pla gen sulfide ed rhizosp ce of redu iron redu uck surfa or well d (Explain ir Depth (inc	stata) nts (B14) e odor (C1) cheres along uced iron (Cauction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	1) I soils (CC	ts (C3) - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hydrology Primary Indicators (m	inimum of one requir (A2) (S) (S) (S) (S) (S) (S) (S) (Water	stained le c fauna (E quatic pla gen sulfide ed rhizosp ce of redu iron redu uck surfa or well d (Explain ir Depth (inc	stata) nts (B14) e odor (C1) cheres along uced iron (Cauction in tilled ce (C7) ata (D9) n Remarks) ches): ches):	1) I soils (CC	ts (C3) - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olm:	sted County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		Sta	te: MN Sampling Point: bdp20
Investigator(s): Andy Kranz	Sect	ion, Township, Range:	S18 T107N S012W
Lanform(hillslope, terrace, etc): <u>Toeslope</u>		Local re	lief (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.07754		Long: -92.31813	Datum: WGS 84
Soil Map Unit Name: 285A: Port Byron silt loam, 0 to 2 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		explain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Ar	ea ea
Hydric Soil Present? Yes ✓ No. Wetland Hydrology Present? Yes ✓ No.		within a Wetland?	Yes <u> ✓</u> No
Remarks: (Explain alternative procedures here or in a separate repo			
Wet meadow on toeslope slope of a depression VEGETATION - Use scientific names of plants.			
		Dominant Indicator	Davisinana Taat Warlahaat
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species Across All Strata: 1 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 102 x1 = 204
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: <u>102</u> x1 = <u>204</u> (B)
2. Urtica dioica, Stinging Nettle	2%	no FACW	Prevalence Index = B/A = 2.000
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate
10.			sheet)
10.		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. 2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Rema	arks
0-12	10YR - 5/2	80	10YR-3/2	20	С	М	SiCL		
							-		
ype: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	Sand Grain	ns. ² I	Location: P	L=Pore Lining, M=Matrix.	
/dric Soil	Indicators:							Indicators for Problematic	Hydric Soils ³ :
	ol (or Histel) (A1) und	defined	Sandy	y Gleyed M	1atrix (S4)			Coast Prairie Redox (A1	
Histic E	pipedon (A2) undef	ined	Sandy	y Redox (S	55)			Dark Surface (S7)	,
Black H	Histi (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses	s (F12)
_ Hydrog	en Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surfa	ace (TF12)
_ Stratifie	ed Layers (A5)		Loam	y Gleyed M	/latrix (F2)			Other (Explain in Remar	
_ 2 cm N	luck (A10)		Deple	ted Matrix	(F3)			3Indicators of hydrophyti	ic vegetation and we
_ Deplete	ed Below Dark Surfa	ce (A11)	Redox	x Dark Surf	face (F6)			hydrology must be pre	sent, unless disturbe
_ Thick D	Park Surface (A12)		✓ Deple	ted Dark S	Surface (F7)			problematic.	
Sandy	Mucky Mineral (S1)		Redox	x Depression	ons (F8)				
_ 5 cm N	lucky Peat or Peat (33)							
strictive	Layer (if observed)	:							
Type:	<u></u>					Hyd	ric Soil Pr	esent?	Yes No _
Deptn									
emarks:	(inches): <u></u>								
emarks:	·					_			
marks:	OGY								
marks: DROLC	DGY rdrology Indicators:		chock all that an	nh/)				Secondary Indicators (minimur	n of two required)
DROLC tland Hy	OGY vdrology Indicators: icators (minimum of				aves (B9)		:	Surface soil cracks (B6)	n of two required)
DROLO etland Hy mary Indi _ Surface	OGY rdrology Indicators: icators (minimum of e water (A1)		Water-	stained lea	` '			Surface soil cracks (B6) Drainage patterns (B10)	
DROLO tland Hy mary Indi Surface High wa	ordrology Indicators: icators (minimum of e water (A1) ater table (A2)		Water-	stained lea c fauna (B1	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	
DROLC etland Hy mary Indi _ Surface _ High w Saturat	oddy rdrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True a	stained lea c fauna (B1 quatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10)	C2)
DROLO tland Hy mary Indi _ Surface _ High w Saturat _ Water r	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) nts (B14)	living roots		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	C2) al imagery (C9)
DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime	oddy rdrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) ats (B14) odor (C1)	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria	C2) Il imagery (C9) S (D1)
DROLO ttland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquation True ao Hydrog Oxidize Preser	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ats (B14) odor (C1) neres along	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	C2) Il imagery (C9) S (D1)
DROLO Intland Hy Mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	order variable (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	nts (B14) odor (C1) neres along aced iron (Ca	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)	one required	Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) odor (C1) neres along need iron (Ca ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	ordrology Indicators: icators (minimum of exators (Ma)) inter table (A2) ion (A3) marks (B1) ient deposits (B2) ient deposits (B3) inat or crust (B4) iposits (B5)	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along aced iron (C- ction in tilled e (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO ttland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	ats (B14) odor (C1) neres along aced iron (C- ction in tilled e (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO Intland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order variable (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial by vegetated concave	one required imagery (B7) e surface (B8	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduck surfac e or well da (Explain in	ats (B14) odor (C1) neres along aced iron (Co ction in tilled the (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO etland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indicators: Ideators (minimum of exactors (minimum of exactors (minimum of exactors) Ideator (A1) Ideator (A2) Ideator (A3) Ideator (A3) Ideator (B4) Ideator (B4) Ideator (B4) Ideator (B4) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B5) Ideator (B6) Ideat	imagery (B7) e surface (B8	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in	nts (B14) odor (C1) neres along nced iron (C- ction in tilled e (C7) hta (D9) Remarks)	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	C2) Il imagery (C9) S (D1)
DROLO etland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy Indrology Indicators: Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (Ma) Indicator	imagery (B7) e surface (B8 Yes Yes	Water- Aquation True accepted by the second of the second	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along iced iron (C- ction in tilled ie (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	C2) Il imagery (C9) S (D1)
DROLO etland Hy mary Indi Surface High w. Saturat Water r Sedime Orift de Algal m Iron de Inundat Sparse eld Obser rface Water Table turation F	pogy Indrology Indicators: Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (Ma) Indicator	imagery (B7) e surface (B8 Yes Yes	Water- Aquation True accepted by the second of the second	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac e or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along iced iron (C- ction in tilled ie (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	C2) Il imagery (C9) S (D1)
DROLC etland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse eld Obsel rface Water Table turation F cludes ca	pogy Indrology Indicators: Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (minimum of experiment) Indicators (Max) Indicator	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead c fauna (B3 quatic plan gen sulfide ed rhizosphace of redut t iron reduce surface or well da (Explain in Depth (inch Depth (inch popth (i	nts (B14) odor (C1) neres along iced iron (Cation in tilled te (C7) ita (D9) Remarks) nes): nes):	4) di soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	C2) Il imagery (C9) S (D1)
DROLC etland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse eld Obsel rface Water Table turation F cludes ca	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead c fauna (B3 quatic plan gen sulfide ed rhizosphace of redut t iron reduce surface or well da (Explain in Depth (inch Depth (inch popth (i	nts (B14) odor (C1) neres along iced iron (Cation in tilled te (C7) ita (D9) Remarks) nes): nes):	4) di soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	C2) Il imagery (C9) S (D1)
DROLO Itland Hy mary Indi Surface High Wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obser fface Wa ter Table turation Fe cludes ca	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead c fauna (B3 quatic plan gen sulfide ed rhizosphace of redut t iron reduce surface or well da (Explain in Depth (inch Depth (inch popth (i	nts (B14) odor (C1) neres along iced iron (Cation in tilled te (C7) ita (D9) Remarks) nes): nes):	4) di soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	c2) Il imagery (C9) is (D1)
DROLC tland Hy mary Indi _ Surface _ High w Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse Id Obsel face Water Table turration Feludes ca	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lead c fauna (B3 quatic plan gen sulfide ed rhizosphace of redut t iron reduce surface or well da (Explain in Depth (inch Depth (inch popth (i	nts (B14) odor (C1) neres along iced iron (Cation in tilled te (C7) ita (D9) Remarks) nes): nes):	4) di soils (C6)	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	c2) Il imagery (C9) is (D1)

Project/Site: Lemon Hill	City/Cou	unty: Farmington/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp21
Investigator(s): Andy Kranz	Section	on, Township, Range: <u>S</u>	24 T107N S013W
Lanform(hillslope, terrace, etc): Footslope		Local relie	ef (concave, convex, none): concave
Slope(%): <u>3-7</u> Lat: <u>44.06208</u>		Long: -92.33718	Datum: WGS 84
Soil Map Unit Name: 24: Kasson silt loam, 1 to 4 percent slopes			NWI classification: PUBFx
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampili	ng point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		within a Wetland?	Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate report Upland at margin of depression in a crop field.	ort.)		
, a			
VEGETATION - Use scientific names of plants.			
	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3. 4.			Total Number of Dominant Species Across All Strata:1 (B)
5.			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1. 2.			Total % Cover of: Multiply by:
3.			OBL species 0 x1 = 0
4.			FACW species $0 \text{ x1} = 0$
5			FAC species $0 x1 = 0$
	0%	= Total Cover	FACU species $\phantom{00000000000000000000000000000000000$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1-	m²) quadrat)	UPL species <u>0</u> x1 = <u>0</u>
Digitaria sanguinalis, Hairy Crab Grass	60%	yes FACU	Column Totals: $\underline{\qquad}$ 60 x1 = $\underline{\qquad}$ 4 cos
2			Prevalence Index = B/A = 4.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	60%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
		= Total Cover	Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sheet.)			
Corn seedlings at normal density.			

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks
0-4	10YR - 2/2	100	/				SCL	
4-12	10YR - 2/2	98	10YR-4/3	2	С	M	SCL	
,	· 							
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grain	ns. 2	Location: Pl	L=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) und			-	Matrix (S4)			Coast Prairie Redox (A16)
	Epipedon (A2) undef	ined		/ Redox (S	•			Dark Surface (S7)
	Histi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5) Muck (A10)			y Gleyed i ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	ed Below Dark Surfa	re (Δ11)		k Dark Sur				³ Indicators of hydrophytic vegetation and w hydrology must be present, unless disturb
	Dark Surface (A12))C (AII)	_		Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depressi				
_ ′	Mucky Peat or Peat (S3)		•	` ,			
Restrictive	Layer (if observed)	:						
Type:	<u></u>					Нус	Iric Soil Pre	esent? Yes No
Donth								
Remarks:	(inches): <u></u>					_		
Remarks:								
Remarks:	DGY							Secondary Indicators (minimum of two required)
Remarks:	OGY ydrology Indicators:		t' check all that an	nlvì			<u>s</u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Primary Indi	DGY				aves (B9)		<u> </u>	Surface soil cracks (B6)
Primary India	OGY /drology Indicators: icators (minimum of		Water-	ply) stained lea c fauna (B		_	9	, , , , , , , , , , , , , , , , , , , ,
Primary Indi Surface High wa	OGY /drology Indicators: icators (minimum of e water (A1)		Water- Aquatio	stained lea	13)		<u>§</u> 	Surface soil cracks (B6) Drainage patterns (B10)
Primary Indi Surface High w Saturat	OGY /drology Indicators: icators (minimum of e water (A1) ater table (A2)		Water- Aquatio True ao	stained lea c fauna (B quatic plar	13)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Primary Indi Surface High w. Saturat Water r	OGY /drology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3)		Water- Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Primary Indi Surface High was Saturat Water r Sedime	OGY vdrology Indicators: icators (minimum of e water (A1) ater table (A2) tion (A3) marks (B1)		Water-:AquatioTrue aoHydrogOxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) nts (B14) odor (C1)	-	- - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	or or crust (B4)		Water Aquatic True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	order (March 1997) order	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac	13) hts (B14) heres along uced iron (C- ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat	order value (A2) control (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial	one required	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat	order (March 1997) order	one required	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge	stained lead of the control of the c	13) hts (B14) heres along uced iron (C- ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat	pogy /drology Indicators: icators (minimum of e water (A1) ater table (A2) ition (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ly vegetated concave	one required	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	ordy /drology Indicators: icators (minimum of e water (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present?	one required imagery (B7 e surface (B	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redutiron redunuck surface or well da (Explain in Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (Citon in tilled ce (C7) hata (D9) hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Surface Water Table	pogy Indicators: icators (minimum of e water (A1) iater table (A2) ition (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) ition visible on aerial ly vegetated concave rvations: ter Present?	imagery (B7 e surface (B Ye Ye	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (— Oxidize — Oxidize — Oxidize — Presen — Recent — Thin m — Oxidize — Oxidize — No ✓ I	stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redutiron redunuck surface or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Gurface Water Table Saturation F	pogy /drology Indicators: icators (minimum of e water (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B Ye Ye	Water Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redutiron redunuck surface or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Water Table Saturation F includes ca	pogy /drology Indicators: icators (minimum of e water (A1) ater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B Ye Ye		stained lead of the control of the c	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) n Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Permarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Sield Obset Surface Water Table Saturation F Includes ca	pogy Indicators: Indicators: Indicators (minimum of experiment) Indicators (minimum o	imagery (B7 e surface (B Ye Ye		stained lead of the control of the c	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) n Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: bdp22
Investigator(s): Andy Kranz	Secti	ion, Township, Range: §	S24 T107N S013W
Lanform(hillslope, terrace, etc): Depression			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.06196		Long: -92.33717	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent s	slopes		NWI classification: PUBFx
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation 🔪 , Soil , or Hydrology Significant	tly disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?	(If needed, ex	plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ N		le the Countried Ame	
Hydric Soil Present? Yes Yes N		Is the Sampled Area within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes _ ✓ N	10		
Remarks: (Explain alternative procedures here or in a separate re Seasonally flooded basin in depression within a crop field.	eport.)		
Seasonally hooded basin in depression within a crop held.			
			·
VEGETATION - Use scientific names of plants.			
The Objective (Diet size 200 ft (0.4 m) and inc)		Dominant Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius) 1		Species? Status	
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3			
4			Total Number of Dominant Species Across All Strata: 0 (B)
5.			Percent of Dominant Species That
		= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 =0
3			FACW species0 x1 =0
4			FAC species0 x1 =0
5			FACU species0 x1 =0
	0%	= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	28-ft square (1	-m²) quadrat)	Column Totals: $0 \times 1 = 0$ (B)
1.			Prevalence Index = B/A = NaN
2. 3.			
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation significantly disturbed due to tillage. Less than 1% Am Corn crop is absent to sparse in bottom of depression whereas it			which are greatly stunted compared with surroundings.

merjent

Depth	Color (moist)	04	Color (moist)	06	_Type ¹	Loc ²	Toyturo	Remarks
(inches)	Color (moist)		Color (moist)	<u></u> %	rype=		Texture	Remarks
0-2	10YR - 2/1	100	/				SCL	-
2-12	10YR - 2/1	95	10YR-4/4	5	C	M	SCL	-
								. .
								. .
								-
	-							
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	Sand Grai	ns. 2	Location: PL	 =Pore Lining, M=Matrix.
ydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
•	l (or Histel) (A1) und	defined	Sandy	Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	Redox (S	55)			Dark Surface (S7)
Black F	listi (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F12)
_ ′ ′	en Sulfide (A4)		Loamy	/ Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			/ Gleyed N				Other (Explain in Remarks)
	luck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and w
	ed Below Dark Surfa	ce (A11)		Dark Sur	` '			hydrology must be present, unless disturb problematic.
	Oark Surface (A12) Mucky Mineral (S1)			eu Dark S Depressi	Surface (F7)			F
	lucky Peat or Peat (S3)	Redux	Depressi	ulis (F6)			
_	Layer (if observed)							
	Layer (II observeu)							
Tyne:						Hvd	ric Soil Pre	sent? Yes ✓ No.
	 (inches): <u></u>					Hyd	ric Soil Pre	sent? Yes <u>✓</u> No
Depth emarks:						Hyd	ric Soil Pre	sent? Yes <u>✓</u> No
Depth emarks:	oGY					Hyd		
Depth emarks: DROLO /etland Hy	OGY rdrology Indicators:		I: check all that an	nh)		Hyd		Secondary Indicators (minimum of two required)
Depth emarks: 'DROLO /etland Hy rimary India	OGY rdrology Indicators: cators (minimum of		•		aves (B9)	Hyd		Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Depth emarks: DROLO Vetland Hy rimary Indi Surface	OGY rdrology Indicators:		Water-	stained lea	. ,	Hyd		Secondary Indicators (minimum of two required)
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Depth emarks: 'DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan len sulfide ed rhizosph ice of redu c iron reducuck surfac	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth emarks: DROLC Tetland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial	one required	Water-s Aquation True and Hydrog Oxidize Present Recent Thin m) Gauge	stained lea c fauna (B: quatic plan len sulfide ed rhizosph lee of redu ciron reduc uck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth emarks: DROLC Tetland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water-s Aquation True and Hydrog Oxidize Present Recent Thin m) Gauge	stained lea c fauna (B: quatic plan len sulfide ed rhizosph lee of redu ciron reduc uck surfac or well da	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ted County Sampling Date: 2024-06-03	
Applicant/Owner: Ranger Power			State		
Investigator(s): Andy Kranz	Sect	tion, Townsh	ــــــ ip, Range: ۶		
Lanform(hillslope, terrace, etc): Swale			Local reli	ief (concave, convex, none): concave	
Slope(%): 0-2 Lat: 44.06083	,	Long: -92.	.33683	Datum: WGS 84	
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop	oes	_		NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye		(If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes , No	
Are Vegetation , Soil , or Hydrology naturally prol				xplain any answers in Remarks.)	
	3.011.00.01	(, moodod, ox	and any anomore in recommend,	
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	is, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes _ Yes _ No _					
Hydric Soil Present? Yes No _			ampled Area Wetland?	a Yes <u>✓</u> No	
Wetland Hydrology Present? Yes _ ✓ No					
Remarks: (Explain alternative procedures here or in a separate repo Wet meadow in a swale within a crop field. VEGETATION - Use scientific names of plants.					
		Dominant		Dominance Test Worksheet	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status		
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A	4)
3				Total Number of Dominant Species	•
4.				Across All Strata: 2 (B	3)
5.				Percent of Dominant Species That	
	0%	= Total Cov	ver	Are OBL, FACW, or FAC: 100% (A	√ B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2				OBL species 0 x1 = 0	
3				FACW species 65 x1 = 130	
4				FAC species 40 x1 = 120	
5				FACU species 10 x1 = 40	
	0%	= Total Cov		UPL species 0 x1 = 0	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft	. ,	, ,	•	'	(B)
Phalaris arundinacea, Reed Canary Grass	65%	yes	FACW	Prevalence Index = B/A = 2.522	(D)
2. Poa pratensis, Kentucky Blue Grass	40%	yes	FAC		
Taraxacum officinale, Common Dandelion Asstrum minus Legger Purrdeck	<u>5%</u> 5%	no	FACU	Hydrophytic Vegetation Indicators:	
4. Arctium minus, Lesser Burrdock			FACU	1 - Rapid Test for Hydrophytic Vegetation	
5 6.				_ ✓ 2 - Dominance Test is > 50%	
7				3 - Prevalence Index is <= 3.0 ¹	
8.				4 - Morphological Adaptations ¹ (Provide	
9.				supporting data in Remarks or on a separate sheet)	
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Expla	ain)
	115%	= Total Cov	ver		-
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problema	
1				Hydrophytic	
	0%	= Total Cov	ver	Vegetation Present? Yes ✓ No	
Remarks: (Include photo numbers here or on a separate sheet.)					

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	R	emarks
0-20	10YR - 2/1	100	/				SiCL		
20-28	10YR - 2/1	95	2.5YR-3/6	5	С	M	SiC		
Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	 IS=Masked	d Sand Grai	ns. ² L	ocation: PL	=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problema	tic Hydric Soils ³ :
Histoso	l (or Histel) (A1) un	defined	Sandy	y Gleyed N	/latrix (S4)			Coast Prairie Redox	-
Histic E	pipedon (A2) undef	ined	Sandy	y Redox (S	S5)			Dark Surface (S7)	
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Mas	sses (F12)
	en Sulfide (A4)			-	lineral (F1)		•	Very Shallow Dark S	Surface (TF12)
	d Layers (A5)			y Gleyed N			,	Other (Explain in Re	marks)
	uck (A10)			eted Matrix				³ Indicators of hydrop	phytic vegetation and wetl
	d Below Dark Surfa	ce (A11)		x Dark Sur	. ,			hydrology must be problematic.	present, unless disturbed
	ark Surface (A12)				Surface (F7)			рговістиль.	
	Mucky Mineral (S1) ucky Peat or Peat (S3)	Redox	x Depressi	ons (F8)				
		-							
Actrictiva									
	Layer (if observed)	1:				Hydr	ic Soil Pres	sent?	Yes ✔ No
Type: Depth (emarks:	(inches): sence of hydric soils		sence of hydrophyt	tic vegetati	ion and hyd		ic Soil Pres	sent?	Yes <u>/</u> No _
Type: Depth (emarks: ssume pre:	inches): sence of hydric soils		sence of hydrophyl	tic vegetati	ion and hyd			sent?	Yes <u>/</u> No _
Type: Depth (emarks: ssume pre:	inches): sence of hydric soils	s due to pre:	sence of hydrophyl	tic vegetati	ion and hyd		ators.	sent?	
Type: Depth (Demarks: ssume pres	(inches):	s due to pre:			ion and hyd		ators.		mum of two required)
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Type: Depth (Petland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel	inches): sence of hydric soils oGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ter Present? Present? Present? present? present?	imagery (B7 e surface (B	d; check all that ap Water- Aquation True a Hydrog Oxidize Preser Recent Thin m 7) Gauge 18) Other of the ses No No No No No No No No No No	oply) -stained lea c fauna (B aquatic plar gen sulfide ed rhizospi nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	aves (B9) 13) 13) 15 odor (C1) 16 heres along 17 uced iron (C 18 ction in tilled 18 ce (C7) 18 ata (D9) 19 Remarks) 19 hes): 19 hes):	living roots 4) d soils (C6)	ators. Signature (C3) and Hydrole	econdary Indicators (mini Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) lants (D1) D2)
Type: Depth (emarks: ssume pre: TDROLO Tetland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel ield Obser urface Water Table aturation P ncludes ca	inches): sence of hydric soils oGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ter Present? Present? Present? present? present?	imagery (B7 e surface (B	d; check all that ap Water- Aquation True a Hydrog Oxidize Preser Recent Thin m 7) Gauge 18) Other of the ses No No No No No No No No No No	oply) -stained lea c fauna (B aquatic plar gen sulfide ed rhizospi nce of redu t iron redu nuck surfac e or well da (Explain in Depth (incl Depth (incl	aves (B9) 13) 13) 15 odor (C1) 16 heres along 17 uced iron (C 18 ction in tilled 18 ce (C7) 18 ata (D9) 19 Remarks) 19 hes): 19 hes):	living roots 4) d soils (C6)	ators. Signature (C3) and Hydrole	econdary Indicators (mini Surface soil cracks (B Drainage patterns (B1 Dry-season water tabl Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) lants (D1) D2)

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			State	: MN Sampling Point: bdp24
Investigator(s): Andy Kranz	Sect	ion, Townsh	ip, Range: <u>S</u>	24 T107N S013W
Lanform(hillslope, terrace, etc): Swale			Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.06076		Long: -92.	33668	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop	oes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			olain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	ampled Area	
Hydric Soil Present? Yes No. Wetland Hydrology Present? Yes No.			Wetland?	Yes No _ 🗸
Remarks: (Explain alternative procedures here or in a separate repo				
Upland portion of a swale in which wetland occurs in lower areas. VEGETATION - Use scientific names of plants.				
		Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1.		Species:	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3.				Total Number of Dominant Species Across All Strata: 3 (B)
5.				, 、 ,
	0%	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. 2.				Total % Cover of: Multiply by:
3				OBL species0 x1 =0
4.				FACW species <u>0</u> x1 = <u>0</u>
5.				FAC species <u>30</u> x1 = <u>90</u>
	0%	= Total Cov	ver	FACU species 90 x1 = 360
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	ıt)	UPL species0 x1 =0
Schedonorus arundinaceus, Tall False Rye Grass	50%	yes	FACU	Column Totals: <u>120</u> x1 = <u>450</u> (B)
2. <u>Taraxacum officinale</u> , Common Dandelion	35%	yes	FACU	Prevalence Index = B/A = 3.750
3. Poa pratensis, Kentucky Blue Grass	30%	yes	FAC	Hydrophytic Vegetation Indicators:
4. Phleum pratense, Common Timothy	5%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9				sheet)
10.		= Total Cov	/er	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Cov	ver	Vegetation Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Bromus inermis becomes dominant to he south.				

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-1	10YR - 2/1	100	/				SiL		
1-12	10YR - 2/2	100	/				SiL		
	10111 2/2	100						-	
							-	-	
							-	-	
							-	_	
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grair	ıs. 2	Location: PL	=Pore Lining, M=Matrix.	
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³	3 _:
Histoso	l (or Histel) (A1) und	lefined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	pipedon (A2) undef	ined		y Redox (S	•			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)	
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
	luck (A10) ed Below Dark Surfa	co (Δ11)		ted Matrix x Dark Sur				³ Indicators of hydrophytic vegetation a hydrology must be present, unless d	and wetlan
	ark Surface (A12)	e (AII)			Surface (F7)			problematic.	iisturbeu o
	Mucky Mineral (S1)			x Depressi					
_ ′	lucky Peat or Peat (S3)		.,	(-/				
Restrictive	Layer (if observed)	:							
Type:						Hvd	lric Soil Pre	sent? Yes	No 🗸
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
	(inches):								
Depth (Remarks:									
Depth (Remarks:	o G Y								
Depth (Remarks: /DROLO Vetland Hy	OGY rdrology Indicators:		l: check all that an	nlv			<u>s</u>	econdary Indicators (minimum of two requi	
Depth (Remarks: /DROLO Vetland Hy Primary Indi	o G Y				aves (B9)		<u>s</u>	econdary Indicators (minimum of two requi Surface soil cracks (B6)	
Depth (Remarks: /DROLO Vetland Hy Primary Indi Surface	GY drology Indicators: cators (minimum of		Water-	pply) stained lea c fauna (B	` '		<u></u>	econdary Indicators (minimum of two requi	
Depth (Remarks: /DROLO Vetland Hy Primary Indi Surface	drology Indicators: cators (minimum of e water (A1) ater table (A2)		Water- Aquatio	stained lea	13)		S	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10)	
Depth (Depth	drology Indicators: cators (minimum of exators (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a	stained lea c fauna (B	13) nts (B14)			econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	ired)
Depth (Depth	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root		econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	ired)
Primary Indi Surface High wa Saturati Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3)		Water- Aquatio True a Hydrog Oxidizo	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C4)	living root	======================================	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	exactors (minimum of exactors		Water- Aquation True a Hydrog Oxidizo Preser Recen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living root	======================================	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1)	ired)
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Pepth of Pep	drology Indicators: cators (minimum of exwater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) lat or crust (B4) posits (B5) ion visible on aerial	one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	13) nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	living root	======================================	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel	edrology Indicators: cators (minimum of exwater (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living root	======================================	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	external deposits (B2) posits (B3) ion visible on aerial by vegetated concavervations:	one required imagery (B7 e surface (B8	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C4 ction in tilled be (C7) ata (D9) Remarks)	living root	======================================	econdary Indicators (minimum of two requi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9 Stunted or stressed plants (D1) Geomorphic position (D2)	ired)
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Depth of Dep	drology Indicators: cators (minimum of extra table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained lead of the control of the c	13) odor (C1) heres along uced iron (C4) ction in tillecte (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	ss (C3)	econdary Indicators (minimum of two requitors Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)
Depth of Dep	drology Indicators: cators (minimum of extra table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained lead of the control of the c	13) odor (C1) heres along uced iron (C4) ction in tillecte (C7) ata (D9) Remarks) hes): hes):	living root 1) soils (C6	ss (C3)	econdary Indicators (minimum of two requitors Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	ired)

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmington/Olm</u>	sted County Sampling Date: 20	24-06-03
Applicant/Owner: Ranger Power		Sta	tte: MN Sampling Point: bd	p25
Investigator(s): Andy Kranz	Sect	tion, Township, Range:	S24 T107N S013W	
Lanform(hillslope, terrace, etc): Swale		Local re	elief (concave, convex, none): concave	
Slope(%): 3-7 Lat: 44.05994		Long: -92.33602	Datum: WGS	S 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent sl			NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸	No (If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantl	y disturbed?	Are "Norma	Circumstances" present? Yes , No	
Are Vegetation , Soil , or Hydrology naturally p	roblematic?	(If needed,	explain any answers in Remarks.)	
				
SUMMARY OF FINDINGS - Attach site map showi	ng sampl	ing point locatio	ns, transects, important feature	s, etc.
Hydrophytic Vegetation Present? Yes No		la dia Gamalad A		
Hydric Soil Present? Yes No		Is the Sampled Ar within a Wetland?		No <u></u> ✓
Wetland Hydrology Present? Yes No	o <u>/</u>			
VEGETATION - Use scientific names of plants.				
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet	
1.			Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2			Total Number of Dominant Species	
5			Across All Strata: Percent of Dominant Species That	<u>1</u> (B)
	0%	= Total Cover	Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1			Prevalence Index worksheet:	
2.			Total % Cover of: Mult	
3.			OBL species0 x1 =	
4			FACW species0 x1 = _	
5			FAC species0 x1 =	
	0%	= Total Cover	FACU species 105 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	. ,		UPL species 0 x1 =	
Schedonorus arundinaceus, Tall False Rye Grass	80%	yes FACU	Column Totals: $105 \times 1 = 105$ Prevalence Index = B/A =	420 (B)
2. <u>Cirsium arvense</u> , Canadian Thistle		no FACU		4.000
3. <u>Taraxacum officinale</u> , Common Dandelion			Hydrophytic Vegetation Indicators:	
4			1 - Rapid Test for Hydrophytic Veg	etation
·			2 - Dominance Test is > 50%	
6			3 - Prevalence Index is <= 3.0 ¹	
8.			4 - Morphological Adaptations ¹ (Pr	
9.			supporting data in Remarks or on sheet)	a separate
10			PROBLEMATIC Hydrophytic Veget	ation ¹ (Evolain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	105%	= Total Cover	¹ Indicators of hydric soil and wetlar must be present, unless disturbed	nd hydrology
1.				o problematic.
2	0%	= Total Cover	Hydrophytic Vegetation Present? Yes	No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches) Color (moist) %	Color (moist) % Type ¹	Loc ² Texture	Remarks
Type: C=Concentration, D=Depletion, RN	=Reduced Matrix, MS=Masked Sand Grains.	² Location: PI	L=Pore Lining, M=Matrix.
ydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
estrictive Layer (if observed):			
Type: Depth (inches): emarks:	ophytic vegetation and lack of hydrology indica	Hydric Soil Pre	Yes No
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro	ophytic vegetation and lack of hydrology indica	ators.	
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators:		ators.	Secondary Indicators (minimum of two required)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requiSurface water (A1)	red; check all that apply) Water-stained leaves (B9)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro DROLOGY retland Hydrology Indicators: rimary Indicators (minimum of one requi Surface water (A1) High water table (A2)	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro TDROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of one requi Surface water (A1) High water table (A2) Saturation (A3)	red; check all that apply) Water-stained leaves (B9)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requi Surface water (A1) High water table (A2)	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requi Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro TDROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requi Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requiSurface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi Presence of reduced iron (C4) Recent iron reduction in tilled so	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Type: Depth (inches): emarks: oil sample not taken due to lack of hydrolic sample not sample	red; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi Presence of reduced iron (C4) Recent iron reduction in tilled so Thin muck surface (C7) B7) Gauge or well data (D9) (B8) Other (Explain in Remarks)	ators.	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Type: Depth (inches): emarks: oil sample not taken due to lack of hydro //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one requi) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (Sparsely vegetated concave surface ield Observations: urface Water Present? //ater Table Present? aturation Present? includes capillary fringe)	wed; check all that apply) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi Presence of reduced iron (C4) Recent iron reduction in tilled so Thin muck surface (C7) Gauge or well data (D9) (B8) Other (Explain in Remarks) Yes No Depth (inches): Yes No Depth (inches):	ators. Sing roots (C3) Joils (C6) Wetland Hydro	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Project/Site: Lemon Hill	City/Cc	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power	City/Co		e: Sampling Point: bdp26
Investigator(s): Andy Kranz	Sect		
			ef (concave, convex, none): none
			Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y		Yes , No	
Are Vegetation , , Soil , or Hydrology Significantly			
Are Vegetation , Soil , or Hydrology naturally prol			Circumstances" present? Yes No Eplain any answers in Remarks.)
or rigarding from	oicinado.	(ii fiecaca, ex	plan any anowers in remains.
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No			
Hydric Soil Present? Yes No	✓	Is the Sampled Area within a Wetland?	a Yes No <u></u> ✓
Wetland Hydrology Present? Yes Yes No		Within a Wolland	165 110
Remarks: (Explain alternative procedures here or in a separate repo Moist upland crop field. Slope levels out — where hydrophytic veget		s — them continues to s	slope again, with a southeastern aspect.
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species Across All Strata: 1 (B)
4			
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
3. 4.			FACW species 40 x1 = 80
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
1. Cyperus esculentus, Chufa	40%	yes FACW	Column Totals: $\underline{\qquad}$ 40 x1 = $\underline{\qquad}$ 80 (B)
2			Prevalence Index = B/A = 2.000
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			\checkmark 3 - Prevalence Index is $<=3.0^1$
7			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10.			
	40%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Corn crop appears healthy.			

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR - 2/1	100	/				SiCL	
6-38	10YR - 2/1	100	/				SiC	
38-46	2.5Y - 4/4	100	/				SiC	
			· · · · · · · · · · · · · · · · · · ·					
							-	
								-
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	IS=Masked	d Sand Grain	s. ²	Location: PL	=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed N				Coast Prairie Redox (A16)
	pipedon (A2) undefi	ined		y Redox (S	-			Dark Surface (S7)
	listi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
_ , ,	en Sulfide (A4) d Layers (A5)			y Mucky IV y Gleyed N	lineral (F1)			Very Shallow Dark Surface (TF12)
	uck (A10)			eted Matrix				Other (Explain in Remarks)
	d Below Dark Surfac	ce (A11)		x Dark Sur	-			³ Indicators of hydrophytic vegetation and we hydrology must be present, unless disturbe
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)			x Depressi				
5 cm M	ucky Peat or Peat (S3)		•				
estrictive	Layer (if observed)	:						
Type:	<u></u>					_ Hyd	Iric Soil Pre	sent? Yes No _
Donth	<i>c</i>							
•	(inches): <u></u>							
emarks:								
Remarks:	GY						S	decondary Indicators (minimum of two required)
emarks: 'DROLO Vetland Hy			l; check all that ap	ply)		_	<u> </u>	secondary Indicators (minimum of two required)Surface soil cracks (B6)
rimary Indi	GY drology Indicators:			oply) -stained lea	aves (B9)			•
/DROLO /etland Hy rimary Indi Surface	GY drology Indicators: cators (minimum of o		Water-				<u>s</u> 	Surface soil cracks (B6)
Procession of the control of the con	drology Indicators: cators (minimum of elements) water (A1) ater table (A2) ion (A3)		Water- Aquati True a	-stained lea c fauna (B aquatic plar	13) nts (B14)	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
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POROLO Petland Hy rimary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water- Aquati True a Hydroţ Oxidiz	stained lea c fauna (B iquatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along I	-	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
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/DROLO /etland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7 e surface (B8 Ye:	Water- Aquatir True a Hydrog Oxidizr Preser Recen Thin m Gauge 8) Other	estained lead of fauna (Budatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along I uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) ✓ FAC-neutral test (D5)
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County MN T107N S013W Concave, convex, NWI classific (If no, explain cumstances" presentin any answers in transects, im Dominance Test V Number of Domina Are OBL, FACW, of Percent of Domina Are OBL, FACW, of	Sampling Po	e No atures, et Yes attures Atture	c.
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Dominance Test \ Number of Domina Are OBL, FACW, of Total Number of Dr Across All Strata: Percent of Domina	Vorksheet ant Species Tha	Yes	No 🗸
Number of Domina Are OBL, FACW, of Fotal Number of Dacross All Strata:	ant Species Tha or FAC:	at	
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Number of Domina Are OBL, FACW, of Fotal Number of Dacross All Strata:	ant Species Tha or FAC:	-	1 (4)
Number of Domina Are OBL, FACW, of Fotal Number of Dacross All Strata:	ant Species Tha or FAC:	-	1 (4)
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Total Number of De Across All Strata: Percent of Domina		es	
Percent of Domina			(^^)
	nt Species The		2 (B)
			50% (A/B)
Prevalence Index	worksheet:		
Total % Cov	er of:	Multiply by	<u>/:</u>
OBL species	<u>0</u> x	(1 =	0
FACW species	<u>0</u> x		0
FAC species			186
·		(1 =	140
JPL species	-	(1 =	0
Column Totals:		(1 =	326 (B)
Prevale	nce Index = B/	/A = 3.36	1
Hydrophytic Vege	tation Indicate	ors:	
1 - Rapid Tes	t for Hydrophyt	tic Vegetation	1
		•	
3 - Prevalenc	e Index is <= 3	3.0 ¹	
supporting da	ta in Remarks	or on a sepa	arate
		1	
PROBLEMAT	IC Hydrophytic	: Vegetation ⁺	(Explain)
		Yes	No
	Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da sheet) PROBLEMAT Indicators of	Hydrophytic Vegetation Indicat 1 - Rapid Test for Hydrophy 2 - Dominance Test is > 509 3 - Prevalence Index is <= 3 4 - Morphological Adaptation supporting data in Remarks sheet) PROBLEMATIC Hydrophytic 1Indicators of hydric soil and must be present, unless dis	PROBLEMATIC Hydrophytic Vegetation ¹ ¹ Indicators of hydric soil and wetland hyd must be present, unless disturbed or pro-

Depth	Matrix	0.4	0 1 (' ' ' ' '	0.4	_ 1	. 2	- .	_	
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	rks
0-32	10YR - 2/1	100	/				SiCL	· 	
32-40	10YR - 2/1	30	2.5Y-3/4	2	<u>C</u>	M	SiC		
	10YR - 3/4	68	/						
								· -	
Type: C=C	oncentration, D=Dep	letion, RM=F	 Reduced Matrix, M	S=Masked	Sand Grai	ns. 2	Location: PL	 =Pore Lining, M=Matrix.	
lydric Soil	Indicators:		-					Indicators for Problematic F	lvdric Soils ³ :
Histoso	l (or Histel) (A1) un	defined	Sandy	Gleyed M	Matrix (S4)			Coast Prairie Redox (A16	-
Histic E	pipedon (A2) under	ined	Sandy	/ Redox (S	65)			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (Iron-Manganese Masses	(F12)
_ ′ °	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface	
	d Layers (A5) luck (A10)			y Gleyed N ted Matrix				Other (Explain in Remark	
	ed Below Dark Surfa	ce (A11)		k Dark Sur				³ Indicators of hydrophytic hydrology must be pres	
	ark Surface (A12)	,			Surface (F7)			problematic.	one, amoso aistansoa
Sandy	Mucky Mineral (S1)		Redox	x Depressi	ons (F8)				
5 cm M	lucky Peat or Peat (S3)							
estrictive	Layer (if observed)):							
Type:	<u></u>):				Hyd	ric Soil Pre	sent?	Yes No•
Type: Depth	Layer (if observed) (inches):):				Hyd	ric Soil Pre	sent?	Yes No•
Type: Depth	<u></u>):				Hyd	ric Soil Pre	sent?	Yes No _•
Type: Depth Remarks:	(inches):					Hyd			
Type: Depth Remarks: /DROLO Vetland Hy	(inches): OGY drology Indicators	:	chack all that an	nh/)		Hyd		econdary Indicators (minimum	
Type: Depth Remarks: /DROLO Vetland Hy Primary Indi	inches): OGY drology Indicators cators (minimum of	:		. ,,	aves (B9)	Hyd		econdary Indicators (minimum Surface soil cracks (B6)	
Type: Depth Remarks: PROLO Vetland Hy rimary Indi Surface	(inches): OGY drology Indicators	:	Water-	ply) stained lea c fauna (B:	` '	Hyd		econdary Indicators (minimum	n of two required)
Type: Depth Temarks: TOROLO Tetland Hy Trimary Indi Surface High wa	GGY drology Indicators cators (minimum of	:	Water-	stained lea	13)	Hyd		econdary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10)	n of two required)
Type: Depth Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat	oGY drology Indicators cators (minimum of e water (A1) ater table (A2)	:	Water-: Aquatio True ao Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)		<u>S</u>	econdary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Cacrayfish burrows (C8) Saturation visible on aerial	o of two required) 2) imagery (C9)
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Type: Depth Depth Demarks: POROLO Petland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	inches): OGY Odrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3)	: one required	Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	13) hts (B14) c odor (C1) heres along uced iron (C ction in tilled	living root	S (C3)	econdary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C: Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	o of two required) 2) imagery (C9)
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Type: Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	inches): OGY OGY Odrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concavi	: one required imagery (B7 e surface (B8	Water-: Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc ouck surfac or well da (Explain in	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	living root	S (C3)	econdary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C: Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	o of two required) 2) imagery (C9)
Type: Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	inches): OGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity vations: ter Present? Present?	: one required imagery (B7 e surface (B8 Ye:	Water-s	stained lead control factorial facto	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	econdary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C: Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	o of two required) 2) imagery (C9)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			e: MN Sampling Point: bdp28
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05814		Long: -92.33763	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent sl	opes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantl	y disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pr	roblematic?		kplain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showi	ng sampl	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		to the Committed Ame	_
Hydric Soil Present? Yes No		Is the Sampled Are within a Wetland?	a Yes No <u>✓</u> _
Wetland Hydrology Present? Yes <u>✓</u> No	<u> </u>		
Upland meadow in a swale within a crop field. VEGETATION - Use scientific names of plants.			
·		Dominant Indicator	Barriera Fast Warda barr
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3	_		Total Number of Dominant Species Across All Strata: 1 (B)
4			
J		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species0 x1 =0
3. 4.			FACW species 10 x1 = 20
5.			FAC species <u>0</u> x1 = <u>0</u>
	0%	= Total Cover	FACU species 100 x1 = 400
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	8-ft square (1	L-m²) quadrat)	UPL species0 x1 =0
Elymus repens, Creeping Wild Rye	100%	yes FACU	Column Totals: $_{}$ 110 x1 = $_{}$ 420 (B)
2. Phalaris arundinacea, Reed Canary Grass	10%	no FACW	Prevalence Index = B/A = 3.818
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6	-		3 - Prevalence Index is $<=3.0^1$
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
			sheet)
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2.	0%	= Total Cover	Vegetation Present? Yes No _ Vegetation
Domarke: (Include phote numbers here or on a constate sheet)			<u> </u>
Remarks: (Include photo numbers here or on a separate sheet.)			

Profile Desc	cription: (Describe Matrix	to the dept		iment the		confirm	n the absenc	e of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
0-20	10YR - 2/1	100	/		Туре		CL	
20-38	10YR - 2/1	100	, /					Occasional depletions less than 1%
38-46	10YR - 4/2	100	/					
30-40	1011(- 4/2	100					-	-
			_					
¹ Type: C=Co	ncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Maske	d Sand Grair	ıs.	² Location: PL	=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol	(or Histel) (A1) und	lefined	Sand	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef i	ined		/ Redox (S	-			Dark Surface (S7)
	isti (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4) d Layers (A5)				Mineral (F1) Matrix (F2)			Very Shallow Dark Surface (TF12)
	uck (A10)			ted Matrix				Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland
Deplete	d Below Dark Surfac	ce (A11)	Redo	x Dark Su	rface (F6)			hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	23)	Redo	x Depress	ions (F8)			
	ucky Peat or Peat (
Type:	Layer (if observed)	:				ш	dric Soil Pre	sent? Yes No _ 🗸
	inches):					_ '''	unc 3011 Fie.	163 NO
Remarks:						-		
HYDROLO	GY							
-	drology Indicators:						<u>s</u>	econdary Indicators (minimum of two required)
	cators (minimum of o	one required			01/00 (DO)			Surface soil cracks (B6)
	water (A1) iter table (A2)			stained le c fauna (E			_	Drainage patterns (B10) Dry-season water table (C2)
Saturati			 ·	quatic pla	,		_	Crayfish burrows (C8)
Water n	narks (B1)		Hydro	gen sulfide	e odor (C1)			Saturation visible on aerial imagery (C9)
	nt deposits (B2)			•	heres along	-		Stunted or stressed plants (D1)
	oosits (B3)				uced iron (C4	-	_	Geomorphic position (D2)
	at or crust (B4) posits (B5)		_	uck surfa	ıction in tilled ce (C7)	SUIS (C	_	FAC-neutral test (D5)
l —	on visible on aerial	imagery (B7		or well da				
Sparsel	y vegetated concave	surface (B	8) Other	(Explain ir	n Remarks)			
Field Obser	vations:							
Surface Wat	er Present?		s No			_		
Water Table			s No			We	tland Hydrol	ogy Present? Yes _ V No
Saturation P (includes car		Ye	s No	Depth (inc	:nes): <u></u>	-		
	corded Data (stream	n gauge, mo	onitorina well. aeria	l photos. i	previous insp	ections).	if available:	
	`	3 3 7	o ,		•	,,		
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			State	
Investigator(s): Andy Kranz	Sect	tion, Townsh	ip, Range: S	
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05759	,	Long: -92.	.3382	Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional		_		NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y		o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro				cplain any answers in Remarks.)
——————————————————————————————————————	bicinatic:	(1	i riccaca, cx	plant any answers in remarks.
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes _ ✓ No			ampled Area Wetland?	a Yes ✔ No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate reportersh wet meadow along 70th Avenue NE. VEGETATION - Use scientific names of plants.	···.)			
The Chatter (Classic local for (0.4 m) and for		Dominant		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status	
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4.				Across All Strata: 2 (B)
5.				Percent of Dominant Species That
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 x1 = 0
3				FACW species 35 x1 = 70
4				FAC species
5				FACU species 12 x1 = 48
	0%	= Total Co		UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	. ,	, .	•	Column Totals: 92 x1 = 253 (B)
Poa pratensis, Kentucky Blue Grass Phylogia army lives and Pour Course Course	40%	yes	FAC	Prevalence Index = B/A = $\frac{2.750}{2.00}$
2. Phalaris arundinacea, Reed Canary Grass	30%	yes	FACW	Trevalence index = D/A =
3. Trifolium pratense, Red Clover	F0/	no	FACU	Hydrophytic Vegetation Indicators:
4. Salix interior, Sandbar Willow		no	FACW	1 - Rapid Test for Hydrophytic Vegetation
Juncus tenuis, Lesser Poverty Rush Taraxacum officinale, Common Dandelion	<u>5%</u> 2%	no	FAC	✓ 2 - Dominance Test is > 50%
		<u>no</u>	FACU	3 - Prevalence Index is <= 3.0 ¹
7. 8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	92%	= Total Co	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2	0%	= Total Co		Vegetation Present? Yes ✓ No
	<u>U70</u>	- IUIAI CU	vei	165 <u>1</u> 110
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	3
0-38	10YR - 2/1	100	/				С		
38-46	10YR - 5/1	90	10YR-4/6	10		М	С		
								-	
Гуре: С=С	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grai	ns. 2	Location: PL	=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problematic Hyd	lric Soils ³ :
	l (or Histel) (A1) und			-	//atrix (S4)			Coast Prairie Redox (A16)	
	pipedon (A2) undef	ined		/ Redox (S	•			Dark Surface (S7)	
	isti (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F	12)
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface	(TF12)
	d Layers (A5)				Matrix (F2)			Other (Explain in Remarks)	
	uck (A10)		 ·	ted Matrix	` '			³ Indicators of hydrophytic v	egetation and wetla
	d Below Dark Surfa	ce (A11)		C Dark Sur				hydrology must be present problematic.	t, unless disturbed o
	ark Surface (A12)		 ·		Surface (F7)			problematic.	
	Mucky Mineral (S1) ucky Peat or Peat (23)	Redox	C Depression of the contract of the contrac	ons (F8)				
	Layer (if observed)								
Type:		•				Hyd	Iric Soil Pre	sent?	Yes <u>✓</u> No
, ,									
Depth emarks:	(inches): <u></u>								
•									
emarks: 'DROLO 'etland Hy	GY drology Indicators:					_	<u>s</u>	econdary Indicators (minimum of	f two required)
emarks: 'DROLO 'etland Hy rimary Indi	GY drology Indicators: cators (minimum of					_	<u>s</u>	Surface soil cracks (B6)	f two required)
emarks: 'DROLO 'etland Hy rimary Indi Surface	GY drology Indicators: cators (minimum of water (A1)		Water-	stained lea			<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10)	f two required)
emarks: DROLO Jetland Hy rimary Indi Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)		<u>s</u> —— -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	f two required)
emarks: DROLO /etland Hy rimary Indi Surface High wa Saturati	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
PROLO Petland Hy rimary Indi Surface High wa Saturati Water r	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plan gen sulfide	13) nts (B14) odor (C1)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im	nagery (C9)
Primary Indi Surface High wa Saturati Water r Sedime	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D	nagery (C9)
Primary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquation True ac Hydrog Oxidize Presen	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu	13) hts (B14) hodor (C1) heres along uced iron (C	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
Properties of the control of the con	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D	nagery (C9)
rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one require	Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nice of redu t iron redu nuck surfac	13) hts (B14) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
POROLO Petland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	13) hts (B14) heres along uced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
POROLO Petland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required imagery (B. e surface (B	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B) e surface (B	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge (8) Other (stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) hata (D9) Remarks) hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	nagery (C9)
emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron del Inundat Sparsel ield Obser urface Wat vater Table aturation P	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B. e surface (B Ye Ye	Water- Aquation True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained leact fauna (B quatic plan gen sulfide gen sulfide gen fredut iron redunck surfact or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)
marks: TDROLO Tetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Tield Obser urface Wate Table aturation P ncludes ca	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B e surface (B Ye Ye	Water- Aquation	stained lead of fauna (Bagen sulfide ed rhizospance of redute tiron reduced factor well date (Explain in Depth (incompeth	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled the (C7) ata (D9) n Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9)
marks: TDROLO Tetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Tield Obser urface Wate Table aturation P ncludes ca	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B e surface (B Ye Ye	Water- Aquation	stained lead of fauna (Bagen sulfide ed rhizospance of redute tiron reduced factor well date (Explain in Depth (incompeth	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled the (C7) ata (D9) n Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9) 1)
Emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vetled Obser urface Wat Vater Table aturation P ncludes ca	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? pillary fringe)	imagery (B e surface (B Ye Ye	Water- Aquation	stained lead of fauna (Bagen sulfide ed rhizospance of redute tiron reduced factor well date (Explain in Depth (incompeth	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled the (C7) ata (D9) n Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	nagery (C9) 1)

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmir</u>	ngton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		-	State	: MN Sampling Point: bdp30
Investigator(s): Andy Kranz	Sect	ion, Townshi	ip, Range: S	24 T107N S013W
Lanform(hillslope, terrace, etc): Depression			Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.0564		Long: -92.	33861	Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es 🔎 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly Are Vegetation, Soil, or Hydrology naturally prol				Circumstances" present? Yes No
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No		T		
Hydric Soil Present? Yes V			mpled Area	
Wetland Hydrology Present? Yes No		within a	Wetland?	Yes <u>✓</u> No
Shrub-carr in a basin. Part of a complex of wetland communities. VEGETATION - Use scientific names of plants.				
Troe Stratum (Diet cize:20 ft (0.1 m) radius)		Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		<u>Species</u> :	Status	Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species Across All Strata:2 (B)
5.				Percent of Dominant Species That
	0%	= Total Cov	/er	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	750/		E4 0)4/	Prevalence Index worksheet:
Salix interior, Sandbar Willow 2.	75%	yes	FACW	Total % Cover of: Multiply by:
3.				OBL species <u>0</u> x1 = <u>0</u>
4.				FACW species 150
5.				FAC species $0 \times 1 = 0$
	75%	= Total Cov	/er	FACU species $0 \text{ x1} = 0$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat	t)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	75%	yes	FACW	Column Totals: $\underline{150}$ x1 = $\underline{300}$ (B)
2				Prevalence Index = B/A = 2.000
3				Hydrophytic Vegetation Indicators:
4				✓ 1 - Rapid Test for Hydrophytic Vegetation
5			-	✓ 2 - Dominance Test is > 50%
6.				✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				
		= Total Cov	/er	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				Hydrophytic Vegetation
	0%	= Total Cov	/er	Present? Yes / No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR - 2/1	100	/				CL		
8-16	10YR - 2/1	95	5YR-3/4	5	С	М	CL		
					·			-	
					·			•	
						(<u> </u>			
					·			-	
Туре: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grain	ns. 2	Location: Pl	=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :	
Histoso	l (or Histel) (A1) und	defined	Sandy	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)	=
Histic E	pipedon (A2) undef	ined	Sandy	/ Redox (S	65)			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)	
_ ′ °	en Sulfide (A4)				/lineral (F1)			Very Shallow Dark Surface (TF12)	
	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)	
	uck (A10)	00 (111)		ted Matrix				³ Indicators of hydrophytic vegetation a	nd wetla
	d Below Dark Surfa ark Surface (A12)	se (AII)		k Dark Sur	nace (F6) Surface (F7)			hydrology must be present, unless di problematic.	sturbea
	Mucky Mineral (S1)			x Depressi				·	
_ ′	ucky Peat or Peat (S3)	11646/	СВоргоссі	10110 (1 0)				
	Layer (if observed)	-							
Type:		-				Hvd	Iric Soil Pre	sent? Yes 🗸	Nο
Depth	(inches): <u></u>								
Depth emarks:									
Depth emarks:							S	Secondary Indicators (minimum of two requir	
Depth emarks:	GY		J; check all that ap	ply)			<u> </u>	Secondary Indicators (minimum of two requir Surface soil cracks (B6)	
Depth of the property of the p	drology Indicators: cators (minimum of			ply) stained lea	aves (B9)		<u>§</u>		
Depth emarks: 'DROLO /etland Hy rimary Indi Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B	13)		-	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u>S</u> -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)		 - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	red)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	nts (B14) odor (C1) heres along	living root	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	red)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquatio True a Hydrog Oxidize Preser	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu	nts (B14) e odor (C1) heres along uced iron (C	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquation True and Hydrogon Oxidize Present Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (Continuo in tilled	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	red)
Depth of Dep	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth of Dep	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m 7) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	nts (B14) e odor (C1) heres along uced iron (C cction in tilled ce (C7) ata (D9)	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m 7) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth emarks: Depth	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required imagery (B7 e surface (B	Water- Aquation True an Hydrog Oxidize Present Recent Thin m Gauge 18) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living root	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7 e surface (B	— Water- Aquation — True accepted a Hydrogon — Oxidizen — Presen — Recent — Thin m — Gauge — Other (— Resent — Thin m — Recent — Thin m — Recent — Thin m	stained lead of the control of the c	nts (B14) nodor (C1) heres along uced iron (Citorion in tilled ce (C7) nta (D9) n Remarks) hes):	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	red)
Depth emarks: Depth	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation True an Hydrog Oxidize Present Recent Thin m Gauge 18) Other (stained lead of the control of the c	nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) hesh: hesh:	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	red)
Depth of Dep	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation True accepted by the second of the second	stained lead of the control of the c	nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) hesh: hesh:	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	red)
Depth of Dep	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	nts (B14) nts (B14) nts (B14) nodor (C1) heres along uced iron (C uction in tilled to (C7) ata (D9) n Remarks) hes): hes):	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	nts (B14) nts (B14) nts (B14) nodor (C1) heres along uced iron (C uction in tilled to (C7) ata (D9) n Remarks) hes): hes):	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	red)
Depth of the property of the p	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? Present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	nts (B14) nts (B14) nts (B14) nodor (C1) heres along uced iron (C uction in tilled to (C7) ata (D9) n Remarks) hes): hes):	living root 4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	red)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County	Sampling Date: <u>2024-06-03</u>
Applicant/Owner: Ranger Power				Sampling Point: bdp31
Investigator(s): Andy Kranz				
Lanform(hillslope, terrace, etc): Depression				
Slope(%): 0-2 Lat: 44.0562		Long: -92.33774		Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional			NWI classific	cation: PSS1B
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 N	o (If no, expla	in in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" prese	ent? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?		xplain any answers ir	<u></u> _
			_	_
SUMMARY OF FINDINGS - Attach site map showing	ig sampli	ing point location	ıs, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		Is the Sampled Are	2	
Hydric Soil Present? Yes No Westernd Underland Present?		within a Wetland?	a	Yes <u> </u>
Wetland Hydrology Present? Yes ✓ No				
Remarks: (Explain alternative procedures here or in a separate representation of wetland communications). Part of a complex of wetland communication of wetland communications.				
The ansat of any in a sacinity at a composition for the analysis of the angle of th				
VEGETATION - Use scientific names of plants.				
	Absolute	Dominant Indicator		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet
Salix euxina, Crack Willow	70%	yes FAC	Number of Domina	
2. <u>Populus deltoides</u> , Eastern Cottonwood	5%	no FAC	Are OBL, FACW, (or FAC: <u>2</u> (A)
3			Total Number of D Across All Strata:	Dominant Species2 (B)
5.			Percent of Domina	
J		= Total Cover	Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index	worksheet:
1			Total % Cov	ver of: Multiply by:
2			OBL species	0 x1 = 0
3			FACW species	55 x1 = 110
4			FAC species	75 x1 = 225
5			FACU species	0 x1 = 0
	0%	= Total Cover	UPL species	0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28			Column Totals:	<u>130</u> x1 = <u>335</u> (E
Phalaris arundinacea, Reed Canary Grass Solidago gigantea, Late Goldenrod	<u>50%</u> 5%		Prevale	ence Index = B/A = 2.577
Solidago gigantea, Late Goldenrod 3.		no FACW	Hydrophytic Voge	etation Indicators:
4.				
5.			I — ·	st for Hydrophytic Vegetation
6.			<u>✓</u> 2 - Dominano	
7			·	ce Index is <= 3.0 ¹
8			4 - Morpholog	gical Adaptations ¹ (Provide ata in Remarks or on a separate
9			sheet)	
10			PROBLEMAT	TIC Hydrophytic Vegetation ¹ (Explain
	55%	= Total Cover	¹ Indicators of	hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be pre	esent, unless disturbed or problemation
1. 2.			Hydrophytic	
	0%	= Total Cover	Vegetation Present?	Yes <u> </u>
Domarke: (Include phote numbers here or on a conserve object)			1	
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR - 2/1	100	/				SiC		
6-12	10YR - 2/1	95	5Y-4/6	5	С	М	С		
						-			
					·				
								-	
					· ——			-	
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	d Sand Grai	ns. 2	Location: Pl		
ydric Soil	Indicators:							Indicators for Problematic Hydric S	Soils ³ :
Histoso	ol (or Histel) (A1) und	defined	Sandy	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	Epipedon (A2) undef	ined	Sandy	/ Redox (S	65)			Dark Surface (S7)	
Black F	Histi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)	
_ ′ °	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF1:	2)
	ed Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)	
	luck (A10)	(444)		ted Matrix				³ Indicators of hydrophytic vegeta	tion and wetla
	ed Below Dark Surfa	ce (A11)	_	x Dark Sur				hydrology must be present, unle problematic.	ess disturbed
	Oark Surface (A12) Mucky Mineral (S1)				Surface (F7)			prosiemate.	
_ ′	Mucky Mineral (S1) lucky Peat or Peat (23)	Redox	x Depressi	ions (F8)				
	Layer (if observed)	-							
Type:		•				Hyd	lric Soil Pre	sent?	s <u> </u>
								Jene.	
Depth	(inches):								
Depth emarks:									
Depth emarks:							S	Secondary Indicators (minimum of two	
Depth emarks: 'DROLO 'etland Hy	OGY		; check all that ap	ply)			9	Secondary Indicators (minimum of two Surface soil cracks (B6)	
Depth emarks: 'DROLO /etland Hy rimary Indi Surface	OGY vdrology Indicators: icators (minimum of e water (A1)			ply) stained lea	aves (B9)		<u>§</u>		
Depth emarks: 'DROLO /etland Hy rimary Indi Surface High wa	ordrology Indicators: icators (minimum of e water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)		-	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth Demarks: DROLO Detland Hy rimary Indi Surface High wa Saturat	oddy rdrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao	stained lea c fauna (B quatic plar	13) nts (B14)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	required)
Depth Depth Demarks: Dema	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)		 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager	required)
Depth Temarks: TOROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	nts (B14) odor (C1) heres along	living root	- - - - 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1)	required)
Depth Temarks: TDROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) e odor (C1) heres along uced iron (C	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	required)
Depth Temarks: TDROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (C	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1)	required)
Depth emarks: //DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lead control factorial	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) e odor (C1) heres along uced iron (C cction in tilled ce (C7) ata (D9)	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	required)
Depth emarks: DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order variable (A2) in (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial by vegetated concave	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	required)
Depth Temarks: TDROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order variable (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required imagery (B7) e surface (B8)	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9)	living root	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	required)
Depth emarks: /DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel ield Obser urface Water	order various in the content of the	one required imagery (B7 e surface (B8 Yes	Water Aquatio True ao Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) nta (D9) n Remarks) hes):	living root 4) d soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)
Depth Temarks: TDROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order of the content	imagery (B7) e surface (B8) Yes	Water Aquation True an Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of redute tiron redunuck surfactor well da (Explain in Depth (incident)	nts (B14) nts (B14) nts (B14) nodor (C1) heres along uced iron (C uction in tilled uce (C7) nta (D9) n Remarks) hes): hes): 8	living root 4) d soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vetland Obser Vater Table aturation F	order of the content	imagery (B7) e surface (B8) Yes	Water	stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of redute tiron redunuck surfactor well da (Explain in Depth (incident)	nts (B14) nts (B14) nts (B14) nodor (C1) heres along uced iron (C uction in tilled uce (C7) nta (D9) n Remarks) hes): hes): 8	living root 4) d soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel ield Obser urface Water Table aturation F ncludes ca	pogy rdrology Indicators: icators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7) e surface (B8) Yes Yes	Water	stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) reduction of the control o	living root 4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vater Table aturface Water Vater Table aturation F ncludes ca	order of the control	imagery (B7) e surface (B8) Yes Yes	Water	stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) reduction of the control o	living root 4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)
Depth emarks: DROLO Tetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obset aturface Water Table aturation F ncludes ca	order of the control	imagery (B7) e surface (B8) Yes Yes	Water	stained lead of fauna (B quatic plan gen sulfide ged rhizosphace of redut iron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) reduction of the control o	living root 4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	required)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			: MN Sampling Point: bdp32
Investigator(s): Andy Kranz	Secti		
Lanform(hillslope, terrace, etc): Footslope		Local relie	ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.05599		Long: -92.33757	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop	pes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	
Hydric Soil Present? Yes No Watland Hydrology Present?		within a Wetland?	Yes No
Wetland Hydrology Present? Yes No			
Upslope bdp31 in agriculture field	,		
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species Across All Strata: 1 (B)
5.			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		- Total Cover	Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2. 3.			OBL species0 x1 =0
4.			FACW species <u>0</u> x1 = <u>0</u>
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species 10 x1 = 40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species0 x1 =0
Digitaria ischaemum, Smooth Crab Grass	10%	yes FACU	Column Totals: $10 \text{ x1} = 40 \text{ (B)}$
2			Prevalence Index = B/A = 4.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6.			3 - Prevalence Index is <= 3.0 ¹
7. 8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate
10.			sheet)
	10%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic
		= Total Cover	Vegetation Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Corn crop appears healthy.			

SOIL Sample Point: <u>bdp32</u>

Profile Des	cription: (Describe Matrix	to the dep		ment the		r confir	m the absen	ce of indicators.)
Depth (inches)	Color (moint)	0/	Color (moint)	0/	T	1.0.2		Domorko
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR - 2/1	100	/				CL	
12-14	10YR - 2/1	95	5YR-4/6	5	C	М	CL	
							_	-
					· ——			_
¹ Type: C=Co	oncentration, D=Dep	letion_RM=	Reduced Matrix M	S=Maske	d Sand Grai		² I ocation: P	PL=Pore Lining, M=Matrix.
Hydric Soil	l (or Histel) (A1) und	lafinad	Sandy	Cloved I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ :
	pipedon (A2) undef			Redox (Coast Prairie Redox (A16)
	listi (A3) undefined	iiieu		ed Matrix	-			Dark Surface (S7)
	en Sulfide (A4)				Mineral (F1)			Iron-Manganese Masses (F12)
	d Layers (A5)				Matrix (F2)			Very Shallow Dark Surface (TF12)
	luck (A10)			ted Matrix				✓ Other (Explain in Remarks)
	ed Below Dark Surface	ce (A11)			rface (F6)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
l —	ark Surface (A12)	20 (AII)			Surface (F7)			problematic.
	Mucky Mineral (S1)			Depress				
I —	lucky Peat or Peat (33)		СБергезз	10113 (1 0)			
	Layer (if observed)	:						
Type:	Rock					— H	ydric Soil Pr	esent? Yes <u>✓</u> No
Depth	(inches): <u>14</u>					_		
HYDROLO	GY							
Wetland Hy	drology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one require						Surface soil cracks (B6)
	water (A1)				aves (B9)			Drainage patterns (B10)
—	ater table (A2)			c fauna (E				Dry-season water table (C2)
	ion (A3)			quatic pla				Crayfish burrows (C8)
	narks (B1)				e odor (C1)			Saturation visible on aerial imagery (C9)
	nt deposits (B2)			-	heres along	_	oots (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	-	00)	Geomorphic position (D2)
	at or crust (B4)				uction in tilled	ı solis (C6)	FAC-neutral test (D5)
l —	posits (B5)			uck surfa				
	ion visible on aerial		· —	or well d	` '			
Sparsei	y vegetated concave	surface (E	38) Other (Explain ir	n Remarks)			
Field Obser	vations:							
Surface Wat	ter Present?	Y	es No 🗸 I	Depth (inc	:hes): <u></u>			
Water Table	Present?	Y	es No <u></u> I	Depth (inc	:hes): <u></u>	w	etland Hydro	ology Present? Yes No _ 🗸
Saturation P		Y	es No 🗸 I	Depth (inc	:hes): <u></u>	_		
(includes ca	pillary fringe)							
Describe Re	ecorded Data (stream	n gauge, m	onitoring well, aeria	l photos, ¡	previous insp	pections), if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: bdp33
Investigator(s): Andy Kranz	Sect	tion, Townsh	ip, Range: S	524 T107N S013W
Lanform(hillslope, terrace, etc): <u>Swale</u>			Local reli	ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.05617		Long: -92.	33713	Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of you	ear?	Ye	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol				plain any answers in Remarks.)
		,	, .	, ,
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _		le the Sa	ampled Area	
Hydric Soil Present? Yes No			Wetland?	Yes No 🗸
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate repo				
Upland meadow in a swale within a crop field. VEGETATION - Use scientific names of plants.				
Table Chapture (Diet sire 200 ft (0.4 m) vadius)		Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1	70 COVE	Species:	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant Species
4				Across All Strata:3 (B)
5	0%	= Total Cov		Percent of Dominant Species That Are OBL, FACW, or FAC: 33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- 10121 001	vei	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 x1 = 0
3				FACW species 20 x1 = 40
4.				FAC species30 x1 =90
5	00/	- Total Co		FACU species 55 x1 = 220
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	0% ft. aguara (1	= Total Cov		UPL species 0 x1 = 0
Poa pratensis, Kentucky Blue Grass	30%	yes	FAC	Column Totals: 105 x1 = 350 (B)
Taraxacum officinale, Common Dandelion	30%	yes	FACU	Prevalence Index = B/A = 3.333
Schedonorus arundinaceus, Tall False Rye Grass		yes	FACU	Hydrophytic Vegetation Indicators:
4. Phalaris arundinacea, Reed Canary Grass			FACW	
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is > 50%
7				3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	105%	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2	0%	= Total Cov	ver	Vegetation Present? Yes No _ Vegetation
Remarks: (Include photo numbers here or on a separate sheet.)				

(inches) Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	rks	
Type: C=Concentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grair	ns. ² L	ocation: P	L=Pore Lining, M=Matrix.		
ydric Soil Indicators: Histosol (or Histel) (A1) undefi Histic Epipedon (A2) undefi Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S	ined ce (A11)	Sandy Strippe Loamy Loamy Deplet Redox	Gleyed Matrix Dark Sur	(S6) (S6) Ilineral (F1) Matrix (F2) (F3) (F3) face (F6) Surface (F7)			Indicators for Problematic H Coast Prairie Redox (A16 Dark Surface (S7) Iron-Manganese Masses Very Shallow Dark Surface Other (Explain in Remark Indicators of hydrophytic hydrology must be preserved.	(F12) ce (TF12) cs) c vegetation a	nd wetlar
estrictive Layer (if observed) Type:	:				Hydr	ic Soil Pre	esent?	Yes	No _ <
	k of hydrophy	ytic vegetation and	d lack of h	ydrology inc	licators.				
emarks: oil sample not taken due to lac	k of hydrophy	ytic vegetation and	d lack of h	ydrology inc	icators.				
emarks: bil sample not taken due to lac		ytic vegetation and	d lack of h	lydrology inc	licators.	<u> </u>	Secondary Indicators (minimum	of two requir	ed)
emarks: DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of o		check all that apj	ply)		licators.	<u> </u>	Surface soil cracks (B6)	of two requir	red)
DROLOGY etland Hydrology Indicators: rimary Indicators (minimum of o		check all that ap	oly) stained lea	aves (B9)	licators.	<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)	·	red)
emarks: oil sample not taken due to lac //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2)		check all that app Water-s	oly) stained lea s fauna (B.	aves (B9)	licators.	<u> </u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	·	red)
PROLOGY Tetland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3)		check all that app Water-s Aquatic True ac	oly) stained lea c fauna (B quatic plar	aves (B9) 13) ats (B14)	licators.	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	2)	
Pemarks: oil sample not taken due to lac POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		check all that app Water-s Aquatic True ac Hydrog	ply) stained lea c fauna (B. quatic plar en sulfide	aves (B9) 13) ats (B14) odor (C1)		- - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial	2) imagery (C9)	
/DROLOGY //DROLOGY //Etland Hydrology Indicators: rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3)		check all that app Water-s Aquation True ao Hydrog Oxidize	oly) stained lea c fauna (B. quatic plar en sulfide ed rhizospl	aves (B9) 13) ats (B14)	living roots	- - - - (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	2) imagery (C9)	
Properties of the second of th		check all that app Water-s Aquation True ao Hydrog Oxidizes	oly) stained lea c fauna (B. quatic plar en sulfide ed rhizospl ce of redu	aves (B9) 13) sts (B14) odor (C1) neres along	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) ✓ Saturation visible on aerial Stunted or stressed plants	2) imagery (C9)	
Primary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent	oly) stained lea c fauna (B. quatic plar en sulfide ed rhizospl ce of redu	aves (B9) 13) tts (B14) odor (C1) neres along iced iron (C4)	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	
rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	one required;	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	oly) stained lea c fauna (B. quatic plar en sulfide ed rhizospl ce of redu iron redu	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tilled	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	
rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	one required;	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	oly) stained lea c fauna (B quatic plar en sulfide ed rhizospl ce of redu iron redu uck surfac or well da	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tilled	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	
rimary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial of Sparsely vegetated concaver	one required;	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	oly) stained lea c fauna (B quatic plar en sulfide ed rhizospl ce of redu iron redu uck surfac or well da	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tilled	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	
Property of the control of the contr	one required; imagery (B7) e surface (B8)	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B quatic plar en sulfide ed rhizospl ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) tots (B14) odor (C1) heres along iced iron (C4 ction in tilled te (C7) ta (D9) Remarks)	living roots	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9) (D1)	
Property of the control of the contr	one required; imagery (B7) e surface (B8) Yes Yes	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B quatic plar en sulfide ed rhizospl ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) ats (B14) odor (C1) neres along iced iron (C4 ction in tilled te (C7) ata (D9) Remarks) nes): nes):	living roots 1) I soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	
Property of the control of the contr	one required; imagery (B7) e surface (B8) Yes Yes	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B quatic plar en sulfide ed rhizospl ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) ats (B14) odor (C1) neres along iced iron (C4 ction in tilled te (C7) ata (D9) Remarks) nes): nes):	living roots 1) I soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	2) imagery (C9) (D1)	
remarks: soil sample not taken due to lace remarks: soil sample not taken due to lace remarks: remary Indicators (minimum of of surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concavers ield Observations: surface Water Present? vater Table Present? saturation Present? includes capillary fringe)	imagery (B7) e surface (B8) Yes Yes Yes	check all that app Water-s Aquation True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lead fauna (Baguatic planen sulfide ed rhizosplace of reduction reduction well date Explain in Depth (include)	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tillect ac (C7) ata (D9) Remarks) ness): ness): ness):	living roots 1) I soils (C6) Wetla	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	2) imagery (C9) (D1)	
Process Apple not taken due to lace and sample not taken due to l	imagery (B7) e surface (B8) Yes Yes Yes	check all that app Water-s Aquation True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lead fauna (Baguatic planen sulfide ed rhizosplace of reduction reduction well date Explain in Depth (include)	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tillect ac (C7) ata (D9) Remarks) ness): ness): ness):	living roots 1) I soils (C6) Wetla	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	2) imagery (C9) (D1)	

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County	Sampling Date: 2	024-06-03
Applicant/Owner: Ranger Power		-	State	: MN	Sampling Point: b	dp34
Investigator(s): Andy Kranz	Sect	ion, Townsh	ip, Range: <u>S</u>	24 T107N S013W		
				ef (concave, convex,	, none): concave	
Slope(%): 8-15 Lat: 44.05559		Long: -92.	.33509		Datum: WC	SS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slo	pes			NWI classific	cation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Y	es 🗸 No	(If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			ircumstances" prese	ent? Yes . No	
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			olain any answers ir	•	
						
SUMMARY OF FINDINGS - Attach site map showing	ıg sampli	ing point	location	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes No			ampled Area Wetland?	L	Yes	No 🗸
Wetland Hydrology Present? Yes <u>✓</u> No						
Remarks: (Explain alternative procedures here or in a separate repulpland meadow in a swale within a crop field.	ort.)					
Opiand meadow in a swale within a crop field.						
VEGETATION - Use scientific names of plants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?		Dominance Test	Worksheet	
1		оросност	<u> </u>			
2.				Number of Domina Are OBL, FACW, of		<u>0</u> (A)
3.				Total Number of D	Oominant Species	
4				Across All Strata:	-	2 (B)
5				Percent of Domina		
	0%	= Total Co	ver	Are OBL, FACW, o	or FAC:	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet:	
1				Total % Cov	ver of: Mu	ultiply by:
2				OBL species	0 x1 =	0
3				FACW species	5 x1 =	10
4				FAC species	0 x1 =	0
J	0%	= Total Cov	ver	FACU species	97 x1 =	388
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28				UPL species	0 x1 =	0
Elymus repens, Creeping Wild Rye	700/	yes	FACU	Column Totals:	<u>102</u> x1 =	<u>398</u> (B)
Cirsium arvense, Canadian Thistle	0507	yes	FACU	Prevale	ence Index = B/A =	3.902
3. Phalaris arundinacea, Reed Canary Grass		no	FACW	Hydrophytic Vege	etation Indicators:	
4. Asclepias syriaca, Common Milkweed	20/	no	FACU			
5					st for Hydrophytic Ve	getation
6				2 - Dominand		
7					ce Index is <= 3.0 ¹	
8				4 - Morpholog supporting da	gical Adaptations ¹ (F ata in Remarks or or	Provide n a separate
9				sheet)		•
10				PROBLEMAT	ΓΙC Hydrophytic Vege	etation ¹ (Explain)
	102%	= Total Co	ver	¹ Indicators of	hydric soil and wetla	and hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be pre	sent, unless disturbe	ed or problematic.
1.				Hydrophytic		
2	0%	= Total Cov		Vegetation Present?	Vα	sNo
	<u> </u>	- 10101 00	v U1	. resent:		S NO
Remarks: (Include photo numbers here or on a separate sheet.)						

Depth (inches): termarks: lo soil sample taken due to lack of hydrophytic vegetation and lack of hydrology indicators. ### Vetand Hydrology Indicators: ### Primary Indicators (minimum of one required; check all that apply) ### Surface water (A1)	Depth (inches) Color (moist)	%	Color (moist)	edox Featur <u>%</u>	Type ¹	Loc ² To	exture	Remarks
## Sandy Gleyed Matrix (\$4) ## Histos (pipedion (A2) undefined ## Sandy Gleyed Matrix (\$4) ## Black Histin (A3) undefined ## Sandy Redox (\$5) ## Dark Surface (\$7) ## Undefined ## Sandy Redox (\$5) ## Undefined ## Sandy Medox (\$5) ## Undefined ## Sandy Redox (\$5) ## Undefined ## Undef		·			·			
Histoic (price) (A2) undefined Sandy, Gleyed Matrix (S4) Coast Prairie Redox (A16) Histoic Epipedon (A2) undefined Sandy Redox (S5) Dark Surface (S7) Dark Surface (S7) Hydrogen Sulfide (A4) Loarny Mucky Mineral (F1) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Sindificat Layers (A5) Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Very Shallow Dark Surface (F12)		Depletion, RM=	Reduced Matrix, M	S=Masked	Sand Grain	s. ² Loca		
Type:	Histosol (or Histel) (A1) Histic Epipedon (A2) un Black Histi (A3) undefin Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Su Thick Dark Surface (A12 Sandy Mucky Mineral (S 5 cm Mucky Peat or Pe	defined ed rface (A11)) 1) tt (S3)	Sandy Strippe Loamy Loamy Deplet Redox	r Redox (S5 ed Matrix (S r Mucky Mir r Gleyed Ma ted Matrix (I r Dark Surfa ted Dark Su	66) neral (F1) hetrix (F2) F3) ace (F6) urface (F7)		Coast Prairie Dark Surface Iron-Mangan Very Shallow Other (Expla	e Redox (A16) e (S7) ese Masses (F12) p Dark Surface (TF12) in in Remarks) f hydrophytic vegetation and wetlan
PARTICLE TO SECONDAY Wetland Hydrology Indicators: Primary Indicators (minimum of noe required; check all that apply) Surface water (A1) High water table (A2) High water table (A2) Water-stained leaves (B9) Hydrology Indicators (minimum of noe required) Saturation (A3) Water-stained leaves (B9) Fire aquatic fauna (B13) Water marks (B1) Water marks (B1) Water marks (B2) Sediment deposits (B2) Drift deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Agual at or crust (B4) I ron deposits (B5) I fini muck surface (C7) I nundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface soil cracks (B6) Driangae patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:	and the state of t	ed):						
Trimary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Y Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No Ves No Ves No Popth (inches): Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): emarks:		nytic vegetation and	l lack of hyd	drology indi		oil Present?	Yes No _ _
Surface water (A1)	Type: Depth (inches): emarks: o soil sample taken due to		nytic vegetation and	I lack of hyd	drology indid		oil Present?	Yes No _ - ∕
High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B8) Sparsely vegetated concave surface (B8) Water Table Present? Water Table Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Y Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D5) FAC-neutral test (D5) FAC-neutral test (D5) Wetland Hydrology Present? Yes No No Depth (inches): No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): emarks: o soil sample taken due to	ack of hydroph			drology indi		Secondary Indicato	, , ,
Saturation (A3)	Type: Depth (inches): emarks: o soil sample taken due to DROLOGY Tetland Hydrology Indicator rimary Indicators (minimum	ack of hydroph	d; check all that apj	ply)			Secondary IndicatoSurface soil cr	ors (minimum of two required) acks (B6)
Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Stunted or stressed plants (D1) Presence of reduced iron (C4) Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Ves No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): emarks: o soil sample taken due to DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface water (A1)	ack of hydroph	d; check all that app	ply) stained leav	res (B9)		Secondary Indicato Surface soil cr Drainage patte	ors (minimum of two required) cacks (B6) erns (B10)
Drift deposits (B3)	Type: Depth (inches): emarks: o soil sample taken due to TDROLOGY Tetland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2)	ack of hydroph	d; check all that app Water-s Aquatio	ply) stained leav c fauna (B13	res (B9)		Secondary Indicato Surface soil cr Drainage patte Dry-season wa	ors (minimum of two required) acks (B6) erns (B10) ater table (C2)
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): emarks: o soil sample taken due to DROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3)	ack of hydroph	d; check all that app Water-s Aquatio True ac	ply) stained leav c fauna (B13 quatic plants	res (B9) 3) s (B14)		Secondary Indicate Surface soil co Drainage patte Dry-season wa Crayfish burro	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Other (Explain in Remarks) Other (Explain in Remarks) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No Depth (inches): Wetland Hydrology Present? Yes No _	Type: Depth (inches): emarks: o soil sample taken due to DROLOGY retland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	ack of hydroph	d; check all that app Water-s Aquatic True ac Hydrog	ply) stained leav c fauna (B13 quatic plants len sulfide c	res (B9) 3) s (B14) dor (C1)	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi	acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9)
Inundation visible on aerial imagery (B7) Gauge or well data (D9) Other (Explain in Remarks) Other (Explain	Type: Depth (inches): emarks: o soil sample taken due to DROLOGY retland Hydrology Indicator rimary Indicators (minimum Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	ack of hydroph	d; check all that app Water-s Aquatio True ac Hydrog Oxidize	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe	res (B9) 3) s (B14) odor (C1) eres along I	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi	acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1)
Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Type: Depth (inches): Demarks: o soil sample taken due to go soil samp	ack of hydroph	d; check all that app Water-s Aquation True aon Hydrog Oxidize Presen	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduc	res (B9) 3) s (B14) odor (C1) eres along l ed iron (C4	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	ack of hydroph	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduc t iron reduct	res (B9) 3) s (B14) bdor (C1) eres along I ed iron (C4 ion in tilled (C7)	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Surface Water Present? Yes No _ ✓ Depth (inches):	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	ack of hydroph	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduc t iron reduct uck surface or well data	res (B9) 3) s (B14) odor (C1) eres along l ed iron (C4 ion in tilled (C7) a (D9)	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Vater Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	ack of hydroph	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduc t iron reduct uck surface or well data	res (B9) 3) s (B14) odor (C1) eres along l ed iron (C4 ion in tilled (C7) a (D9)	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Saturation Present? Yes No Depth (inches): includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	ack of hydroph	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduc t iron reduct uck surface or well data	res (B9) 3) s (B14) odor (C1) eres along l ed iron (C4 ion in tilled (C7) a (D9)	cators.	Secondary Indicato Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type:	ack of hydroph rs: of one required ial imagery (B7 ave surface (B	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge B) Other (ply) stained leav c fauna (B1; quatic plants gen sulfide c ed rhizosphe ice of reduct iron reduct iuck surface or well data (Explain in F	res (B9) 3) s (B14) bdor (C1) eres along I ed iron (C4) ion in tilled (C7) a (D9) Remarks)	eators.	Secondary Indicate Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Y Geomorphic p FAC-neutral te	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2) st (D5)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	iack of hydroph rs: of one required ial imagery (B7 ave surface (B	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduct iron reduct iuck surface or well data (Explain in F	res (B9) 3) s (B14) bdor (C1) eres along I ed iron (C4) ion in tilled (C7) a (D9) Remarks)	eators.	Secondary Indicate Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Y Geomorphic p FAC-neutral te	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2)
Remarks:	Type: Depth (inches): Depth (inches): Demarks: o soil sample taken due to soil sample taken due t	iack of hydroph rs: of one required ial imagery (B7 ave surface (B	d; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (ply) stained leav c fauna (B13 quatic plants gen sulfide c ed rhizosphe ice of reduct iron reduct iuck surface or well data (Explain in F	res (B9) 3) s (B14) bdor (C1) eres along I ed iron (C4) ion in tilled (C7) a (D9) Remarks)	eators.	Secondary Indicate Surface soil or Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Y Geomorphic p FAC-neutral te	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2) st (D5)
	Type:	ack of hydroph ITS: Of one required Italial imagery (B7 ave surface (B Ye Ye	d; check all that app Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (ply) stained leav c fauna (B1: quatic plants gen sulfide c ed rhizosphe ace of reduc t iron reduct uck surface or well data (Explain in F	res (B9) 3) s (B14) odor (C1) eres along I ed iron (C4) ion in tilled (C7) a (D9) Remarks) es): es):	cators. iving roots (C3) soils (C6) Wetland	Secondary Indicate Surface soil of Drainage patte Dry-season wa Crayfish burro Saturation visi Stunted or stre Geomorphic p FAC-neutral te	ors (minimum of two required) acks (B6) erns (B10) ater table (C2) ws (C8) ble on aerial imagery (C9) essed plants (D1) osition (D2) st (D5)

Project/Site: Lemon Hill	City/Cr	ounty: Farmi	naton/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power	0,, 0.0			e: MN Sampling Point: bdp35
Investigator(s): Andy Kranz	Sect			
				ef (concave, convex, none): concave
				Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional		_		NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y	es , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			xplain any answers in Remarks.)
<u> </u>		-		
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No				
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	a Yes <u>✓</u> No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate repo Wet meadow in a broad swale separating crop fields. Part of a comp VEGETATION - Use scientific names of plants.		land commu	nities.	
VEGETATION COS SOICHAING HAINES OF Plants.	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata:1 (B)
4				
J	0%	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species $0 \times 1 = 0$
3			-	FACW species 100 x1 = 200
4				FAC species 0 x1 = 0
5	0%	= Total Cov		FACU species <u>2</u> x1 = <u>8</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	100%	yes	FACW	Column Totals: 102 x1 = 208 (B)
Cirsium arvense, Canadian Thistle	2%	no	FACU	Prevalence Index = B/A = 2.039
3.				Hydrophytic Vegetation Indicators:
4				
5				✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50%
6				
7				✓ 3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10		= Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			vei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Co	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
						Mucky	
0-6 10YR - 2/1	100	/				Loam	
							_
							_
							_
Type: C=Concentration, D=De	nletion RM=	Reduced Matrix M	 S=Masked	Sand Grain	2 _I	ocation: P	 L=Pore Lining, M=Matrix.
ydric Soil Indicators:	pietion, rrivi–i	Treduced Matrix, M	3-Maskeu	Sand Oran	. L	ocation. i	Indicators for Problematic Hydric Soils ³ :
Histosol (or Histel) (A1) ur	ndefined	Sandy	Gleyed M	latrix (S4)			Coast Prairie Redox (A16)
Histic Epipedon (A2) unde			Redox (S				Dark Surface (S7)
Black Histi (A3) undefined	t	Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)		<u></u> ✓ Loamy	Mucky M	ineral (F1)			Very Shallow Dark Surface (TF12)
Stratified Layers (A5)		Loamy	/ Gleyed M	Matrix (F2)			Other (Explain in Remarks)
2 cm Muck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and w
Depleted Below Dark Surfa	ace (A11)		Dark Surf				hydrology must be present, unless disturb
Thick Dark Surface (A12)				Surface (F7)			problematic.
Sandy Mucky Mineral (S1)		Redox	Depression	ons (F8)			
5 cm Mucky Peat or Peat estrictive Layer (if observed							
_	4).				Hydr	ic Soil Pr	esent? Yes <u>✓</u> No
							- Tes No
Type:					_		
					_		
Depth (inches): emarks:							
Depth (inches):	s:				_		Secondary Indicators (minimum of two required)
Depth (inches): emarks: 'DROLOGY		t; check all that ap	ply)				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth (inches): emarks: 'DROLOGY //etland Hydrology Indicators			ply) stained lea	ives (B9)			
Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators		Water-					Surface soil cracks (B6)
Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquatio True a	stained lea c fauna (B1 quatic plan	13) ts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (inches): emarks: **TDROLOGY **Jetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) ts (B14) odor (C1)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B1 quatic plan len sulfide ed rhizosph	ts (B14) odor (C1) neres along	-	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water- Aquatio True a Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan len sulfide ed rhizosph ce of redu	ts (B14) odor (C1) neres along ced iron (C4	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water- Aquation True and Hydrog Oxidized Presen Recent	stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu	ts (B14) odor (C1) neres along ced iron (C4	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): emarks: DROLOGY Metland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	f one required	Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B2 quatic plan den sulfide ed rhizosph ce of redu c iron reduc uck surfac	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria	f one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan len sulfide ed rhizosph ce of redu c iron reduc uck surfac or well da	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: DROLOGY Metland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concave	f one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B2 quatic plan den sulfide ed rhizosph ce of redu c iron reduc uck surfac	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: DROLOGY Metland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concaviield Observations:	f one required I imagery (B7 ve surface (B	Water- Aquatic True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B2 quatic plan gen sulfide ed rhizosph ce of redu ci iron reduc uck surfac or well da Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	1)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concavialed Observations: urface Water Present?	f one required I imagery (B7 ve surface (B	Water- Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ce of redu ciron reduc uck surfac or well da (Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): emarks: DROLOGY Metland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concaviield Observations:	I imagery (B7 ve surface (B Ye Ye	Water- Aquatic True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ce of redu ciron reduc uck surfac or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concavicield Observations: urface Water Present? //ater Table Present?	I imagery (B7 ve surface (B Ye Ye	Water- Aquatical	stained lea c fauna (B3 quatic plan gen sulfide ed rhizosph ce of redu ciron reduc uck surfac or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concavicield Observations: urface Water Present? Vater Table Present? aturation Present?	I imagery (B7 ve surface (B Ye Ye Ye	Water- Aquation	stained lead control factorial facto	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County Sampling Date: 2024-06-03
Applicant/Owner: Ranger Power		State	
Investigator(s): Andy Kranz	Sect	tion, Township, Range: S	
Lanform(hillslope, terrace, etc): Footslope		Local reli	ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.05052		Long: -92.32738	Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	vear?		o (If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly			Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro		7.10 110111101	constances present: res
	,5,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(11 1100000, 0)	the state of the s
SUMMARY OF FINDINGS - Attach site map showin	ig sampl	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		to the Committed Ame	_
Hydric Soil Present? Yes No		Is the Sampled Are within a Wetland?	a Yes No <u>✓</u> _
Wetland Hydrology Present? Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate repo	ort.)		
оріали стор неій.			
VEGETATION - Use scientific names of plants.			Т
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2.			Are OBL, FACW, or FAC: 0 (A)
3.			Total Number of Dominant Species
4			Across All Strata:1 (B)
5			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3			OBL species0 x1 =0
4.			FACW species0 x1 =0
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species 40 x1 = 160
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1	L-m²) quadrat)	UPL species0 x1 =0
Digitaria ischaemum, Smooth Crab Grass	40%	yes FACU	Column Totals: $\underline{\qquad}$ 40 x1 = $\underline{\qquad}$ 160 (B)
2			Prevalence Index = B/A = 4.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is > 50%
6 7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	40%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.)			
Corn crop appears healthy.			

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR - 2/1	100	/				CL		
8-16	10YR - 2/1	95	5YR-4/6	5	С	М	CL		
						-	-		
								_	
						-		-,	
 Гуре: C=C	oncentration, D=Dep	letion, RM=I	Reduced Matrix, M	S=Masked	d Sand Grain	ns. 2	Location: P	 _=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problematic Hydric So	oils ³ :
Histoso	l (or Histel) (A1) und	defined	Sandy	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)	
Histic E	pipedon (A2) undef	ined	Sandy	/ Redox (S	65)			Dark Surface (S7)	
Black F	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)	
Hydrog	en Sulfide (A4)				1ineral (F1)			Very Shallow Dark Surface (TF12))
	d Layers (A5)				Matrix (F2)			Other (Explain in Remarks)	
	luck (A10)			ted Matrix				³ Indicators of hydrophytic vegetati	ion and wetla
	ed Below Dark Surfa	ce (A11)		x Dark Sur				hydrology must be present, unler problematic.	ss disturbed
	Park Surface (A12) Mucky Mineral (S1)				Surface (F7)			prosionialio.	
_ ′	lucky Peat or Peat (23)	Redux	x Depressi	uns (Fo)				
_	Layer (if observed)								
Type:		•				Hyr	dric Soil Pre	sent? Yes	✓ No
iypc.									
	(inches): <u></u>								
emarks:									
emarks:								Secondary Indicators (minimum of two r	
emarks: DROLO	o G Y		i; check all that ap	ply)					
emarks: 'DROLO 'etland Hy rimary Indi Surface	drology Indicators: cators (minimum of			ply) stained lea	aves (B9)			Secondary Indicators (minimum of two r	
Emarks: DROLO Tetland Hy rimary Indi Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)			Secondary Indicators (minimum of two r Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
POROLO Vetland Hy rimary Indi Surface High wa Saturat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao	stained lea c fauna (B quatic plar	13) nts (B14)			Secondary Indicators (minimum of two rows (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	equired)
POROLO Petland Hy rimary Indi Surface High wa Saturat Water r	order of the control		Water- Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)		<u>\$</u>	Secondary Indicators (minimum of two resection of two resections of two resection of two resections of two	equired)
MOROLO Metland Hy rimary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)		Water-:AquatioTrue aoHydrogOxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) nts (B14) odor (C1) heres along	living roo		Secondary Indicators (minimum of two response soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1)	equired)
Primary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	living roo		Secondary Indicators (minimum of two responses soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	equired)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	exactors (minimum of exactors (Ma)) and the posits (B1) and the posits (B2) posits (B3) and or crust (B4)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C- ction in tilled	living roo		Secondary Indicators (minimum of two response soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1)	equired)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	exactors (minimum of exactors (B1) exactors (B1) exactors (B2) posits (B3) exactor crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lead control factorial	13) hts (B14) c odor (C1) heres along uced iron (C- ction in tilled	living roo		Secondary Indicators (minimum of two responses soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	equired)
EMARKS: FOROLO Fetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	nts (B14) nts (B14) ndor (C1) heres along uced iron (Cition in tilled te (C7) ata (D9)	living roo		Secondary Indicators (minimum of two responses soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	equired)
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	expectated concave	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	13) hts (B14) c odor (C1) heres along uced iron (C- ction in tilled	living roo		Secondary Indicators (minimum of two responses soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	equired)
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Applicant/Owner: Ranger Power	City/Co	ounty: <u>Farmır</u>	ngton/Olmste	d County	Sampling Date	: <u>2024-06-03</u>
				: MN		
Investigator(s): Andy Kranz	Sect	ion, Townshi	ip, Range: <u>S</u>	24 T107N S013W		
Lanform(hillslope, terrace, etc): Swale			Local relie	f (concave, convex,	none): concave	
Slope(%): 3-7 Lat: 44.05224		Long: -92.	32858		Datum: \	WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional				NWI classific	ation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time of	year?	Ye	es , No	(If no, explai	n in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantl	ly disturbed?	Aı	re "Normal C	ircumstances" prese	ent? Yes , No)
Are Vegetation , Soil , or Hydrology naturally p	roblematic?	(If	needed, ex	olain any answers in	Remarks.)	
SUMMARY OF FINDINGS - Attach site map showi	na compli	ina noint	location	transports im	nortant foati	iros oto
			iocations	s, transects, in	iportant leati	
Hydrophytic Vegetation Present? Yes No			ampled Area			
Wetland Hydrology Present? Yes ✓ No.		within a	Wetland?		Ye	es No_ <u> </u>
Remarks: (Explain alternative procedures here or in a separate re						
VEGETATION - Use scientific names of plants.						
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?	Indicator Status	Dominance Test \	Vorksheet	
1				Number of Domina	ant Species That	1 (A)
2				Total Number of D Across All Strata:		3 (B)
5.				Percent of Domina	nt Species That	<u>o</u> (b)
	0%	= Total Cov	/er	Are OBL, FACW, o		33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.				Prevalence Index	worksheet:	
2.				Total % Cov	er of:	Multiply by:
3				OBL species	0 x1 :	=0
4.				FACW species	25 x1 :	= 50
5.				FAC species	10 x1 :	= <u>30</u>
	0%	= Total Cov	⁄er	FACU species	72 x1 :	= 288
	8-ft square (1	0) 1				·
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2		m²) quadra	t)	UPL species	0 x1 :	= 0
1. <i>Bromus inermis</i> , Smooth Brome	40%	m²) quadra <u>yes</u>	t) <u>FACU</u>	Column Totals:	0 x1 =	= <u>0</u> = <u>368</u> (B)
Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass	40% 30%	, .	,	Column Totals:	0 x1 :	= <u>0</u> = <u>368</u> (B)
 Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass Phalaris arundinacea, Reed Canary Grass 	30% 25%	yes	FACU FACU FACW	Column Totals:	0 x1 : 107 x1 : nce Index = B/A :	= 0 = 368 (B) = 3.439
 Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass 	30% 25% 10%	yes yes yes no	FACU FACW FAC	Column Totals:	0 x1 : 107 x1 : nce Index = B/A : etation Indicators	= 0 = 368 (B) = 3.439
Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Cirsium arvense, Canadian Thistle	30% 25% 10% 2%	yes yes yes no	FACU FACU FACW	Column Totals: Prevale Hydrophytic Vege	0 x1 = 107 x1 = nce Index = B/A = station Indicators	= 0 = 368 (B) = 3.439
Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Cirsium arvense, Canadian Thistle	30% 25% 10% 2%	yes yes yes no no	FACU FACW FAC	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes2 - Dominance	0 x1 = 107 x1 = nce Index = B/A = station Indicators	= 0 = 368 (B) = 3.439
Bromus inermis, Smooth Brome Dactylis glomerata, Orchard Grass Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Cirsium arvense, Canadian Thistle 7.	30% 25% 10% 2%	yes yes no no	FACU FACU FACW FAC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalence	0 x1 = 107 x1 = 107 x1 = 100 x	= 0 = 368 (B) = 3.439 :: Vegetation
1. Bromus inermis, Smooth Brome 2. Dactylis glomerata, Orchard Grass 3. Phalaris arundinacea, Reed Canary Grass 4. Poa pratensis, Kentucky Blue Grass 5. Cirsium arvense, Canadian Thistle 6	30% 25% 10% 2%	yes yes no no	FACU FACU FACW FAC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da	0 x1 : 107 x1 : nce Index = B/A : etation Indicators at for Hydrophytic e Test is > 50% e Index is <= 3.0	= 0 = 368 (B) = 3.439 (B) :: Vegetation
1. Bromus inermis, Smooth Brome 2. Dactylis glomerata, Orchard Grass 3. Phalaris arundinacea, Reed Canary Grass 4. Poa pratensis, Kentucky Blue Grass 5. Cirsium arvense, Canadian Thistle 6. 7. 8.	30% 25% 10% 2%	yes yes no no	FACU FACU FACW FAC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da sheet)	0 x1 : 107 x1 : nce Index = B/A : station Indicators t for Hydrophytic e Test is > 50% e Index is <= 3.0 gical Adaptations ta in Remarks or	= 0 = 368 (B) = 3.439 (B) Vegetation
1. Bromus inermis, Smooth Brome 2. Dactylis glomerata, Orchard Grass 3. Phalaris arundinacea, Reed Canary Grass 4. Poa pratensis, Kentucky Blue Grass 5. Cirsium arvense, Canadian Thistle 6	30% 25% 10% 2%	yes yes no no	FACU FACW FACC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da sheet) PROBLEMAT	0 x1 = 107 x	= 0 = 368 (B) = 3.439 (B) :: Vegetation (Provide on a separate egetation (Explain)
1. Bromus inermis, Smooth Brome 2. Dactylis glomerata, Orchard Grass 3. Phalaris arundinacea, Reed Canary Grass 4. Poa pratensis, Kentucky Blue Grass 5. Cirsium arvense, Canadian Thistle 6	30% 25% 10% 2%	yes yes yes no no	FACU FACW FACC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da sheet) PROBLEMAT	0 x1 = 107 x1 = 107 x1 = 100 x	= 0 = 368 (B) = 3.439 EVegetation (Provide on a separate egetation (Explain) etland hydrology
1. Bromus inermis, Smooth Brome 2. Dactylis glomerata, Orchard Grass 3. Phalaris arundinacea, Reed Canary Grass 4. Poa pratensis, Kentucky Blue Grass 5. Cirsium arvense, Canadian Thistle 6. 7. 8. 9. 10.	30% 25% 10% 2%	yes yes yes no no	FACU FACW FACC FACU	Column Totals: Prevale Hydrophytic Vege 1 - Rapid Tes 2 - Dominanc 3 - Prevalenc 4 - Morpholog supporting da sheet) PROBLEMAT	0 x1 = 107 x1 = 107 x1 = 100 x	= 0 = 368 (B) = 3.439 (B) SE Vegetation (Provide on a separate egetation (Explain)

Depth (inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	arks	
							-		
Type: C=Concentration, D=Deple	etion, RM=Re	educed Matrix, M	 S=Masked	 I Sand Grair	ns. ² L	ocation: Pl	 L=Pore Lining, M=Matrix.		
lydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S2)	e (A11)	Sandy Strippe Loamy Loamy Deplet Redox Deplet	Gleyed Natrix Dark Sur	(S6) (S6) Ineral (F1) Matrix (F2) (F3) face (F6) Surface (F7)			Indicators for Problematic Coast Prairie Redox (A: Dark Surface (S7) Iron-Manganese Masse: Very Shallow Dark Surfa Other (Explain in Rema 3Indicators of hydrophythydrology must be preproblematic.	s (F12) ace (TF12) rks) tic vegetation a	and wetlar
Restrictive Layer (if observed):								Vac	No 🗸
Type: Depth (inches): Remarks: Remarks: Remarks: Remarks:	ack of hydrop	phytic vegetation	and lack (of hydrology		ic Soil Pre	sent?	163	
Depth (inches): Remarks: soil sample unnecessary due to le	ack of hydrop	phytic vegetation	and lack (of hydrology					
Depth (inches): emarks: oil sample unnecessary due to le //DROLOGY //etland Hydrology Indicators:				of hydrology			Secondary Indicators (minimu		
Depth (inches): emarks: oil sample unnecessary due to le //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of oil		check all that app	ply)				Secondary Indicators (minimu Surface soil cracks (B6)		
Depth (inches): demarks: doil sample unnecessary due to le //DROLOGY //detland Hydrology Indicators: rimary Indicators (minimum of on Surface water (A1)		check all that app	oly) stained lea	aves (B9)			Secondary Indicators (minimu	m of two requi	
Depth (inches): Remarks: Soil sample unnecessary due to le /DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface water (A1) High water table (A2)		check all that app Water-s Aquatic	oly) stained lea s fauna (B:	aves (B9)			Secondary Indicators (minimu Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (G	m of two requi	
Depth (inches): emarks: oil sample unnecessary due to le 'DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3)		check all that app Water-s Aquatic True ac	oly) stained lea c fauna (B: quatic plan	aves (B9) 13) nts (B14)			Secondary Indicators (minimu Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (G	m of two requi	red)
Depth (inches): demarks: doil sample unnecessary due to le /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of or Surface water (A1) High water table (A2)		check all that app Water-s Aquatic True ac Hydrog	ply) stained lea c fauna (B: quatic plan en sulfide	aves (B9)	indicators.		Secondary Indicators (minimu Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (G	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): Remarks: Roil sample unnecessary due to la POROLOGY Vetland Hydrology Indicators: Remary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		check all that app Water-s Aquation True ao Hydrog Oxidize	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl	aves (B9) 13) nts (B14) odor (C1)	indicators.	(C3) _	Secondary Indicators (minimur Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): Remarks: Roil sample unnecessary due to la ODROLOGY Vetland Hydrology Indicators: Remary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		check all that app — Water-s — Aquatic — True ac — Hydrog — Oxidize — Presen	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu	aves (B9) 13) nts (B14) odor (C1) heres along	indicators.	(C3)	Secondary Indicators (minimur Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plant	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): demarks:		check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu	aves (B9) 13) tts (B14) odor (C1) heres along iced iron (C4)	indicators.	(C3)	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): Remarks: Roil sample unnecessary due to land Portion of the second of the seco	ne required; o	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc	aves (B9) 13) ats (B14) odor (C1) heres along aced iron (C4 ction in tilled	indicators.	(C3)	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): temarks: soil sample unnecessary due to la temarks: foil sample unnecessary due to la temarks: foil sample unnecessary due to la formation (inches): formation (inches)	ne required; o	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizosph ce of redu iron redu uck surfac or well da	aves (B9) 13) ats (B14) odor (C1) heres along aced iron (C4 ction in tilled	indicators.	(C3)	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): temarks: soil sample unnecessary due to la temarks: foil sample unnecessary due to la temarks: foil sample unnecessary due to la formary indicators: frimary indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	ne required; o	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	oly) stained lea c fauna (B: quatic plan en sulfide ed rhizosph ce of redu iron redu uck surfac or well da	aves (B9) 13) nts (B14) odor (C1) heres along aced iron (C4 ction in tilled te (C7) ata (D9)	indicators.	(C3)	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): Remarks: Roil sample unnecessary due to la Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in	ne required; of magery (B7) surface (B8)	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc uck surfac or well da Explain in	aves (B9) 13) ats (B14) odor (C1) heres along iced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	indicators.	(C3)	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	red)
Depth (inches): Remarks: Roil sample unnecessary due to land Portion of the sample unnecessary due to land Porti	magery (B7) surface (B8) Yes Yes	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc uck surfac or well da Explain in Depth (incl	aves (B9) 13) ats (B14) odor (C1) heres along iced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	indicators.	(C3) _	Secondary Indicators (minimular Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Carayfish burrows (C8) Saturation visible on aerial Stunted or stressed plant Geomorphic position (D2)	m of two requictions of two requictions of two requirements of two	ired)
Depth (inches): Remarks: Roil sample unnecessary due to land Portion of the second of the seco	magery (B7) surface (B8) Yes Yes	check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (oly) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc uck surfac or well da Explain in Depth (incl	aves (B9) 13) ats (B14) odor (C1) heres along iced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	indicators.	(C3) _	Secondary Indicators (minimumous Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Compared of the compared of the co	m of two requi	ired)
Depth (inches): temarks: soil sample unnecessary due to lead to	magery (B7) surface (B8) Yes Yes Yes	check all that app Water-s Aquation True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc uck surfac or well da Explain in Depth (incl	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C4 ction in tillect te (C7) tata (D9) Remarks) hes): hes):	indicators.	(C3)	Secondary Indicators (minimumous Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Compared of the compared of the co	m of two requi	ired)
Depth (inches): Remarks: Remary Indicators (minimum of on one of	magery (B7) surface (B8) Yes Yes Yes	check all that app Water-s Aquation True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B: quatic plan en sulfide ed rhizospl ce of redu iron reduc uck surfac or well da Explain in Depth (incl	aves (B9) 13) nts (B14) odor (C1) heres along nced iron (C4 ction in tillect te (C7) tata (D9) Remarks) hes): hes):	indicators.	(C3)	Secondary Indicators (minimumous Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Compared of the compared of the co	m of two requi	red)

Project/Site: Lemon Hill	City/Co	ounty: Enid/0	Olmsted Cour	nty	Sampling Date: 2	2024-06-04
Applicant/Owner: Ranger Power					Sampling Point: b	
Investigator(s): Andy Kranz	Sect	ion, Townsh	ip, Range: S	24 T107N S013W		
				f (concave, convex,		
Slope(%): 3-7 Lat: 44.05403		_Long: -92	.33788		Datum: W	GS 84
Soil Map Unit Name: 479: Floyd silt loam, 1 to 4 percent slopes				NWI classific	cation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es , No	(If no, expla	ain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			ircumstances" pres	ent? Yes , No	
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			olain any answers ir		
-						
SUMMARY OF FINDINGS - Attach site map showir	ng sampli	ing point	locations	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes No		le the S	ampled Area			
Hydric Soil Present? Yes No			Wetland?		Yes	No
Wetland Hydrology Present? Yes ✓ No						
Remarks: (Explain alternative procedures here or in a separate rep Upland meadow in a swale within a crop field.	ort.)					
Spirata incadow in a swate within a crop field.						
VEGETATION - Use scientific names of plants.						
TECENTION CONTINUE NAMES OF PRAISE	Ahsolute	Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test	Worksheet	
1				Number of Domina		
2				Are OBL, FACW,	or FAC:	1 (A)
3				Total Number of D		2 (5)
4				Across All Strata:	· -	2 (B)
5		= Total Co		Percent of Domina		50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	090	- Iolai Co	vei		-	(
1				Prevalence Index		
2.				Total % Cov	ver of: M	
3				OBL species	0 x1 =	
4				FACW species	<u>0</u> x1 =	
5				FAC species	25 x1 =	
	0%	= Total Co	ver	FACU species	50 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28		, ,	,	UPL species Column Totals:	0 x1 = 75 x1 =	
Schedonorus arundinaceus, Tall False Rye Grass		yes	FACU_		ence Index = B/A =	、,
Poa pratensis, Kentucky Blue Grass Oisian and Control Thirth	E 0/	yes	FAC			0.001
3. <u>Cirsium arvense</u> , Canadian Thistle		no	<u>FACU</u>	Hydrophytic Veg	etation Indicators:	
Taraxacum officinale, Common Dandelion 5.		no	<u>FACU</u>	1 - Rapid Tes	st for Hydrophytic Ve	egetation
5. 6.				2 - Dominano	ce Test is > 50%	
7.				3 - Prevalend	ce Index is <= 3.0 ¹	
8.				4 - Morpholo	gical Adaptations ¹ (F	Provide .
9				supporting da sheet)	ata in Remarks or o	n a separate
10				PROBLEMAT	TIC Hydrophytic Veg	etation ¹ (Explain)
	75%	= Total Co	ver		f hydric soil and wetl	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					esent, unless disturbe	
1				Hydrophytic		
2				Vegetation		
	0%	= Total Co	ver	Present?	Ye	es No
Remarks: (Include photo numbers here or on a separate sheet.)						

	<u> </u>	r (moist) %	Type ¹	Loc ² Textu	ure Remarks
			· · _ · _ · _ · _ · _ · _ · _		
Type: C=Concentration, D=Deple	etion, RM=Reduce	ed Matrix, MS=Mask	ed Sand Grain	s. ² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S	e (A11)	Sandy Gleyed Sandy Redox Stripped Matri Loamy Mucky Loamy Gleyed Depleted Matr Redox Dark S Depleted Dark Redox Depres	(S5) ix (S6) ix (Mineral (F1) d Matrix (F2) rix (F3) Surface (F6) k Surface (F7)		Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed problematic.
Restrictive Layer (if observed): Type: Depth (inches):				_ Hydric Soil	Present? Yes No
/DROLOGY		<u>-</u>			
					Secondary Indicators (minimum of two required)
Vetland Hydrology Indicators:	ne required; check		Issues (PQ)		Surface soil cracks (B6)
Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface water (A1)	ne required; check	Water-stained I			Surface soil cracks (B6) Drainage patterns (B10)
Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2)	ne required; check	Water-stained I	(B13)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Vetland Hydrology Indicators: Primary Indicators (minimum of of Surface water (A1)	ne required; check	Water-stained I	(B13) lants (B14)		Surface soil cracks (B6) Drainage patterns (B10)
Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	ne required; checl	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic	(B13) lants (B14) de odor (C1)	iving roots (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3)	ne required; checl	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos	(B13) lants (B14) de odor (C1)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	ne required; chect	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re	(B13) lants (B14) de odor (C1) spheres along I)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	ne required; chect	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re	(B13) lants (B14) de odor (C1) spheres along l duced iron (C4 duction in tilled)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4) duction in tilled face (C7) data (D9))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Vetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	magery (B7)	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4) duction in tilled face (C7) data (D9))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)
Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	magery (B7)	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4) duction in tilled face (C7) data (D9))	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave Field Observations: Surface Water Present?	magery (B7) surface (B8) Yes	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well Other (Explain	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks)	soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave Field Observations: Surface Water Present? Water Table Present?	magery (B7) surface (B8) Yes Yes	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well Other (Explain No Depth (ir	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks) nches): nches):	soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave	magery (B7) surface (B8) Yes Yes	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well Other (Explain	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks) nches): nches):	soils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial ir Sparsely vegetated concave Field Observations: Surface Water Present? Water Table Present? Saturation Present?	magery (B7) surface (B8) Yes Yes Yes	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well Other (Explain No Depth (ir No Depth (ir	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks) nches): nches): nches):	soils (C6) Wetland Hy	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of or Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial in Sparsely vegetated concave Field Observations: Surface Water Present? Water Table Present? Saturation Present? includes capillary fringe)	magery (B7) surface (B8) Yes Yes Yes	Water-stained I Aquatic fauna (True aquatic pl Hydrogen sulfic Oxidized rhizos Presence of re Recent iron rec Thin muck surf Gauge or well Other (Explain No Depth (ir No Depth (ir	(B13) lants (B14) de odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks) nches): nches): nches):	soils (C6) Wetland Hy	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Enid/Olmsted Cou	unty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: bdp39
Investigator(s): Andy Kranz	Sect	ion, Township, Range: §	S24 T107N S013W
Lanform(hillslope, terrace, etc): Depression		Local reli	ef (concave, convex, none): concave
Slope(%): <u>3-7</u> Lat: <u>44.05521</u>		Long: -92.32967	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slop			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly Are Vegetation, Soil, or Hydrology naturally pro			Circumstances" present? Yes No Value No
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No		Is the Sampled Are within a Wetland?	a Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate reposed Seasonally flooded crop land at margin of wetland basin. VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.			Total Number of Dominant Species Across All Strata: 1 (B)
5.	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		- Total Cover	Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2. 3.			OBL species0 x1 =0
3. 4.			FACW species 40 x1 = 80
5.	-		FAC species0 x1 =0
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	-m²) quadrat)	UPL species0 x1 =0
Echinochloa crus-galli, Large Barnyard Grass	40%	yes FACW	Column Totals: <u>40</u> x1 = <u>80</u> (B)
2			Prevalence Index = B/A = 2.000
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9			sheet)
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	0%	= Total Cover	Hydrophytic Vegetation Present? Yes _ No
Boundary (to shade whate			100
Remarks: (Include photo numbers here or on a separate sheet.) Corn crop patchy to normal density but stunted in comparison with a	adjacent upl	land.	

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-2	10YR - 2/1	100	/				SCL	
								Second matrix loamy sand. Incorporated fr
2-12	10YR - 2/1	80	5YR-4/6	2	C	M	SiCL	below via tillage.
	10YR - 5/2	18	/					<u>-</u>
12-24	10YR - 5/1	<u>85</u>	5YR-4/6	15	C	M	LS	
ivne: C=C	oncentration, D=Dep	letion RM=	Reduced Matrix M	S=Masker	Sand Grai		ocation: PI	
	Indicators:	Tellon, Kivi-	Reduced Matrix, M	3-Masked	J Sand Grai	113.	LUCALIUII. FL	Indicators for Problematic Hydric Soils ³ :
Histic E Black H Hydroge Stratifie 2 cm M Deplete Thick D	I (or Histel) (A1) un- epipedon (A2) undef disti (A3) undefined en Sulfide (A4) d Layers (A5) duck (A10) ed Below Dark Surfa eark Surface (A12) Mucky Mineral (S1)	ined	Sandy Strippo Loamy Loamy Deplet Redox	y Gleyed N ted Matrix k Dark Sur	(S5) (S6) Ineral (F1) Matrix (F2) (F3) face (F6) Surface (F7)			Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and we hydrology must be present, unless disturbed problematic.
_	lucky Peat or Peat (S3)						
5 cm M	lucky Peat or Peat (
5 cm M						Hyd	ric Soil Pre	esent? Yes <u>✓</u> No
5 cm M estrictive Type: Depth (lucky Peat or Peat (Hyd	ric Soil Pre	esent? Yes <u>✓</u> No
5 cm M estrictive Type: Depth (emarks:	Layer (if observed) (inches):					Hyd	ric Soil Pre	esent? Yes <u>✓</u> No
5 cm M estrictive Type: Depth (emarks:	Layer (if observed) (inches):):				Hyd		
5 cm M estrictive Type: Depth (emarks:	Layer (if observed) (inches):	:	d; check all that ap	ply)		Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy imary Indi	Layer (if observed (inches):	:		ply) stained lea	aves (B9)	Hyd		Secondary Indicators (minimum of two required)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy imary India Surface	Layer (if observed (inches): OGY drology Indicators cators (minimum of	:	Water-s	stained lea c fauna (B:	13)	Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy imary Indic Surface High wa Saturati	Layer (if observed) (inches): OGY rdrology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3)	:	Water-s Aquatio True ac	stained lea c fauna (B: quatic plan	13) nts (B14)	Hyd	<u>§</u> 	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hyrimary India Surface High wa Saturati Water n	Layer (if observed) (inches): OGY Odrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1)	:	Water-s Aquatio True ao Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)		<u>S</u> 	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
5 cm M estrictive Type: Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime	Layer (if observed) (inches): OGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)	:	Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) nts (B14) odor (C1) heres along	living root	<u>S</u> 	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy etimary India Surface High wa Saturati Water n Sedime Drift de	Layer (if observed) (inches): OGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) not deposits (B2) posits (B3)	:	Water-s Aquatio True ao Hydrog Oxidize	stained leact fauna (B: quatic plangen sulfide ed rhizosphace of redu	13) hts (B14) odor (C1) heres along uced iron (C	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO retland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m	GY drology Indicators cators (minimum of water (A1) atter table (A2) ion (A3) marks (B1) mit deposits (B2) posits (B3) attor crust (B4)	:	Water-s Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C ction in tiller	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
5 cm M estrictive Type: Depth (emarks: DROLO rimary Indi Surface High wa Saturati Water n Sedime Drift de Algal m Iron de	Cayer (if observed) (inches): OGY Idrology Indicators cators (minimum of exators (Minimum of ex	: one require	Water-s Aquatio True ao Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reducuck surfac	nts (B14) odor (C1) heres along uced iron (C ction in tilled	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron del Inundat	CGY Idrology Indicators Cators (minimum of exators (Minimum of ex	: one require	— Water-s — Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m 7) — Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron del Inundat	Cayer (if observed) (inches): OGY Idrology Indicators cators (minimum of exators (Minimum of ex	: one require	— Water-s — Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m 7) — Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron de Inundat Sparsel	Cayer (if observed) (inches): (inches): OGY Idrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) marks (B1) marks (B3) mat or crust (B4) posits (B5) ion visible on aerial by vegetated concavi	: one require	— Water-s — Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m 7) — Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO fetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron del Inundat Sparsel ield Obser urface Wat	Cayer (if observed) (inches): (inches): OGY Idrology Indicators cators (minimum of exators (minimum of exators (B1)) int deposits (B2) posits (B3) inat or crust (B4) posits (B5) ion visible on aerial by vegetated concaviruations: ter Present?	imagery (B'		stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc inck surfac or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks)	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron del Inundat Sparsel eld Obser urface Water Table	Cayer (if observed) (inches): (inches): OGY drology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concaviruations: ter Present? Present?	imagery (B' e surface (E	Water-s	stained lead of fauna (B: quatic plan gen sulfide ed rhizosphance of reduction reduction well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water in Sedime Drift del Algal m Iron del Inundat Sparsel eld Obser urface Wat ater Table aturation P	Cayer (if observed) (inches): (inches): OGY Indrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) mit deposits (B2) posits (B3) mat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity vegetated concavity versent? Present?	imagery (B' e surface (E		stained lead of fauna (B: quatic plan gen sulfide ed rhizosphance of reduction reduction well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
5 cm M estrictive Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron de Inundat Sparsel eld Obser urface Wat dater Table atturation P includes ca	Cayer (if observed) (inches): (inches): (inches): OGY Inches (inches): Inches (inche	imagery (B' e surface (B' Ye	Water-s	stained lead control from the control fr	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
5 cm M estrictive Type: Depth (estrictive) Type: Depth (estrictive) for Algal m Iron dep Inundat Sparsel folio Obser urface Wat /ater Table aturation P ncludes ca	Cayer (if observed) (inches): (inches): OGY Indrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) mit deposits (B2) posits (B3) mat or crust (B4) posits (B5) ion visible on aerial by vegetated concavity vegetated concavity versent? Present?	imagery (B' e surface (B' Ye	Water-s	stained lead control from the control fr	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
5 cm M estrictive Type: Depth (emarks: //DROLO /etland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron de Inundat Sparsel ield Obser urface Wat //ater Table aturation P includes ca	Cayer (if observed) (inches): (inches): (inches): OGY Inches (inches): Inches (inche	imagery (B' e surface (B' Ye	Water-s	stained lead control from the control fr	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Cou	unty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: bdp40
nvestigator(s): Andy Kranz	Secti	ion, Township, Range: S	S24 T107N S013W
.anform(hillslope, terrace, etc): Backslope		Local relie	ef (concave, convex, none): none
Slope(%): 8-15 Lat: 44.05513		Long: -92.32998	Datum: WGS 84
oil Map Unit Name: 479: Floyd silt loam, 1 to 4 percent slopes			NWI classification:
are climatic / hydrologic conditions on the site typical for this time of year	ear?	Yes 🗸 No	o (If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology Significantly of naturally probability of the Vegetation, Soil, or Hydrology	olematic?	(If needed, ex	Circumstances" present? Yes No plain any answers in Remarks.)
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No		Is the Sampled Area within a Wetland?	
Upland crop field on a slope. /EGETATION - Use scientific names of plants.			
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3			Total Number of Dominant Species Across All Strata: 1 (B)
5.		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- Total Cover	Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 2 x1 = 4
4			FAC species 0 x1 = 0
5			FACU species 0 x1 = 0
	0%	= Total Cover	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-ft 1. <u>Echinochloa crus-galli</u> , Large Barnyard Grass	2%	yes FACW	UPL species $0 \times 1 = 0$ Column Totals: $2 \times 1 = 4 \times 6$ Prevalence Index = B/A = 2.000
2			Hydrophytic Vegetation Indicators:
4			
5			✓ 1 - Rapid Test for Hydrophytic Vegetation
6			✓ 2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9.			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Corn crop healthy. Very sparse volunteer soybean seedlings present. from a wetland is a common occurrence.	. The spars	e presence of the FACV	N Echinochloa crus-gali in an upland crop field upslope

JOIL								
Profile Desc	cription: (Describe Matrix	to the dep		ment the edox Feat		r confir	m the abse	nce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-14	10YR - 2/1	100	/				SiCL	
14-18	10YR - 4/1	80	5YR-4/4	20	С	М	C	
18-24	10YR - 5/1	60	5YR-4/6	40	С	М	c	
								_
1 _{Typo:} C=C	oncentration, D=Dep	lotion DM-	- Doduced Matrix M	C-Mackac			2 ₁ coation:	PL=Pore Lining, M=Matrix.
Hydric Soil		Jielion, Rivi-	Reduced Matrix, M	3-Masket	J Saliu Glai	115.	LUCAIIOII.	•
•	l (or Histel) (A1) un	defined	Sandy	Gleved N	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	pipedon (A2) undef			Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)			Other (Explain in Remarks)
	luck (A10) ed Below Dark Surfa	co (A11)		ted Matrix CDark Sur				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	oark Surface (A12)	ce (AII)			Surface (F7)			problematic.
	Mucky Mineral (S1)			Depressi				
5 cm M	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)):						
Type:	<u></u> (inches): <u></u>					H	ydric Soil P	resent? Yes _ ✓ No
•	(ITICHES). <u> </u>							
Remarks:								
HYDROLO	nc.v							
	drology Indicators	-						Secondary Indicators (minimum of two required)
•	cators (minimum of		d; check all that ap	ply)				Surface soil cracks (B6)
	e water (A1)	,	•	stained lea	aves (B9)			Drainage patterns (B10)
High wa	ater table (A2)		Aquatio	c fauna (B	13)			Dry-season water table (C2)
	ion (A3)			quatic plar				Crayfish burrows (C8)
	marks (B1)				odor (C1)	listan na	(C2)	Saturation visible on aerial imagery (C9)
	ent deposits (B2) posits (B3)				heres along uced iron (C	_	00IS (C3)	Stunted or stressed plants (D1) Geomorphic position (D2)
	nat or crust (B4)				ction in tilled	•	C6)	FAC-neutral test (D5)
	posits (B5)			uck surfac		`	,	
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	ly vegetated concav	e surface (E	38) Other (Explain in	Remarks)			
Field Obser	rvations:							
Surface Wat			es No 🗸 [-	— I		
Water Table Saturation P			es No _ 🗸 _ [es No 🗸 _ [-	_ w	etiand Hydi	rology Present? Yes No
	pillary fringe)	10	31101_1	Jepui (iiici		_		
Describe Re	ecorded Data (strear	n gauge, m	onitoring well, aeria	l photos, p	orevious insp	pections)), if available	9:
Remarks:								
rvemarks.								

Project/Site: Lemon Hill	City/Co	ounty: Enid/0	Olmsted Cou	nty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power				:: MN Sampling Point: bdp41
Investigator(s): Andy Kranz	Sect	ion, Townsh		
Lanform(hillslope, terrace, etc): Depression		,		ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05681		Long: -92	.32551	Datum: WGS 84
Soil Map Unit Name: 1846: Kato silty clay loam, depressional				NWI classification: PSS1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		la tha C		
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes <u>✓</u> No				
Remarks: (Explain alternative procedures here or in a separate report Hardwood swamp in a basin. Part of a complex of wetland commun				
That are of a somplex of welland community	11100.			
VEGETATION - Use scientific names of plants.				
Technical des solename maines et plante.	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
Populus deltoides, Eastern Cottonwood	45%	yes	FAC	Number of Dominant Species That
2. Salix euxina, Crack Willow	15%	yes	FAC	Are OBL, FACW, or FAC: 6 (A)
3				Total Number of Dominant Species
4				Across All Strata:
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 85.714% (A/B)
	60%	= Total Co	ver	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	1004	VOC	OPI	Prevalence Index worksheet:
Salix petiolaris, Meadow Willow Salix eriocephala, Missouri Willow	10%	<u>yes</u> yes	OBL FACW	Total % Cover of: Multiply by:
Salix discolor, Pussy Willow	5%	no	FACW	OBL species10 x1 =10
4. Rhamnus cathartica, European Buckthorn	5%	no	FAC	FACW species 70 x1 = 140
5.				FAC species <u>65</u> x1 = <u>195</u>
	30%	= Total Co	ver	FACU species <u>10</u> x1 = <u>40</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	nt)	UPL species <u>0</u> x1 = <u>0</u>
Impatiens capensis, Spotted Touch-Me-Not	25%	yes	FACW	Column Totals: $\underline{155}$ x1 = $\underline{385}$ (B)
2. Phalaris arundinacea, Reed Canary Grass	20%	yes	FACW	Prevalence Index = B/A = 2.484
3. Solidago gigantea, Late Goldenrod	10%	no	FACW	Hydrophytic Vegetation Indicators:
4. Parthenocissus quinquefolia, Virginia-Creeper	5%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate
9				sheet)
10.	60%	= Total Co	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	0070	Total Co	• • • • • • • • • • • • • • • • • • • •	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Parthenocissus quinquefolia, Virginia-Creeper	5%	yes	FACU	made be present, amess distarbed of problemation
2.				Hydrophytic Vegetation
	5%	= Total Co	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				
The state of the separate sites.				

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR - 2/1	95	5YR-3/4	5	С	М	CL		
5-12	10YR - 3/1	95	5YR-3/4	5	С	М	С		
				-				_	
			<u> </u>						
Type: C=C	oncentration, D=Dep	letion, RM=I	Reduced Matrix, M	S=Masked	Sand Grain	ns. 2	Location: Pl		
ydric Soil	Indicators:							Indicators for Problematic Hydric S	Soils ³ .
-	l (or Histel) (A1) und	defined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)	Jons .
Histic E	pipedon (A2) undefi	ned	Sandy	y Redox (S	S5)			Dark Surface (S7)	
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)	
Hydrog	en Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF1	2)
Stratifie	d Layers (A5)		Loam	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)	
2 cm M	luck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegeta	ition and wetla
Deplete	ed Below Dark Surfac	ce (A11)	✓ Redox	x Dark Sur	face (F6)			hydrology must be present, unl	ess disturbed
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.	
Sandy	Mucky Mineral (S1)		Redox	x Depressi	ons (F8)				
5 cm M	lucky Peat or Peat (33)							
estrictive	Layer (if observed)	:							
Type:	<u> </u>					Hyd	Iric Soil Pre	sent? Yes	s <u> </u>
Danth									
demarks:	(inches): <u></u>								
emarks:						_			
emarks:	oGY					_			
remarks: 'DROLO Vetland Hy	DGY rdrology Indicators:		l: chock all that an	nh/)			0.1	Secondary Indicators (minimum of two	required)
emarks: 'DROLO 'etland Hy rimary Indi	OGY rdrology Indicators: cators (minimum of o				aves (B9)		<u> </u>	Surface soil cracks (B6)	required)
POROLO Petland Hy rimary Indi Surface	oGY rdrology Indicators: cators (minimum of o		Water-	stained lea	. ,		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)	required)
'DROLO /etland Hy rimary Indi Surface High wa	ody drology Indicators: cators (minimum of e water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B	13)		-	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	required)
POROLO Petland Hy rimary Indi Surface High wa Saturat	ordrology Indicators: cators (minimum of example water (A1) ater table (A2) ion (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	13) nts (B14)		-	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
TDROLO Vetland Hy rimary Indi Surface High wa Saturat Water r	ordrology Indicators: cators (minimum of exter (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)	livina root	 - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager	
POROLO Petland Hy rimary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•	- - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1)	
POROLO Petland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water- Aquatio True a Hydrog Oxidize Preser	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) ater crust (B4)		Water- Aquation True and Hydrog Oxidize Present	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (Co	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1)	
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquation True and Hydrog Oxidize Presen Recent	stained lead c fauna (B quatic plar gen sulfide ed rhizosplance of redutiron reductions statistics.	nts (B14) odor (C1) heres along uced iron (C- ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	extraction (Maintenance of the Water (A1) atter table (A2) atter table (A2) atter table (B1) and deposits (B2) posits (B3) atter or crust (B4) posits (B5) atter or visible on aerial	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C- ction in tilled te (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C- ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	
Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	redrology Indicators: cators (minimum of of exators (M2)) indicators (M3) indicators (M3) indicators (M3) indicators (M3) indicators (M3) indicators (M3) indicators (M4) indicators (M3) i	one required imagery (B7 e surface (B8	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along iced iron (Ciction in tilled te (C7) ata (D9) Remarks)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2)	
/DROLO /etland Hy rimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel urface Wat	order various (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present?	one required imagery (B7 e surface (B8 Ye:	Water- Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks)	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)
Property of the control of the contr	redrology Indicators: cators (minimum of exactors (imagery (B7 e surface (B6 Ye: Ye:	Water- Aquatical	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes): 5	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	
rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order various (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B6 Ye: Ye:	Water- Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes): 5	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)
Property of the control of the contr	rdrology Indicators: cators (minimum of of exter (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquation	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 5 hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)
Emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Vetled Observer Vater Table aturation F ncludes ca	order various (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquation	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 5 hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)
Emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Veter Table atturation F Includes ca	rdrology Indicators: cators (minimum of of exter (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquation	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes): 5 hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)
Emarks: DROLO Tetland Hy Imary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Obsei urface Water Table aturation F ncludes ca	rdrology Indicators: cators (minimum of of exter (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquation	stained lead of the control of the c	13) odor (C1) heres along uced iron (Cction in tilled te (C7) ata (D9) Remarks) hes): hes): 5	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imager Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	y (C9)

Project/Site: Lemon Hill	City/Co	ounty: Enid/0	Olmsted Cou	nty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power				: MN Sampling Point: bdp42
Investigator(s): Andy Kranz	Sect	ion, Townsh		
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.05616		Long: -92.	.32684	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slo	pes			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
-				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		lo the C	ampled Area	
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes <u>✓</u> No				
Remarks: (Explain alternative procedures here or in a separate reposition of a basin. Part of a complex of wetland communities.	ort.)			
Sinus car in a sasin. Fait of a complex of wetand communities.				
VEGETATION - Use scientific names of plants.				
VECENTION Coc solentine names of plants.	Ahsoluta	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test Worksheet
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 6 (A)
3				Total Number of Dominant Species
4		-		Across All Strata: 7 (B)
5		- Total Co		Percent of Dominant Species That Are OBL, FACW, or FAC: 85.714% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Co	vei	
Salix petiolaris, Meadow Willow	70%	yes	OBL	Prevalence Index worksheet:
Salix discolor, Pussy Willow	100/		FACW	Total % Cover of: Multiply by:
3				OBL species 70
4.				FACW species 45 x1 = 90
5				FAC species $25 \times 1 = 75$
	80%	= Total Co	ver	FACU species 20 x1 = 80
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	at)	UPL species $0 \times 1 = 0$
Circaea canadensis, Broad-Leaf Enchanter's-Nightshade	20%	yes	FACU	Column Totals: $160 \text{ x1} = 315 \text{ (B)}$
2. <u>Cryptotaenia canadensis</u> , Canadian Honewort	15%	yes	<u>FAC</u>	Prevalence Index = B/A = 1.969
3. Phalaris arundinacea, Reed Canary Grass	10%	yes	FACW	Hydrophytic Vegetation Indicators:
4. Packera aurea, Golden Groundsel	10%	yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Poa pratensis, Kentucky Blue Grass	10%	yes	FAC	2 - Dominance Test is > 50%
Equisetum pratense, Meadow Horsetail Solidago gigantea, Late Goldenrod	<u>10%</u> 5%	yes no	FACW FACW	$\underline{}$ 3 - Prevalence Index is <= 3.0^1
			PACVV	4 - Morphological Adaptations ¹ (Provide
9.				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	80%	= Total Co	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hardwoods die
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ _ No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: <u>bdp42</u>

	cription: (Describe Matrix	to the dep		ment the edox Feat		confirm	the abser	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
(mones)	Color (moist)	70	Color (moist)		Турс	LOC	Mucky	
0-3	10YR - 2/1	100	/				Loam	
4-10	10YR - 2/1	96	5YR-3/4	2	С	М	С	
	/		10YR-4/1	2		М		
					·			
			·	-	· ——		-	
					· 			
				-				
								_
	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grair	ıs. ⁴	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil		dofinad	Sand	Clayed N	Antriv (CA)			Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und pipedon (A2) undef			/ Gleyeu i / Redox (S	Matrix (S4)			Coast Prairie Redox (A16)
	listi (A3) undefined	illeu		ed Matrix	•			Dark Surface (S7)
	en Sulfide (A4)				nineral (F1)			Iron-Manganese Masses (F12)
	d Layers (A5)			-	Matrix (F2)			Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	luck (A10)			ted Matrix				
Deplete	ed Below Dark Surfa	ce (A11)		C Dark Sui				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.
Sandy I	Mucky Mineral (S1)		Redox	c Depressi	ions (F8)			
5 cm M	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)	:						
Type:	<u></u>					Hyd	dric Soil Pı	esent? Yes _ ✓ No
Depth ((inches): <u></u>					_		
Remarks:						<u> </u>		
HYDROLO	GY							
•	drology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one require			(DO)			Surface soil cracks (B6)
	water (A1)			stained lea	. ,			Drainage patterns (B10) Dry-season water table (C2)
Flight wa	ater table (A2)			c fauna (B				Crayfish burrows (C8)
	narks (B1)			quatic plai	odor (C1)			Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	livina roo	nts (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	•	no (00)	Geomorphic position (D2)
	at or crust (B4)				ction in tilled	•	6)	✓ FAC-neutral test (D5)
	posits (B5)			uck surfac			- 7	
	ion visible on aerial	imagery (B		or well da				
Sparsel	y vegetated concave	e surface (E	38) Other	(Explain in	Remarks)			
Field Observe	40							
Field Obser Surface Wat		V	es No _ 🗸 _	Donth (inc	hoc):			
Water Table			es <u> </u>			— We	tland Hydr	ology Present? Yes <u>✓</u> No
Saturation P			es No			_ '''	aana riyar	165165
	pillary fringe)			-1 (_		
Describe Re	ecorded Data (stream	n gauge, m	onitoring well, aeria	l photos, r	orevious insc	ections).	if available	
	`	0 0 ,	5 ,			,,		
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: Enid/Olmsted Cou	unty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: bdp43
Investigator(s): Andy Kranz	Sect	ion, Township, Range: §	S24 T107N S013W
Lanform(hillslope, terrace, etc): Backslope		Local reli	ef (concave, convex, none): none
Slope(%): 8-15 Lat: 44.0564		Long: -92.32699	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent	slopes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes 🎤 N	o (If no, explain in Remarks.)
Are Vegetation 🧳 , Soil , or Hydrology Significan	itly disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally	problematic?		cplain any answers in Remarks.)
CLIMMARY OF FINISHINGS. Attack site was about	.i		
SUMMARY OF FINDINGS - Attach site map show	ing sampii	ing point location	is, transects, important features, etc.
Hydrophytic Vegetation Present? Yes I hydrin Sail Brasant?		Is the Sampled Are	a
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		within a Wetland?	Yes No
Remarks: (Explain alternative procedures here or in a separate re			
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1 2			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
34.			Total Number of Dominant Species Across All Strata: 1 (B)
5.		- Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover	Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 5 x1 = 10
45.			FAC species 0 x1 = 0
5	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.			UPL species0 x1 =0
Echinochloa crus-galli, Large Barnyard Grass		yesFACW_	Column Totals: <u>5</u> x1 = <u>10</u> (B)
2			Prevalence Index = B/A = 2.000
3.			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7.			4 - Morphological Adaptations ¹ (Provide
8.			supporting data in Remarks or on a separate
9			sheet)
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Corn crop healthy. Very sparse volunteer soybean seedlings pres from a wetland is a common occurrence.	sent. The spars	se presence of the FAC	W Echinochloa crus-gali in an upland crop field upslope

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10YR - 2/1	100	/				SiCL	
18-24	10YR - 3/1	90	5YR-4/4	10		М	С	
								-
								-
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grai	ns. ²	Location: PL	
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) un o	defined	Sandy	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	/ Redox (S	S5)			Dark Surface (S7)
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5) luck (A10)			y Gleyed i ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	ed Below Dark Surfa	ce (A11)	 ·	k Dark Sur	` '			³ Indicators of hydrophytic vegetation and wi hydrology must be present, unless disturbe
	Oark Surface (A12)	,			Surface (F7)			problematic.
Sandy	Mucky Mineral (S1)		Redo>	x Depressi	ons (F8)			
5 cm M	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)	:						
Type:	<u> </u>					Hyd	Iric Soil Pre	sent? Yes No
	·							
Depth Remarks:	(inches): <u></u>							
Remarks:						_		
Remarks:	oGY					_		
Remarks:	OGY rdrology Indicators:		di abadi all that an	oh à			<u>s</u>	Secondary Indicators (minimum of two required)
Primary Indi	OGY rdrology Indicators: cators (minimum of				aves (B9)		<u>s</u>	Surface soil cracks (B6)
Primary India	OGY rdrology Indicators:		Water-	ply) stained lea c fauna (B		_	<u> </u>	· · · · · · · · · · · · · · · · · · ·
Primary Indi Surface High wa	ody rdrology Indicators: cators (minimum of water (A1)		Water- Aquatio	stained lea	13)		<u>§</u>	Surface soil cracks (B6) Drainage patterns (B10)
Primary Indi Surface High w Saturat	ody odrology Indicators: cators (minimum of e water (A1) ater table (A2)		Water- Aquatio True ao	stained lea c fauna (B quatic plar	13)	_	<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Primary Indi Surface High was Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water-:AquatioTrue aoHydrogOxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High w. Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) hodor (C1) heres along uced iron (C	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) ater crust (B4)		Water Aquatic True ac Hydrog Oxidize Presen Recent	stained lead c fauna (B quatic plar gen sulfide ed rhizosplarce of redut iron redu	nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	oddy redrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of redutiron redunuck surfac	nts (B14) c odor (C1) heres along uced iron (C ction in tilled ce (C7)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) ater crust (B4)	one required	Water Aquation True an Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required	Water Aquation True an Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) c odor (C1) heres along uced iron (C ction in tilled ce (C7)	4)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Water Table Saturation F includes ca	order various in the content of the	imagery (B7 e surface (B Ye Ye		stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Permarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Sield Obset Surface Water Table Saturation F Includes ca	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? present?	imagery (B7 e surface (B Ye Ye		stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Enid/0	Olmsted Cou	nty	Sampling Date: 2	2024-06-04
Applicant/Owner: Ranger Power					Sampling Point: b	
Investigator(s): Andy Kranz						
				f (concave, convex,		
Slope(%): 3-7 Lat: 44.05692		Long: -92	.32928		Datum: WC	GS 84
Soil Map Unit Name: 479: Floyd silt loam, 1 to 4 percent slopes				NWI classific	cation: <u></u>	
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Y	es , No	(If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			ircumstances" pres	ent? Yes , No	
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			olain any answers ir	<u>-</u>	
SUMMARY OF FINDINGS - Attach site map showin	ig sampli	ing point	location	s, transects, in	nportant featur	es, etc.
Hydrophytic Vegetation Present? Yes No		le the S	ampled Area			
Hydric Soil Present? Yes No			Wetland?		Yes	No <u></u> ✓
Wetland Hydrology Present? Yes ✓ No						
Remarks: (Explain alternative procedures here or in a separate report Upland meadow in a swale within a crop field.	ort.)					
opiana meadow in a swale wallin a stop hold.						
VEGETATION - Use scientific names of plants.						
VEGETATION COS SOIEMAND NAMES OF PLANTS!	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test	Worksheet	
1				Number of Domina	ant Species That	
2				Are OBL, FACW,	or FAC:	<u>0</u> (A)
3				Total Number of D		1 (5)
4				Across All Strata:	=	<u>1</u> (B)
5	· · ·			Percent of Domina		0% (A/B)
Sanling/Shrub Stratum (Diet cize:15 ft (4.6 m) radius)		= Total Co	ver		_	(, (, 5)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1				Prevalence Index	worksheet:	
2.	· · ·			Total % Cov	ver of: Mu	ultiply by:
3.				OBL species	0 x1 =	
4				FACW species	0 x1 =	
5				FAC species	<u>15</u> x1 =	
	0%	= Total Co	ver	FACU species	<u>85</u> x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1	m²) quadra	at)	UPL species	<u> </u>	
Bromus inermis, Smooth Brome	75%	yes	FACU	Column Totals:	100 x1 =	、,
2. <u>Poa pratensis</u> , Kentucky Blue Grass		no	FAC	Prevale	ence Index = B/A =	3.850
3. <u>Cirsium arvense</u> , Canadian Thistle		no	<u>FACU</u>	Hydrophytic Veg	etation Indicators:	
4. <u>Taraxacum officinale</u> , Common Dandelion		no	FACU	1 - Rapid Tes	st for Hydrophytic Ve	egetation
5				2 - Dominano	ce Test is > 50%	
6				3 - Prevalend	ce Index is $\leq 3.0^1$	
8.				4 - Morpholo	gical Adaptations ¹ (F	Provide
9.				supporting da sheet)	ata in Remarks or or	n a separate
10.					TIC Hydrophytic Vege	otation ¹ (Evolain)
	100%	= Total Co	ver	 ,		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					f hydric soil and wetla esent, unless disturbe	
1				<u> </u>		
2				Hydrophytic Vegetation		
	0%	= Total Co	ver	Present?	Ye	s No
Remarks: (Include photo numbers here or on a separate sheet.)						

Depth (inches) Color (moist) %	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks	
Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, N	//S=Masked S	Sand Grains	. ² Loc	cation: PL	=Pore Lining, M=Matrix.	
ydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A1 Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Sand Stripp Loam Loam Deple Loam Deple Loam Deple Loam Deple Loam	ly Gleyed Ma ly Redox (S5) ped Matrix (S ny Mucky Min ny Gleyed Ma eted Matrix (F ox Dark Surfa eted Dark Sur ox Depression) 66) neral (F1) atrix (F2) -3) nce (F6) rface (F7)			Indicators for Problematic Hyd Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F: Very Shallow Dark Surface Other (Explain in Remarks) 3Indicators of hydrophytic ve hydrology must be present problematic.	12) (TF12) egetation and wetla
estrictive Layer (if observed):							
Type: <u></u> Depth (inches): <u></u> emarks: oil sample unnecessary due to lack o	f hydrophytic vegetation	n and lack of	hydrology i		Soil Pre	sent?	Yes No _ _
Depth (inches): emarks:	f hydrophytic vegetation	n and lack of	hydrology i		Soil Pre	sent?	YesNo
Depth (inches): emarks: oil sample unnecessary due to lack o	f hydrophytic vegetation	n and lack of	hydrology i			econdary Indicators (minimum of	
Depth (inches): emarks: oil sample unnecessary due to lack of /DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one re	quired; check all that a	oply)				econdary Indicators (minimum of Surface soil cracks (B6)	
Depth (inches): emarks: oil sample unnecessary due to lack of /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one reSurface water (A1)	quired; check all that a	oply) -stained leave	es (B9)			econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inches): emarks: oil sample unnecessary due to lack of //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2)	quired; check all that a Water Aquat	oply) -stained leav ic fauna (B13	es (B9)			econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (inches): remarks: oil sample unnecessary due to lack of DROLOGY // DROLOGY // Land Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2) Saturation (A3)	quired; check all that a Water Aquat True a	oply) -stained leav ic fauna (B13 aquatic plants	es (B9) 3) 5 (B14)			econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	f two required)
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Depth (inches): remarks: oil sample unnecessary due to lack of DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	quired; check all that a Water Aquat True a Hydro Oxidiz	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o ted rhizosphe	es (B9) 3) 5 (B14) dor (C1) eres along liv	ndicators.	<u>S</u>	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D	f two required)
Depth (inches): remarks: oil sample unnecessary due to lack of DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	quired; check all that a — Water — Aquat — True a — Hydro — Oxidiz — Prese	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o ted rhizosphe nce of reduce	es (B9) B) G (B14) Hodor (C1) Heres along lived iron (C4)	ndicators.	<u>S</u>	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	f two required)
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Depth (inches): emarks: oil sample unnecessary due to lack of //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one reSurface water (A1)High water table (A2)Saturation (A3)Water marks (B1)Sediment deposits (B2)Drift deposits (B3)Algal mat or crust (B4)Iron deposits (B5)	quired; check all that a — Water — Aquat — True a — Hydro — Oxidiz — Prese — Recer — Thin r y (B7) — Gauge	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o red rhizosphe nce of reduce nt iron reducti nuck surface	es (B9) 3) 5 (B14) dor (C1) eres along lived iron (C4) ion in tilled s (C7) a (D9)	ndicators.	<u>S</u>	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	f two required)
Depth (inches): emarks: oil sample unnecessary due to lack of //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imager	quired; check all that a — Water — Aquat — True a — Hydro — Oxidiz — Prese — Recer — Thin r y (B7) — Gauge	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o ted rhizosphe nce of reduce nt iron reducti nuck surface	es (B9) 3) 5 (B14) dor (C1) eres along lived iron (C4) ion in tilled s (C7) a (D9)	ndicators.	<u>S</u>	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2)	f two required)
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Depth (inches): emarks: oil sample unnecessary due to lack of /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one re Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imager Sparsely vegetated concave surface Water Present?	quired; check all that a — Water — Aquat — Hydro — Oxidiz — Prese — Recer — Thin r y (B7) — Gaugo ce (B8) — Other	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o red rhizosphe nce of reduce nt iron reducti nuck surface e or well data (Explain in R	es (B9) B) B (B14) B (C1) B eres along lived iron (C4) B (C7) B (C7) B (D9) B emarks) B (C5) B (C7)	ving roots (Cosoils (S S	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)
Depth (inches): emarks: oil sample unnecessary due to lack of sample unnecessary descriptions. Vater marks (B1)	quired; check all that an water Aquat Aquat True and Hydro Oxidiz Prese Recer Thin received (B8) Other Yes No Yes	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o red rhizosphe nce of reduce it iron reducti nuck surface e or well data (Explain in R Depth (inche Depth (inche	es (B9) 3) 5 (B14) dor (C1) eres along lived iron (C4) ion in tilled s (C7) a (D9) Remarks) es): es):	ving roots (Casoils (C6)	S S	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)
Depth (inches): remarks: oil sample unnecessary due to lack of sample unnecessary described unnecessary due to lack of sample unnecessary	quired; check all that an water Aquat Aquat True and Hydro Oxidiz Prese Recer Thin received (B8) Other Yes No Yes	oply) -stained leave ic fauna (B13 aquatic plants gen sulfide o red rhizosphe nce of reduce it iron reducti nuck surface e or well data (Explain in R Depth (inche Depth (inche	es (B9) 3) 5 (B14) dor (C1) eres along lived iron (C4) ion in tilled s (C7) a (D9) Remarks) es): es):	ving roots (Casoils (C6)	S S	econdary Indicators (minimum of Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial im Stunted or stressed plants (D Geomorphic position (D2) FAC-neutral test (D5)	agery (C9)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power			: MN Sampling Point: bdp45
Investigator(s): Andy Kranz	Section	on, Township, Range: S	24 T107N S013W
			ef (concave, convex, none): concave
Slope(%): 3-7 Lat: 44.05653		Long: -92.33124	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent slo	pes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly	disturbed?		Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, exp	plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showin	g sampliı	ng point locations	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		In the Country of Augus	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate reportance Low gradient wetland swale in a crop field.	ort.)		
Low gradient wetand swale in a crop held.			
VEGETATION - Use scientific names of plants.			
VEGETATION - OSE SCIENTIFIC Harries of plants.		Dominout Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Continue (Charles Charles of Charles and 5 (4 (4 Cons) and the charles	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species 50 x1 = 100
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1-	m²) quadrat)	UPL species0 x1 =0
Cyperus esculentus, Chufa		yes FACW	Column Totals: $\underline{50}$ x1 = $\underline{100}$ (B)
2. Echinochloa crus-galli, Large Barnyard Grass	5%	no FACW	Prevalence Index = B/A =2.000
3			Hydrophytic Vegetation Indicators:
4			✓ 1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
6			\checkmark 3 - Prevalence Index is $\leq 3.0^1$
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	50%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			The decords at a
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ _ No
Remarks: (Include photo numbers here or on a separate sheet.)	aa unland		
Corn crop is patchy and slightly stunted in comparison to surroundir	ig uplatiu.		

2-6 10YR - 2/1 98 10YR-3/1 2 D M 6-12 10YR - 2/1 93 10YR-3/1 5 D M / 5YR-4/6 2 C M/	CC CC CC CD
10YR - 2/1 93 10YR-3/1 5 D M 10YR-3/1 5 D M	on: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Plydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Cem Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sestrictive Layer (if observed): Type: Type: Type: Depth (inches): Type: Depth (inches): Type: Semarks: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Mater-stained leaves (B9)	on: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Addric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sestrictive Layer (if observed): Type: Type: Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	on: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. # Histosol (or Histel) (A1) undefined	Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Stratified Layer (if observed): Type: Type: Depth (inches): Remarks: MDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Sandy Gleyed Matrix (S4) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Depleted Matrix (F3) Primary Indicators (minimum of one required; check all that apply) Mater-stained leaves (B9)	Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histosol (or Histel) (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Type: Depth (inches): Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Mater-stained leaves (B9)	Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histosol (or Histel) (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Stratified Layers (A5) Stratified Layers (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Strady Mucky Mineral (S1) Strady Mucky Mineral (S1) Strady Mucky Mineral (S1) Strady Mucky Mineral (S1) Strady Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Hydric So Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Sandy Gleyed Matrix (S4) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Depleted Matrix (F3) Depleted Ma	Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Histosol (or Histel) (A1) undefined Sandy Gleyed Matrix (S4) Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Somethic trick Layer (if observed): Redox Depressions (F8) Hydric Somethic trick Layer (if observed): Hydric Somethic trick Layer (if observed): Hydric Somethic trick Layer (if observed):	Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed of problematic.
Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F7) Sandy Mucky Mineral (S1) Type: Depth (inches): Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Pepleted Matrix (F3) Depleted Matrix (F3) Pepleted Matrix (F3) Depleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F3) Pepleted Matrix (F2) Pepleted Matrix (F2) Pepleted Matrix (F3) Pepleted Matrix (F	Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Black Histi (A3) undefined Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Hydric So Depth (inches): Hydric So Perimary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed of problematic.
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Loamy Mucky Mineral (F1) Edomy Gleyd Matrix (F2) Depleted Matrix (F2) Pedox Derivative (F6) Hydric So	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed of problematic.
Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Hydric So Depth (inches): Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed of problematic.
2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	³ Indicators of hydrophytic vegetation and wetlar hydrology must be present, unless disturbed o problematic.
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply) Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Hydric So Hydric So Water-stained leaves (B9)	hydrology must be present, unless disturbed o problematic.
Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Hydric So Depth (inches): Hydric So Remarks: Hydric So Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	problematic.
S cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	vil Present? Yes <u>✓</u> No
Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	il Present? Yes <u>✓</u> No
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	vil Present? Yes <u>✓</u> No
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	il Present? Yes <u>✓</u> No
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	
	
Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)	Connection to Indicators (minimum of two years in all
Surface water (A1) Water-stained leaves (B9)	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	Drainage patterns (B10)
· ··g·· · · · · · · · · · · · · ·	Dry-season water table (C2)
Saturation (A3) True aquatic plants (B14)	Crayfish burrows (C8)
Water marks (B1) Hydrogen sulfide odor (C1)	Saturation visible on aerial imagery (C9)
Sediment deposits (B2) Oxidized rhizospheres along living roots (C3)	
Drift deposits (B3) Presence of reduced iron (C4)	Geomorphic position (D2)
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6)	✓ FAC-neutral test (D5)
Iron deposits (B5) Inundation visible on aerial imagery (B7) — Thin muck surface (C7) Gauge or well data (D9)	
Sparsely vegetated concave surface (B8) Other (Explain in Remarks)	
<u> </u>	
Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches):	
	Hydrology Present? Yes ✓ No
Saturation Present? Yes No _ ✓ Depth (inches):	,
includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available	able:
Remarks:	

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Cou	nty Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp46
Investigator(s): Andy Kranz			
Lanform(hillslope, terrace, etc): Backslope			
Slope(%): 8-15 Lat: 44.05653		Long: -92.33142	Datum: WGS 84
Soil Map Unit Name: 479: Floyd silt loam, 1 to 4 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	/ disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Ic the Campled Area	
Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes No		Is the Sampled Area within a Wetland?	Yes No 🛂
Remarks: (Explain alternative procedures here or in a separate rep Upland crop field.	ort.)		
opinion of production			
VEGETATION - Use scientific names of plants.			
Telegrament des coloniums mannes en planten	Ahsolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3	· ——		Total Number of Dominant Species
4			Across All Strata:0 (B)
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- Iolai Covei	Prevalence Index worksheet:
1			
2	· ·		Total % Cover of: Multiply by:
3			OBL species $0 \text{ x1} = 0$
4			FACW species 0 x1 = 0 FAC species 0 x1 = 0
5			FAC species0 x1 =0 FACU species0 x1 =0
		= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28		·m²) quadrat)	Column Totals: $0 \times 1 = 0$ (B)
1.			Prevalence Index = B/A = NaN
2. 3.			
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			supporting data in Remarks of on a separate
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Manda Man Otratura (Diata in 200 ft (0.4 m) andica)	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2		= Total Cover	Vegetation Present? Yes No ✓
Domarke: (Include photo numbers have or on a conserve sheet)		22.0.	165 140 -
Remarks: (Include photo numbers here or on a separate sheet.) No spontaneous vegetation present. Corn crop is full statured and	dense in line	with the field as a whol	e.
			,

Profile Desc	cription: (Describe Matrix	to the dep		ment the		r confirm	n the absen	ice of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	– Texture	Remarks
0-16	10YR - 2/1	100	/				CL	- Nomano
16-22	10YR - 2/1	98	10YR-3/1	2	D	M		
							_	
22-30	10YR - 4/1	90	10YR-4/6	10	<u> </u>	M	C	
								<u> </u>
								- -
								- -
¹ Type: C=Co	 oncentration, D=Dep	 letion_RM=	Reduced Matrix M	S=Maske	d Sand Grain		² I ocation: F	PL=Pore Lining, M=Matrix.
Hydric Soil			Troudou manny m		<u> </u>		2004	
-	(or Histel) (A1) und	lefined	Sandy	Gleved I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ :
	pipedon (A2) undefi			Redox (Coast Prairie Redox (A16) Dark Surface (S7)
Black H	isti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loamy	/ Mucky N	Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			-	Matrix (F2)			Other (Explain in Remarks)
	uck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and wetland
l — ·	d Below Dark Surfac	ce (A11)			rface (F6)			hydrology must be present, unless disturbed or problematic.
	ark Surface (A12) Mucky Mineral (S1)			ed Dark Depress	Surface (F7)			F
	ucky Peat or Peat (\$	53)	Kedo/	Depless	ions (Fo)			
	Layer (if observed)							
Type:		•				н	dric Soil Pr	resent? Yes _ ✓ No
	(inches):					_ '''		
HYDROLO								
-	drology Indicators:		di abaak all that an	nlu)				Secondary Indicators (minimum of two required)
	cators (minimum of o water (A1)	one require			aves (B9)			Surface soil cracks (B6) Drainage patterns (B10)
	ater table (A2)			: fauna (E	. ,			Dry-season water table (C2)
Saturati			True a	quatic pla	nts (B14)			Crayfish burrows (C8)
Water n	narks (B1)		Hydrog	en sulfide	e odor (C1)			Saturation visible on aerial imagery (C9)
Sedime	nt deposits (B2)			-	heres along	-	ots (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C	•		Geomorphic position (D2)
	at or crust (B4)				uction in tilled	I soils (C	(6)	FAC-neutral test (D5)
	oosits (B5) on visible on aerial	imagery (R		uck surfa or well d				
	y vegetated concave				n Remarks)			
			<u> </u>	•				
Field Obser Surface Wat		Ye	es No 🖍 [Denth (inc	:hes):			
Water Table			es No I			_ we	etland Hydro	ology Present? Yes No _ <
Saturation P (includes cap			es No 🔽 [_		
	corded Data (stream	n dalide m	onitoring well agric	Inhotos	nrevious incr	ections)	if available	
Describe Re	colded Dala (Silean	r gauge, m	oriitoring well, aena	i priotos,	previous irisp	ections)	, ii avaliable.	
Domorko								
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: Olmst	ed County	Sampling Date: 2024-06-04
Applicant/Owner: Ranger Power				: MN Sampling Point: bdp47
Investigator(s): Andy Kranz				
				of (concave, convex, none): none
Slope(%): 0-2 Lat: 44.08504		_ Long: -92	.34736	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			olain any answers in Remarks.)
		_		
SUMMARY OF FINDINGS - Attach site map showin	ig sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		lo the C	ampled Area	
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes <u>✓</u> No				
Remarks: (Explain alternative procedures here or in a separate report Wet meadow in a stream terrace. Investigated due to being the drief		f a larger w	etland.	
wet includes in a stream terrace. Investigated due to being the unc	or portion of	i a larger w	ctiaria.	
VEGETATION - Use scientific names of plants.				
VEGETATION - OSC SCIENTING Harnes of plants.	Absoluto	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
Acer negundo , Ash-Leaf Maple	2%	yes	FAC	Number of Dominant Species That
2				Are OBL, FACW, or FAC: 3 (A)
3				Total Number of Dominant Species
4				Across All Strata:4 (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
Continue (Charles Charles (Diet einer 15 ft (4 C an) and inn)	2%	= Total Co	ver	746 GB2, 176W, 61 176.
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1. Cornus alba, Red Osier	5%	VAS	FACW	Prevalence Index worksheet:
Cornus alba, Red Osier 2.		yes	TACW	Total % Cover of: Multiply by:
3.				OBL species <u>5</u> x1 = <u>5</u>
4				FACW species 30 x1 = 60
5				FAC species 42 x1 = 126
	5%	= Total Co	ver	FACU species 45 x1 = 180
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1	m²) quadra	at)	UPL species0 x1 =0
Solidago altissima, Tall Goldenrod	35%	yes	FACU	Column Totals: 122 x1 = 371 (B)
2. Poa pratensis, Kentucky Blue Grass	30%	yes	<u>FAC</u>	Prevalence Index = B/A = 3.041
3. Agrostis gigantea, Black Bent	15%	no	FACW	Hydrophytic Vegetation Indicators:
4. Pastinica sativa, Wild parsnip	10%	no	<u>FACU</u>	1 - Rapid Test for Hydrophytic Vegetation
5. <u>Viola sororia</u> , Hooded Blue Violet	5%	no	<u>FAC</u>	✓ 2 - Dominance Test is > 50%
6. <u>Vitis riparia</u> , River-Bank Grape	5%	no	FACW	3 - Prevalence Index is <= 3.0 ¹
7. <u>Symphyotrichum novae-angliae</u> , New England American-Aster	5%	no	FACW	4 - Morphological Adaptations ¹ (Provide
8. Equisetum arvense, Field Horsetail	5%	no	FAC	supporting data in Remarks or on a separate
9. Angelica atropurpurea, Purple-Stem Angelica	5%	no	OBL	sheet)
10	115%	= Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		- 10141 00	vei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2		- Total Car		Vegetation
	<u>U%</u>	= iotal Co	ver	riesent: Yes V NO
Remarks: (Include photo numbers here or on a separate sheet.)		= Total Co	ver	Present? Yes V No

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-18	10YR - 2/1	100	/				SiCL	
18-46	10YR - 2/1	90	10YR-4/1	5		М		
			5YR-4/4	5		M		-
			011(4/4					•
							-	-
		 -		-				-
					· ——		· -	-
					·			-
Гуре: С=С	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	d Sand Grain	ns. ²	Location: PL	=Pore Lining, M=Matrix.
lydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und			-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undefii	ned		Redox (S	•			Dark Surface (S7)
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
	en Sulfide (A4)			-	/lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			-	Matrix (F2)			✓ Other (Explain in Remarks)
_	uck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and we
	d Below Dark Surfac	e (A11)		Dark Su	, ,			hydrology must be present, unless disturbed problematic.
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1) ucky Peat or Peat (S	(3)	Redox	Depressi	ions (F8)			
Pestrictive								
	Layer (if observed):					Hvo	Iric Soil Pre	sent? Yes 🗸 No
Type: Depth Remarks:	(inches): to the depth capable		g. It is assumed th	ne soil will	meet Thick		face (A12).	sent? Yes <u>✓</u> No _
Type: Depth Remarks:	inches): to the depth capable		g. It is assumed th	ne soil will	meet Thick			sent? Yes ✓ No _
Type: Depth Remarks: Soil is black	 (inches): to the depth capable		g. It is assumed th	ne soil will	meet Thick		face (A12).	sent? Yes <u>✓</u> No _
Type: Depth Remarks: Goil is black /DROLO Vetland Hy Primary Indi	to the depth capable GY drology Indicators: cators (minimum of o	e of samplin	l; check all that ap	oly)			face (A12).	Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Type: Depth Remarks: Goil is black /DROLO Vetland Hy Primary Indi Surface	to the depth capable GY drology Indicators: cators (minimum of o	e of samplin	l; check all that ap	oly) stained lea	aves (B9)		face (A12).	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Type: Depth Remarks: Goil is black CDROLO Vetland Hy Primary Indi Surface High wa	to the depth capable GY drology Indicators: cators (minimum of o	e of samplin	l; check all that ap Water- Aquatio	oly) stained lea	aves (B9)		face (A12).	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Type: Depth Remarks: Soil is black /DROLO Vetland Hy Primary Indi Surface High wa Saturat	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3)	e of samplin	l; check all that ap — Water- — Aquatic — True ac	ply) stained lea c fauna (B quatic plar	aves (B9) (13) nts (B14)		face (A12).	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r	to the depth capable OGY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1)	e of samplin	I; check all that app Water Aquatio True ao Hydrog	oly) stained lea : fauna (B quatic plar en sulfide	aves (B9) 13) nts (B14) e odor (C1)	Dark Sur	face (A12).	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)	e of samplin	I; check all that app Water Aquatic True ac Hydrog Oxidize	oly) stained lea c fauna (B quatic plan en sulfide ed rhizosp	aves (B9) 13) hts (B14) odor (C1) heres along	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3)	e of samplin	I; check all that app Water-s Aquatic True ac Hydrog Oxidize	oly) stained lea c fauna (B quatic plar en sulfide ed rhizosp ce of redu	aves (B9) .13) .nts (B14) .e odor (C1) .heres along .uced iron (C-	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	e of samplin	l; check all that app Water-s Aquatio True ac Hydrog Oxidize Presen Recent	oly) stained lea fauna (B quatic plar en sulfide ed rhizosp ce of redu iron redu	aves (B9) 13) hts (B14) e odor (C1) heres along uced iron (Co	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	e of samplin	l; check all that app Water-s Aquatic True ac Hydrog Oxidizes Presen Recent	ply) stained lea fauna (B quatic plan en sulfide d rhizosp ce of redu iron redu uck surface	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tilled	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in	e of samplin	l; check all that ap Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m) Gauge	oly) stained lea c fauna (B quatic plan en sulfide d rhizosp ce of redu iron redu uck surfac or well da	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Caction in tilled ce (C7) ata (D9)	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave	e of samplin	l; check all that ap Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m) Gauge	oly) stained lea c fauna (B quatic plan en sulfide d rhizosp ce of redu iron redu uck surfac or well da	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tilled	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave vations:	e of sampling one required magery (B7 surface (B8	l; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea fauna (B quatic plar en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tillectoe (C7) ata (D9) n Remarks)	Dark Sur	face (A12). S ts (C3) -	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) fon (A3) finarks (B1) fint deposits (B2) posits (B3) at or crust (B4) posits (B5) fion visible on aerial in y vegetated concave rvations: for resent?	e of sampling one required magery (B7 surface (B8	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea fauna (B quatic plan en sulfide d rhizosp ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tillector (C7) ata (D9) n Remarks) hes):	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) fon (A3) marks (B1) mt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present?	magery (B7 surface (B8 Ye:	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea fauna (B quatic plan en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tillector (C7) ata (D9) n Remarks) hes): hes): 18	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) fon (A3) marks (B1) mt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present?	magery (B7 surface (B8 Ye:	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea fauna (B quatic plan en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in	aves (B9) 13) nts (B14) e odor (C1) heres along uced iron (Coction in tillector (C7) ata (D9) n Remarks) hes): hes): 18	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Vater Table Saturation F includes ca	to the depth capable GY drology Indicators: cators (minimum of or water (A1) ater table (A2) fon (A3) marks (B1) mt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present?	magery (B7 surface (B8 Ye- Ye-	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Present Recent Thin m Gauge Other (poly) stained lea c fauna (B quatic plan en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in Depth (inc	aves (B9) aves (B14) aves (B14) aves (C1) averaged iron (C- action in tilled aves (C7) ata (D9) averaged iron (C- ata (D9)) averaged i	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Vater Table Saturation F includes ca	to the depth capable OGY drology Indicators: cators (minimum of or exators (Minimum of or	magery (B7 surface (B8 Ye- Ye-	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Present Recent Thin m Gauge Other (poly) stained lea c fauna (B quatic plan en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in Depth (inc	aves (B9) aves (B14) aves (B14) aves (C1) averaged iron (C- action in tilled aves (C7) ata (D9) averaged iron (C- ata (D9)) averaged i	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Remarks: Soil is black Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obset Surface Wat Vater Table Saturation F includes ca	to the depth capable OGY drology Indicators: cators (minimum of or exators (Minimum of or	magery (B7 surface (B8 Ye- Ye-	I; check all that app Water-s Aquatic True ac Hydrog Oxidize Present Recent Thin m Gauge Other (poly) stained lea c fauna (B quatic plan en sulfide ed rhizosp ce of redu iron redu uck surfac or well da Explain in Depth (inc	aves (B9) aves (B14) aves (B14) aves (C1) averaged iron (C- action in tilled aves (C7) ata (D9) averaged iron (C- ata (D9)) averaged i	Dark Sur	face (A12). S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Olmsted County	Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power			e: MN Sampling Point: bdp48
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08017			• • • • • • • • • • • • • • • • • • • •
			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y		Yes , No	
Are Vegetation , , Soil , or Hydrology Significantly			
_ -			Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	biemauc?	(ii fieeded, ex	cplain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	
Hydric Soil Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Wetland Hydrology Present? Yes No			
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3. 4.			Total Number of Dominant Species Across All Strata: 0 (B)
5.			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	<u> </u>	= Total Cover	Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species0 x1 =0
4			FAC species0 x1 =0
5			
	0%	= Total Cover	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	
1			Column Totals: $0 \times 1 = 0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3.			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6.			3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8.			supporting data in Remarks or on a separate
9			sheet)
10	0%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		- Iolai Covei	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2.	0%	= Total Cover	Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sheet.) Spontaneous vegetation is absent. Corn crop is consistent with the is lower in elevation than the sample point.	field in statu	ure and density. Bromus	inermis is dominant in the adjacent roadside ditch which

Depth	Matrix Color (moist)	%	Color (moist)	edox Feati %	Type ¹	Loc ²	Texture	Remarks
(inches)	Color (Illoist)	70	Color (moist)	70	туре	LUC	Texture	Less than 1% redox concentrations of 10Y
0-30	10YR - 2/1	100	/				CL	4/4 and depletions of 10YR 3/1
30-40	10YR - 3/4	80	/				SiC	<u></u>
	10YR - 2/1	20	/					-
pe: C=C	oncentration, D=Dep	oletion, RM=I	 Reduced Matrix, M	S=Masked	Sand Grai	ns. 2	Location: PL	=Pore Lining, M=Matrix.
dric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
_ Histosol	(or Histel) (A1) un	defined		/ Gleyed M				Coast Prairie Redox (A16)
_	pipedon (A2) undef			/ Redox (S				Dark Surface (S7)
_	isti (A3) undefined			ed Matrix (` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
_	uck (A10) d Below Dark Surfa	ιςο (Λ11)		ted Matrix x Dark Sur				³ Indicators of hydrophytic vegetation and we
_ '	аrk Surface (A12)	ce (AII)			Surface (F7)			hydrology must be present, unless disturbe problematic.
_	Mucky Mineral (S1)			x Depressi				·
_	ucky Peat or Peat (S3)		Copicoon	0110 (1 0)			
	Layer (if observed)	-						
Strictive	Layer (ii observed)	<i>)</i> -						
Type:						Hvd	ric Soil Pre	sent? Yes No.
Type: Depth (emarks:	<u></u> inches): <u></u>					Hyd	ric Soil Pre	sent? Yes No _
Depth (Hyd	ric Soil Pre	sent? Yes No _
Depth (emarks:						Hyd		sent? Yes No _
Depth (emarks:	GY		l; check all that ap	ply)		Hyd		
Depth (emarks: DROLO etland Hydimary India	GY drology Indicators		Water-	stained lea	` '	Hyd		econdary Indicators (minimum of two required)
Depth (emarks: DROLO etland Hy emary India Surface High wa	GY drology Indicators cators (minimum of water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B:	13)	Hyd		econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (Pmarks: DROLO Petland Hydimary India Surface High wa Saturati	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3)		Water- Aquation True a	stained lea c fauna (B: quatic plan	13) nts (B14)	Hyd		econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
DROLO etland Hy imary India Surface High wa Saturati Water n	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)		<u>S</u> - -	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (DROLO etland Hydimary India Surface High wa Saturati Water m Sedimen	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root	<u>S</u> - -	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLO etland Hydrimary India Surface High wa Saturati Water n Sedimee Drift dep	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water-Aquation True a Hydrog Oxidizo	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (DROLO Tetland Hyrimary India Surface High wa Saturati Water m Sedimen Drift dep Algal m	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquation True a Hydrog Oxidize Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu	nts (B14) odor (C1) heres along aced iron (C ction in tilled	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLO etland Hyrimary India Surface High wa Saturati Water n Sedimen Drift dep Algal m. Iron dep	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquation True a Hydrog Oxidize Preser Recenting	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7)	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedimel Drift dep Algal mallon dep Iron dep	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedimen Drift dep Algal ma Iron dep Inundati	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduce nuck surfac	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLO etland Hydrimary India Surface High wa Saturati Water m Sedimen Drift dep Algal m. Iron dep Inundati Sparsel	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations:	one required imagery (B7 e surface (Bi	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (Demarks: DROLO Operational Hydromary India Surface High wa Saturati Water in Sediment Drift dep Algal in Iron dep Inundati Sparsely eld Obserurface Water	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present?	one required imagery (B7 e surface (Bi	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained leact fauna (B: quatic plan gen sulfide ed rhizosphance of reduct iron reduct surfact or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along iced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root 4) d soils (C6	s (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (Demarks: DROLO etland Hyrimary India Surface High wa Saturati Water n Sedimen Drift dep Algal m Iron dep Inundati Sparsely eld Obser urface Watater Table	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (Bi Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m Gauge 8) Other of	stained leact fauna (B: quatic plan gen sulfide ed rhizosphace of reductiron reductiron reduck surfactor well da (Explain in Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (Demarks: DROLO etland Hyrimary India Surface High wa Saturati Water n Sedimen Drift dep Algal m. Iron dep Inundati Sparsely eld Obser urface Water Table aturation P	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (Bi Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other of	stained leact fauna (B: quatic plan gen sulfide ed rhizosphace of reductiron reductiron reduck surfactor well da (Explain in Depth (incl	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	s (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO detland Hydrimary India Surface High was Saturati Water in Sedimen Drift dep Algal in Iron dep Inundati Sparsely eld Obser urface Water Table aturation Pincludes cap	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? present? present?	imagery (B7 e surface (Br Ye Ye	Water- Aquation Aquation	stained lead control from the control fr	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	living root 4) d soils (C6	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (Demarks: DROLO etland Hydimary India Surface High wa Saturati Water n Sedimen Iron dep Inundati Sparsely eld Obser urface Wate atter Table turration Piccludes cap	GY drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (Br Ye Ye	Water- Aquation Aquation	stained lead control from the control fr	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	living root 4) d soils (C6	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (Permarks: DROLO Petland Hydimary India Surface High wa Saturati Water n Sedimen Iron dep Inundati Sparsely Peld Obser Irface Wate Atter Table Lituration Pellides cap	drology Indicators cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? present? present?	imagery (B7 e surface (Br Ye Ye	Water- Aquation Aquation	stained lead control from the control fr	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) hata (D9) Remarks) hes): hes):	living root 4) d soils (C6	S (C3)	econdary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp49
Investigator(s): Andy Kranz			
			ef (concave, convex, none): none
Slope(%): <u>3-7</u> Lat: <u>44.07895</u>		Long: -92.34138	Datum: WGS 84
Soil Map Unit Name: 333: Vasa silt loam			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significan	ntly disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally	problematic?	(If needed, ex	plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		In the Complet Aver	
Hydric Soil Present? Yes		Is the Sampled Area within a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes			
Remarks: (Explain alternative procedures here or in a separate r Upland crop field on gentle slope	eport.)		
opiana crop neia on genue stope			
VEGETATION - Use scientific names of plants.			
VEGETATION - OSC SCIENTING Harries of plants.	Absoluto	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1.			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4.			Across All Strata: 0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Carling/Church Charles (Diet circula (4.0 cm) radius)	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5			FAC species0 x1 =0
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.	28-ft square (1-	-m²) quadrat)	UPL species $0 \times 1 = 0$
1			Column Totals: $0 \times 1 = 0$ (B)
2.			Prevalence Index = B/A = NaN NaN
3			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Unidentified grass seedlings 1%. Corn crop consistent with surro	undinas in statı	ure and density	
Services grant and services are services and services and services and services are services are services and services are services and services are services are services and services are services are services and services are services are services are services are services and services are services are services are services are services are			

Thick Dark Surface (A12) Depleted Dark Surface (F7) problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) **Testrictive Layer (if observed): Type: Depth (inches):	Depth (inches) Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1924									
19-24 107R 3/3 90				/				CL	4/4 and depletions of 10YR 3/1
Toyne: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Flooration: PL=Pore Lining, M=Matrix.	10YR	2 - 3/3 2	20	/					
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Cocation: PL=Pore Lining, M=Matrix.	18-24 10YR	2 - 3/3	90	/				SiC	<u></u>
Holicators Hol	10YR	2 - 2/1	10	/					
Agric Soil Indicators: Histosol (or Histel) (A1) undefined Histosol (or Histel) (A2) undefined Black Histi (A3) undefined Black Histi (A5)									· -
Histosol (or Histel) (A1) undefined									
Histosol (or Histel) (A1) undefined									
Agric Soil Indicators: Histosol (or Histel) (A1) undefined Histosol (or Histel) (A2) undefined Black Histi (A3) undefined Black Histi (A5)									_
Indicators for Problematic Hydric Soils Indicators Indicators for Problematic Hydric Soils Indicators for	Type: C=Concentration	on, D=Depletion	n, RM=Re	educed Matrix, M	S=Masked	Sand Grain	s. ²	Location: PL	
Histic Epipedon (A2) undefined									
Histic Epipedon (A2) undefined Sandy Redox (S5) Dark Surface (S7) Inon-Manganese Masses (F12) Very Shallow Dark Surface (A6) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (F12) Very Shallow Dark Surface (F13) Depleted Below Dark Surface (A12) Depleted Dark Surface (F6) Problematic. Very Shallow Dark Surface (A12) Depleted Dark Surface (F7) Problematic. Very Shallow Dark Surface (A12) Depleted Dark Surface (F7) Problematic. Very Shallow Dark Surface (A12) Problematic. Very Shallow Dark Surface (A	Histosol (or Histe	l) (A1) undefin	ed	Sandy	Gleyed M	latrix (S4)			
Black Histi (A3) undefined	Histic Epipedon (A2) undefined		Sandy	Redox (S	5)			
Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Mineral (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Matrix (F3) Thick Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (51) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Black Histi (A3) ι	undefined		Stripp	ed Matrix ((S6)			· · · · · · · · · · · · · · · · · · ·
Stratified Layers (A5)	Hydrogen Sulfide	(A4)		Loamy	/ Mucky M	ineral (F1)			
Depleted Below Dark Surface (A11)	Stratified Layers	(A5)		Loamy	/ Gleyed N	Matrix (F2)			
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) hydrology must be present, unless disturbed in Thick Dark Surface (A12) Depleted Dark Surface (F7) problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Popth (inche	2 cm Muck (A10))		Deple	ted Matrix	(F3)			
Sandy Mucky Mineral (S1) Redox Depressions (F8) Some Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remox Depressions (F8) Remarks: Remarks: Remarks: Hydric Soil Present? Yes No Person Property (inches): Remox Soil Present? Yes No Person Person Present? Yes No Person Pre	Depleted Below [Dark Surface (A	\11)	Redox	Dark Sur	face (F6)			hydrology must be present, unless disturbed of
S cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Thick Dark Surfa	ce (A12)		Deple	ted Dark S	Surface (F7)			problematic.
Restrictive Layer (if observed): Type:	Sandy Mucky Mir	neral (S1)		Redox	Depressi	ons (F8)			
Type:	5 cm Mucky Pea	t or Peat (S3)							
Permarks: Paramax Permarks	estrictive Layer (if	observed):							
Verland Hydrology Indicators: Verland Hydrology Indicators (minimum of two required) Verland Hydrology Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) High water table (A2) Aquatic fauna (B13) Drinage patterns (B10) Drinage patterns (B10) Drinage patterns (B10) Verland Hydrogen (C2) Saturation (A3) True aquatic plants (B14) Water marks (B1) Hydrogen sulfide odor (C1) Verland Saturation visible on aerial imagery (C9) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Ves No Verland Depth (inches): Vesturation Present? Ves No Verland Hydrology Present? Ves No Verland Depth (inches): Vesturation Present? Ves No Verland Hydrology Present?	T								
Vettand Hydrology Indicators: **Primary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Induction visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Furface Water Present? Ves No V Depth (inches): Veternarks: **Remarks:** **Remarks:** **Remarks:** **Remarks:** **Remarks:** **Remarks:** **Remarks:** **Remarks:** **Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dray-season water table (C2) Crayfish burrows (C8) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D5) Wetland Hydrology Present? Yes No V Depth (inches): Wetland Hydrology Present? Yes No V Depth (inches): N	-						_ Hyd	Iric Soil Pre	sent? Yes No <u>✔</u>
Vettand Hydrology Indicators: Vertimary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water-stained leaves (B9) Aquatic fauna (B13) Dry-season water table (C2) Crayfish burrows (C8) Water marks (B1) Hydrogen sulfide odor (C1) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Iron deposits (B4) Iron deposits (B5) Inim muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No Depth (inches): Includes capillary fringe) Wetland Hydrology Present? Wetland Hydrology Present? Yes No Remarks: Wetland Hydrology Present? Yes No Presvious inspections), if available:	-						_ Hyd	Iric Soil Pre	esent? Yes No
Armary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) Prainage patterns (B10) High water table (A2) Aquatic fauna (B13) Dry-season water table (C2) Saturation (A3) Water marks (B1) Water marks (B1) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface water (A1) Water marks: Water marks: Water marks (B1) Presence of reduced iron (C4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) FAC-neutral test (D5) Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Peth (inches): Yes No Pet	Depth (inches): -						_ Hyd	Iric Soil Pre	Yes No
Surface water (A1)	Depth (inches): <u>-</u> emarks:						Hyd	Iric Soil Pre	Yes No
High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Dry-season water table (C2) Sediment deposits (B3) Dry-season water table (C2) Sediment deposits (B3) Dry-season water table (C2) Sediment deposits (B2) Dry-season water table (C2) Crayfish burrows (C8) Water marks (B1) Sediment deposits (B2) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Sediment deposits (B2) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Sediment deposits (B2) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Sediment deposits (B2) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Sediment deposits (B3) Presence of reduced iron (C4) Geomorphic position (D2) FAC-neutral test (D5) FAC-neutral test (D5) FAC-neutral test (D5) Condition (D2) FAC-neutral test (D5) Condition (D2) FAC-neutral test (D5) FAC-neutral test (D5) Condition (D2) FAC-neutral test (D5) FAC-neutral test (D5) Condition (D2) FAC-neutral test (D5) FAC-neutra	Depth (inches): - emarks: 'DROLOGY						Hyd		
Saturation (A3)	Depth (inches): - emarks: DROLOGY /etland Hydrology I	ndicators:	required;	check all that ap	ply)		Hyd		Secondary Indicators (minimum of two required)
Water marks (B1)	Depth (inches): - emarks: DROLOGY /etland Hydrology I rimary Indicators (mi	ndicators:	required;			ives (B9)	_ Hyd		Secondary Indicators (minimum of two required)Surface soil cracks (B6)
Sediment deposits (B2)	Depth (inches): _ emarks: /DROLOGY /etland Hydrology I rimary Indicators (miSurface water (A	ndicators: inimum of one (required;	Water-	stained lea	` ,	_ Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Presence of reduced iron (C4) Geomorphic position (D2) Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No✓ Depth (inches): Vater Table Present? Yes No✓ Depth (inches): Vaturation Present? Yes No✓ Depth (inches): Saturation Present? Yes No✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): - emarks: 'DROLOGY /etland Hydrology I rimary Indicators (mi Surface water (A High water table	ndicators: inimum of one (required;	Water-	stained lea	13)	Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface Water Present?	Depth (inches): - emarks: 'DROLOGY /etland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3)	ndicators: inimum of one (1) (A2)	required;	Water- Aquatio True a	stained lea c fauna (B: quatic plan	13) its (B14)	Hyd		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface Water Present?	Depth (inches): - emarks: 'DROLOGY /etland Hydrology I rimary Indicators (mi Surface water (A. High water table Saturation (A3) Water marks (B1)	ndicators: inimum of one (1) (A2)	required;	Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan len sulfide	13) its (B14) odor (C1)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Inundation visible on aerial imagery (B7)	Depth (inches): - emarks: 'DROLOGY /etland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3) Water marks (B1) Sediment deposit	ndicators: inimum of one id 1) (A2)) is (B2)	required;	Water- Aquation True a Hydrog Oxidize	stained lea c fauna (B: quatic plan len sulfide ed rhizosph	13) its (B14) odor (C1) neres along	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Sield Observations: Surface Water Present? Yes No Depth (inches): Vater Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Sincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): - emarks: DROLOGY Vetland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3) Water marks (B1) Sediment deposit Drift deposits (B3)	ndicators: inimum of one i 1) (A2) is (B2)	required;	Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu	13) tts (B14) odor (C1) neres along ced iron (C4)	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Vater Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): - emarks: DROLOGY Vetland Hydrology I rimary Indicators (mi Surface water (A. High water table Saturation (A3) Water marks (B1) Sediment deposit Drift deposits (B3 Algal mat or crus	ndicators: inimum of one of the o	required;	Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan len sulfide ed rhizosph ce of redu	ts (B14) odor (C1) neres along ced iron (C4	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface Water Present? Yes No _ ✓ Depth (inches):	Depth (inches): - emarks: DROLOGY Vetland Hydrology I rimary Indicators (mi Surface water (A. High water table Saturation (A3) Water marks (B1) Sediment deposit Drift deposits (B3 Algal mat or crus Iron deposits (B5	ndicators: inimum of one i 1) (A2)) is (B2) b) it (B4)		Water- Aquation True and Hydrogon Oxidized Present Recent Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ce of redu ciron reducuck surfac	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Vater Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): emarks: DROLOGY Vetland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3) Water marks (B1, Sediment deposit Drift deposits (B3, Algal mat or crus Iron deposits (B5, Inundation visible	ndicators: inimum of one (1) (A2)) is (B2) it (B4)) e on aerial imag	gery (B7)	Water- Aquation True and Hydrogon Oxidize Present Recent Thin m Gauge	stained lea c fauna (B: quatic plan len sulfide ed rhizosph lee of redu ciron reduc uck surfac or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Saturation Present? Yes No _ ✓ Depth (inches): includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): - emarks: DROLOGY Vetland Hydrology I rimary Indicators (mi Surface water (A. High water table Saturation (A3) Water marks (B1) Sediment deposits Drift deposits (B3 Algal mat or crus Iron deposits (B5 Inundation visible Sparsely vegetate	ndicators: inimum of one (1) (A2)) is (B2) it (B4)) e on aerial imag	gery (B7)	Water- Aquation True and Hydrogon Oxidize Present Recent Thin m Gauge	stained lea c fauna (B: quatic plan len sulfide ed rhizosph lee of redu ciron reduc uck surfac or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	iving root		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (inches): emarks: POROLOGY Vetland Hydrology I rimary Indicators (miSurface water (AHigh water tableSaturation (A3)Water marks (B1,Sediment depositsDrift deposits (B3,Algal mat or crusIron deposits (B5,Inundation visibleSparsely vegetate iteld Observations: urface Water Presen	ndicators: inimum of one (1) (A2)) is (B2) b) it (B4)) e on aerial imaged concave sur	gery (B7) face (B8) Yes_ Yes_	Water- Aquation True accepted Present Recent Thin m Gauge Other (stained least fauna (B: crauna (B: crauna (B: crauna (B: crauna (B: crauna crau	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	iving root) soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Remarks:	Depth (inches): emarks: DROLOGY Vetland Hydrology I rimary Indicators (miSurface water (AHigh water tableSaturation (A3)Water marks (B1)Sediment depositDrift deposits (B3Algal mat or crusIron deposits (B5Inundation visibleSparsely vegetateield Observations: urface Water Present /ater Table Present? aturation Present?	ndicators: inimum of one of 1) (A2)) is (B2) it (B4)) e on aerial imaged concave sur	gery (B7) face (B8) Yes_ Yes_	Water- Aquation True accepted Present Recent Thin m Gauge Other (stained least fauna (B: crauna (B: crauna (B: crauna (B: crauna (B: crauna crau	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	iving root) soils (C6	s (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
	Depth (inches): emarks: POROLOGY Petland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3) Water marks (B1) Sediment deposits Drift deposits (B3 Algal mat or crus Iron deposits (B5 Inundation visible Sparsely vegetate petended observations: urface Water Present Pater Table Present? aturation Present? includes capillary frin	ndicators: inimum of one (1) (A2)) is (B2) it (B4)) e on aerial imaged concave sur	yery (B7) face (B8) Yes Yes Yes	Water- Aquation True and Hydrogo Oxidizer Present Recent Thin m Gauge Other (stained leader fauna (B: captained leader fauna (B: captained leader fauna (B: captained leader fauna	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	iving root) soils (C6	S S S S S S S S S S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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orainage tile inlet nearby to the northeast	Depth (inches): emarks: POROLOGY Petland Hydrology I rimary Indicators (mi Surface water (A High water table Saturation (A3) Water marks (B1) Sediment deposits Drift deposits (B3 Algal mat or crus Iron deposits (B5 Inundation visible Sparsely vegetate petended observations: urface Water Present Pater Table Present? aturation Present? includes capillary frin	ndicators: inimum of one (1) (A2)) is (B2) it (B4)) e on aerial imaged concave sur	yery (B7) face (B8) Yes Yes Yes	Water- Aquation True and Hydrogo Oxidizer Present Recent Thin m Gauge Other (stained leader fauna (B: captained leader fauna (B: captained leader fauna (B: captained leader fauna	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	iving root) soils (C6	S S S S S S S S S S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
	Depth (inches): - emarks: **TOROLOGY **Jetland Hydrology I rimary Indicators (mi	ndicators: inimum of one (1) (A2)) is (B2) it (B4)) e on aerial imaged concave sure at? ge) ata (stream gate	gery (B7) face (B8) Yes Yes Yes uge, moni	Water- Aquation True and Hydrogo Oxidizer Present Recent Thin m Gauge Other (stained leader fauna (B: captained leader fauna (B: captained leader fauna (B: captained leader fauna	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	iving root) soils (C6	S S S S S S S S S S	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill		City/Co	ounty: Olmst	ed County		Sampling Date: 2	024-06-05
Applicant/Owner: Ranger Power						Sampling Point: bo	
Investigator(s): Andy Kranz							•
Lanform(hillslope, terrace, etc): Backslope						, none): none	
Slope(%): 35+ Lat: 44.07772			Long: -92.	.3164	•	Datum: WG	SS 84
Soil Map Unit Name: 251F: Marlean silty clay loam, 25 to	o 40 percent s	slopes	_		NWI classific	cation:	
Are climatic / hydrologic conditions on the site typical for				es , No		uin in Remarks.)	
Are Vegetation , Soil , or Hydrology	Significantly	disturbed?		<u> </u>	ircumstances" pres	ent? Yes No	
Are Vegetation , Soil , or Hydrology	,				olain any answers ir		
	, ,		`	,	,	,	
SUMMARY OF FINDINGS - Attach site ma	up showing	g sampli	ing point	locations	s, transects, in	nportant feature	es, etc.
Hydrophytic Vegetation Present? Ye	s No	✓					
	s No			ampled Area Wetland?		Yes	No <u>✓</u>
Wetland Hydrology Present? Ye	s No						
Remarks: (Explain alternative procedures here or in a s	separate repo	ort.)					
Upland meadow on steep ground within crop field.							
\							
VEGETATION - Use scientific names of pl	iants.			1			
Tree Stratum (Plot size:30-ft (9.1-m) radius)			Dominant Species?		Dominance Test	Worksheet	
1(1 lot 5/26/30 it (0.1 iii) fudicis)					Number of Domina	ant Species That	
2.					Are OBL, FACW,		<u>0</u> (A)
3.					Total Number of D	Dominant Species	
4					Across All Strata:	_	<u>1</u> (B)
5					Percent of Domina		
		0%	= Total Co	ver	Are OBL, FACW,	or FAC:	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)					Prevalence Index	worksheet:	
1.					Total % Cov	ver of: Mu	ıltiply by:
2					OBL species	0 x1 =	
3					FACW species	0 x1 =	0
4 5.					FAC species	2 x1 =	6
· -		0%	= Total Co	ver	FACU species	92 x1 =	368
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3	3.28- bv 3.28-				UPL species	<u> </u>	0
Bromus inermis, Smooth Brome		80%	yes	FACU	Column Totals:	<u>94</u> x1 =	374 (B)
2. Pastinaca sativa, Wild Parsnip		10%	no	FACU	Prevale	ence Index = B/A =	3.979
3. Ambrosia trifida, Great Ragweed		2%	no	FAC	Hydrophytic Veg	etation Indicators:	
		201	no	FACU			
5.						st for Hydrophytic Ve	getation
6					2 - Dominano		
7						ce Index is <= 3.0 ¹	
8					4 - Morpholo supporting da	gical Adaptations ¹ (P ata in Remarks or on	Provide La separate
9					sheet)		
10					PROBLEMAT	TIC Hydrophytic Vege	etation ¹ (Explain)
		94%	= Total Co	ver	¹ Indicators of	f hydric soil and wetla	and hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					must be pre	esent, unless disturbe	d or problematic.
1.					Hydrophytic		
2		0%	= Total Co		Vegetation Present?	Vo	s No 🗸
		<u> </u>	= 10tai C0	VEI	rieseit:		S No
Remarks: (Include photo numbers here or on a separa	te sheet.)						

Depth (inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remai	rks	
							_		
							-		
Type: C=Concentration, D=Depl	letion, RM=R	educed Matrix, M	S=Masked	d Sand Grair	ns. ² L	ocation: PL	 _=Pore Lining, M=Matrix.		
Hydric Soil Indicators: Histosol (or Histel) (A1) und Histic Epipedon (A2) undefi Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surfact Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S	ned ce (A11)	Sandy Strippe Loamy Loamy Deplet Redox Deplet	Redox (Seed Matrix of Mucky Mucky Model Matrix of Colleged Matrix at Dark Sur	(S6) Inneral (F1) Matrix (F2) (F3) Iface (F6) Surface (F7)			Indicators for Problematic H Coast Prairie Redox (A16 Dark Surface (S7) Iron-Manganese Masses Very Shallow Dark Surface Other (Explain in Remark 3Indicators of hydrophytic hydrology must be prese problematic.	(F12) ce (TF12) cs) c vegetation	and wetlan
Restrictive Layer (if observed):	:				11	ia Cail Dua		Yes	No _ ✓
Type: Depth (inches): Remarks: Soil sample unnecessary due to	lack of hydro	phytic vegetation	and lack	of hydrology		ic Soil Pre	sent?		
Depth (inches): Remarks: Soil sample unnecessary due to		phytic vegetation	and lack	of hydrology				of two regu	urad)
Depth (inches): Remarks: Soil sample unnecessary due to /DROLOGY Vetland Hydrology Indicators:				of hydrology			Secondary Indicators (minimum	of two requ	uired)
Depth (inches): temarks: soil sample unnecessary due to /DROLOGY Vetland Hydrology Indicators:		check all that app						of two requ	uired)
Depth (inches): emarks: oil sample unnecessary due to //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of comments)		check all that app	ply)	aves (B9)			Secondary Indicators (minimum Surface soil cracks (B6)		uired)
Depth (inches): Remarks: Soil sample unnecessary due to //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of consumption) Surface water (A1)		check all that app Water-s Aquatic	oly) stained lea	aves (B9)			Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10)		uired)
Depth (inches): Remarks: Soil sample unnecessary due to //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of consumant of		check all that app Water-s Aquatio True ac	oly) stained lea c fauna (B quatic plar	aves (B9)			Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2	2)	,
Depth (inches): Remarks: Soil sample unnecessary due to //DROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of of Surface water (A1) High water table (A2) Saturation (A3)		check all that app Water-s Aquatic True ac Hydrog	ply) stained lea c fauna (B. quatic plar en sulfide	aves (B9) 13) nts (B14)	indicators	9	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	2) imagery (C	,
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Project/Site: Lemon Hill	City/Co	ounty: Olmst	ed County	Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		-		: MN Sampling Point: bdp51
Investigator(s): Andy Kranz	Sect	ion, Townsh	ip, Range: <u>S</u>	18 T107N S012W
Lanform(hillslope, terrace, etc): Draw			Local relie	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07816		Long: -92.	.31722	Datum: WGS 84
Soil Map Unit Name: 251F: Marlean silty clay loam, 25 to 40 percent	slopes			NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			plain any answers in Remarks.)
_				
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		la tha C		
Hydric Soil Present? Yes No			ampled Area Wetland?	Yes No <u></u> ✓
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate repulphand forest in a draw in steeply rolling terrain.	ort.)			
opiana lorest in a draw in steeply rolling terrain.				
VEGETATION - Use scientific names of plants.				
VEGETATION - OSE SCIENTING HAINES OF PIANTS.	Absolute	Daminant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Species?	Status	Dominance Test Worksheet
1. Quercus macrocarpa, Burr Oak	60%	yes	FAC	Number of Dominant Species That
2. Acer negundo , Ash-Leaf Maple	50%	yes	FAC	Are OBL, FACW, or FAC:
3				Total Number of Dominant Species
4				Across All Strata: 5 (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
	110%	= Total Co	ver	Ale OBL, PACW, OI PAC.
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. Acer negundo , Ash-Leaf Maple	10%	yes	<u>FAC</u>	Total % Cover of: Multiply by:
2				OBL species0 x1 =0
4.				FACW species0 x1 =0
5.				FAC species 190 x1 = 570
	10%	= Total Cov	ver	FACU species 5 x1 = 20
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1	m²) quadra	at)	UPL species NaN x1 = NaN
Ribes missouriense , Missouri Gooseberry	undefined9	% <u>no</u>	UPL	Column Totals: NaN x1 = NaN (B)
Sanicula odorata, Clustered Black-Snakeroot	50%	yes	FAC	Prevalence Index = B/A = NaN
3. <u>Cryptotaenia canadensis</u> , Canadian Honewort	20%	yes	FAC	Hydrophytic Vegetation Indicators:
4. Osmorhiza claytonii, Hairy Sweet-Cicely	5%	no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9		-		sheet)
10.		= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	1441470	10101 00	VOI	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-32	10YR - 2/2	95	10YR-3/2	5		М	SiL	
32-42	10YR - 3/2	100	/				SiL	
32 4 2	10111 3/2	100				•		
			<u> </u>				· 	
								
Type: C=C	oncentration, D=Dep	letion, RM=I	 Reduced Matrix, M	S=Masked	Sand Grair	ns. 2	Location: Pl	_ _=Pore Lining, M=Matrix.
	Indicators:							Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) un	defined	Sandy	y Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef			, y Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N	, ,			Other (Explain in Remarks)
	luck (A10)	(444)	 ·	ted Matrix	` ,			³ Indicators of hydrophytic vegetation and we
	ed Below Dark Surfa Oark Surface (A12)	ce (A11)		x Dark Sur				hydrology must be present, unless disturbe problematic.
	Mucky Mineral (S1)			x Depressi	Surface (F7)			•
_ ′	lucky Peat or Peat (S3)		Cocpicssi	0113 (1 0)			
	Layer (if observed)							
Type:						Hvc	Iric Soil Pre	esent? Yes No
.,,,,,,								
•	(inches): <u></u>							
emarks:						_		
Remarks:	oGY						c	Secondary Indicators (minimum of two required)
Remarks: /DROLO Vetland Hy	OGY rdrology Indicators:		i; check all that ap	ply)			<u> </u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Pemarks: /DROLO Vetland Hy Primary Indi	oGY			ply) stained lea	aves (B9)		9	· · · · · · · · · · · · · · · · · · ·
Pemarks: /DROLO Vetland Hy Primary IndiSurface	OGY rdrology Indicators: cators (minimum of		Water-				<u>S</u>	Surface soil cracks (B6)
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Primary Indi Surface High was Saturat Water r	ordrology Indicators: cators (minimum of exators (A1) atter table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B. quatic plar gen sulfide	13) nts (B14) odor (C1)	_	- - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indi Surface High was Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	-	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High w. Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water-Aquation True a Hydrog Oxidize	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C4)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Permarks: POROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Sield Obset Surface Water Table Saturation F Includes ca	order various in the present?	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquation Aquation	stained leact fauna (B. quatic plaragen sulfide ed rhizosplance of redut iron reduction well da (Explain in Depth (incl Depth (incl popth	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obset urface Water Table aturation F includes ca	rdrology Indicators: cators (minimum of exactors (max)) atter table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? present?	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained leact fauna (B. quatic plaragen sulfide ed rhizosplance of redut iron reduction well da (Explain in Depth (incl Depth (incl popth	nts (B14) odor (C1) heres along uced iron (C4 ction in tillect te (C7) ata (D9) Remarks) hes): hes):	4) I soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Olmsted County	Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		State	: MN Sampling Point: bdp52
Investigator(s): Andy Kranz			
			ef (concave, convex, none): none
Slope(%): 8-15 Lat: 44.07589		Long: -92.31498	Datum: WGS 84
Soil Map Unit Name: 473F: Dorerton loam, 25 to 40 percent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly	/ disturbed?	Are "Normal C	ircumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?	(If needed, ex	plain any answers in Remarks.)
- -			
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		In the Complet Area	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	Yes No
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate rep Upland crop field on a back slope.	ort.)		
Spland Grop field off a back stope.			
VEGETATION - Use scientific names of plants.			
VEGETATION - OSC Scientific flames of plants.	Absoluto	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4			Across All Strata:0 (B)
5			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Continue (Charles Charles and Charles and Edit (A.C. an) and then	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1.			Prevalence Index worksheet:
1. 2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1-	-m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \text{ x1} = 0 \text{ (B)}$
2.			Prevalence Index = B/A = NaN NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2		- Total Cause	Vegetation
	0%	= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.) Less than 1% Chenopodium album. Soy crop is consistent in statu	re and densit	v with the surrounding f	ield.
and the second s		,	

Depth					_ 1	. 2		
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR - 2/2	100	/				SiL	-
10-34	10YR - 2/1	100	/				CL	_
34-42	10YR - 2/2	100	/				CL	<u></u>
							,	-
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Grain	S. ²	Location: PL	=Pore Lining, M=Matrix.
•	Indicators:			01 11				Indicators for Problematic Hydric Soils ³ :
	l (or Histel) (A1) und			y Gleyed N				Coast Prairie Redox (A16)
	pipedon (A2) undefi	nea		y Redox (S	•			Dark Surface (S7)
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
_ , ,	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N	, ,			Other (Explain in Remarks)
	uck (A10)	(011)		eted Matrix	-			³ Indicators of hydrophytic vegetation and wetlar
	d Below Dark Surfac	;e (A11)		x Dark Sur	` '			hydrology must be present, unless disturbed of problematic.
	ark Surface (A12)				Surface (F7)			F. 22.3.
	Mucky Mineral (S1) lucky Peat or Peat (S	22)	Redox	x Depressi	ons (F8)			
	` `							
	Layer (if observed)	:					lain Ontil Bar	
Type:						HVC	Iric Soil Pre	sent? Yes No <u>✓</u>
Depth (Remarks: Soil sampl	(inches): <u></u>							
Remarks: Soil sampl								
Remarks: Soil sampl	GY							Secondary Indicators (minimum of two required)
Remarks: Soil sampl YDROLO Wetland Hy	GY drology Indicators:		: check all that ap	DIV)				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Remarks: Soil sampl YDROLO Wetland Hy Primary Indi	GY				aves (B9)			Surface soil cracks (B6)
Primary India Semarks: Soil sampl YDROLO Wetland Hy Primary India Surface	GY drology Indicators: cators (minimum of o		Water-	oply) -stained lea c fauna (B				
Primary India Semarks: Soil sampl YDROLO Wetland Hy Primary India Surface	drology Indicators: cators (minimum of control water (A1) ater table (A2)		Water- Aquati	-stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati	drology Indicators: cators (minimum of control water (A1) ater table (A2)		Water- Aquati True a	stained lea	13) nts (B14)		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
YDROLO YDROLO Wetland Hy Primary Indic Surface High wa Saturati Water n	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)		Water- Aquati True a Hydroç	-stained lea c fauna (B aquatic plar gen sulfide	13) nts (B14)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
YDROLO YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water n Sedime	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a Hydroţ Oxidiz	stained lea c fauna (B iquatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living roo	<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
YDROLO YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water n Sedime Drift de	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water- Aquati True a Hydrog Oxidize	stained lead control factorial	13) nts (B14) odor (C1) heres along	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water n Sedime Drift de Algal m	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3)		Water- Aquati- True a Hydroo Oxidizo Preser Recen	stained lead control factorial	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water n Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4)	one required	WaterAquatiTrue aHydrogOxidizePreserRecenThin m	stained lead of the control of the c	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled the (C7)	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled the (C7)	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained lea c fauna (B cquatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surfac e or well da	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave	one required imagery (B7 e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge B) Other	estained lead of fauna (B organic plar gen sulfide ed rhizosph noce of redu at iron redu nuck surface or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C4 ction in tilled ce (C7) ata (D9) Remarks)	living roo	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave	one required imagery (B7 e surface (B8 Ye:	Water- Aquatir True a Hydrog Oxidizr Preser Recen Thin m Gauge Other No No No No No	estained lead of fauna (Budatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks)	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: cer Present? Present?	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatir True a Hydrog Oxidizr Preser Recen Thin m Gauge Other S No✓ S No✓	estained lead of fauna (Buquatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel Field Obser Surface Water Table Saturation P	drology Indicators: cators (minimum of of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: cer Present? Present?	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquatir True a Hydrog Oxidizr Preser Recen Thin m Gauge Other No No No No No	estained lead of fauna (Buquatic plan gen sulfide ed rhizosplance of redutiron redunuck surface or well da (Explain in Depth (incl.)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B8 Ye: Ye:		estained lead of fauna (Budatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
YDROLO Wetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel Field Obser Surface Water Table Saturation P includes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: ter Present? Present? Present? present?	imagery (B7 e surface (B8 Ye: Ye:		estained lead of fauna (Budatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
YDROLO Vetland Hy Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: ter Present? Present? Present? present?	imagery (B7 e surface (B8 Ye: Ye:		estained lead of fauna (Budatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Primary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundat Sparsel Sield Obser Surface Water Table Saturation P includes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if y vegetated concave vations: ter Present? Present? Present? present?	imagery (B7 e surface (B8 Ye: Ye:		estained lead of fauna (Budatic plan gen sulfide ed rhizospince of redutiron redunuck surface or well da (Explain in Depth (incline)	nts (B14) odor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9) Remarks) hes): hes):	living roo	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	Citv/Co	unty: Olmsted County	Sampling Date: 2024-06-05
Applicant/Owner: Ranger Power		, 	e: MN Sampling Point: bdp53
Investigator(s): Andy Kranz			
Lanform(hillslope, terrace, etc): Backslope			ef (concave, convex, none): none
Slope(%): 16-25 Lat: 44.07668			Datum: WGS 84
Soil Map Unit Name: 251F: Marlean silty clay loam, 25 to			
Are climatic / hydrologic conditions on the site typical for the		Yes , No	
	Significantly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology r	,		plain any answers in Remarks.)
	, ,	, ,	
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		
	No <u> </u>	Is the Sampled Area within a Wetland?	Yes No <u>✓</u>
	No		
Remarks: (Explain alternative procedures here or in a set Upland meadow strip on steep ground within crop field.	parate report.)		
Opiana meadow strip on steep ground within crop held.			
VEGETATION - Use scientific names of pla	ents		
Continue of the solution of th		Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5		- Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of:Multiply by:
3.			OBL species0 x1 =0
4			FACW species $0 \times 1 = 0$
5			FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species 0 x1 = 0 UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.2	, ,	, , ,	
1. Bromus inermis, Smooth Brome		yes FACU	Column Totals: 100 x1 = 400 (B) Prevalence Index = B/A = 4.000
2. <u>Cirsium arvense</u> , Canadian Thistle	5%	no FACU	Prevalence muex – B/A – 4.000
3.			Hydrophytic Vegetation Indicators:
4 5.			1 - Rapid Test for Hydrophytic Vegetation
5 6			2 - Dominance Test is > 50%
7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	100%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2			Vegetation
		= Total Cover	Present? Yes No _
Remarks: (Include photo numbers here or on a separate	sheet.)		

Depth (inches) Color (moist)	% Col	or (moist)	%	Type ¹	Loc ²	Texture	Rema	arks	
Type: C=Concentration, D=Depletion	on, RM=Reduc	ced Matrix, MS=N	Masked	 Sand Grain	s. ² l	ocation: PL	.=Pore Lining, M=Matrix.		
lydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	d	Sandy GI Sandy Re Stripped I Loamy M Loamy G Depleted Redox De Redox De	edox (S5 Matrix (S lucky Mil leyed Ma Matrix (ark Surfa Dark Su	5) 66) neral (F1) atrix (F2) F3) ace (F6) urface (F7)			Indicators for Problematic Coast Prairie Redox (A1 Dark Surface (S7) Iron-Manganese Masses Very Shallow Dark Surfa Other (Explain in Remar ³ Indicators of hydrophyti hydrology must be pres problematic.	s (F12) ace (TF12) rks) ic vegetation	and wetlan
Pestrictive Layer (if observed): Type: Depth (inches): Temarks: oil sample unnecessary due to lace	sk of hydrophy	tic vegetation an	d lack o	f hydrology		ric Soil Pre	sent?	Yes	No
Type: Depth (inches): demarks: oil sample unnecessary due to lace	k of hydrophy	tic vegetation an	d lack o	f hydrology					
Type: Depth (inches): temarks: oil sample unnecessary due to lace /DROLOGY /Vetland Hydrology Indicators:				f hydrology			econdary Indicators (minimur		
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			:: MN Sampling Point: cdp01
Investigator(s): Jared Booms			
			ef (concave, convex, none): convex
Slope(%): 3-7 Lat: 44.07193		Long: -92.30835	Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slopes	, moderatel	y eroded	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes , No	(If no, explain in Remarks.)
Are Vegetation , , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		plain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	
Hydric Soil Present? Yes No		within a Wetland?	Yes No
Wetland Hydrology Present? Yes <u>✓</u> No Remarks: (Explain alternative procedures here or in a separate repo			
Data point is located on side slope above wetland drainage basin. F VEGETATION - Use scientific names of plants.	Tot is plante	ed in row crops and doe:	s not meet the criteria of a wetland.
		Dominant Indicator Species? Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species
4.			Across All Strata: 0 (B)
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2	<u> </u>		OBL species0 x1 =0
3 4			FACW species0 x1 =0
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
7 8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate
10.			sheet)
		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Agricultural field planted with corn.			

Sample Point: cdp01

Depth	Matrix		R	edox Feat	ures				
inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-23	10YR - 2/1	99	7.5YR-4/6	1	C	M	CL	_ =	
23-30	10YR - 3/3	99	7.5YR-4/6	1	C	M	SiCL		
	oncentration, D=Depl	etion, RM=R	educed Matrix, M	S=Masked	d Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	3
	Indicators: ol (or Histel) (A1) und	lefined	Sandy	y Gleyed M	Matrix (S4)			Indicators for Problematic Hydri	ic Soils ³ :
_	Epipedon (A2) undefi			y Redox (S				Coast Prairie Redox (A16) Dark Surface (S7)	
_	listi (A3) undefined		·	ed Matrix (Iron-Manganese Masses (F12	2)
_	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (T	-
Stratifie	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
_	luck (A10)			ted Matrix					
_	ed Below Dark Surfac	ce (A11)		x Dark Sur				³ Indicators of hydrophytic veg hydrology must be present,	jetation and we unless disturbe
-	Oark Surface (A12)				Surface (F7)			problematic.	a
_	Mucky Mineral (S1)			x Depressi					
	lucky Peat or Peat (S	33)	<u> </u>	.,	- (-)				
strictive	Layer (if observed)	:							
Type:						Hyd	Iric Soil P	resent?	Yes No _
Depth emarks:	(inches): d when wet.								
Depth marks:						_			
Depth marks: ls colored	d when wet.								
Depth marks: ls colored	d when wet.		chook all that an	ah)				Secondary Indicators (minimum of the Surface soil cracks (R6)	wo required)
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Depth marks: Is colored DROLO tland Hy mary Indi _ Surface	d when wet. OGY Identifications: Identifications (minimum of company)		Water-	stained lea	` ,			Surface soil cracks (B6) Drainage patterns (B10)	wo required)
Depth marks: ls colored DROLO tland Hy mary Indi Surface High w	d when wet. OGY Idrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water-	stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	wo required)
Depth marks: ls colored DROLO tland Hy mary Indi Surface High w Saturat	d when wet. OGY Indicators: Idea (A1) Idea (A2) Idea (A3)		Water- Aquatio True a	stained lea c fauna (B: quatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth marks: ls colored DROLO tland Hy mary Indi Surface High w Saturat Water r	d when wet. OGY rdrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)	living root	te (C2)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial image	gery (C9)
Depth marks: ls colored DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	d when wet. OGY rdrology Indicators: icators (minimum of ce water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial images	gery (C9)
Depth marks: Is colored DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de	d when wet. OGY Indicators:		Water- Aquation True ao Hydrog Oxidize Presen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial images Stunted or stressed plants (D1) Geomorphic position (D2)	gery (C9)
Depth marks: Is colored DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	d when wet. OGY ordrology Indicators: icators (minimum of of exators (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water- Aquation True and Hydrog Oxidize Present Recent	estained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	13) nts (B14) odor (C1) heres along uced iron (C ction in tilled	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial images	gery (C9)
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Preject/Cite. Lomon Hill	City /Ca	t Formington/Olmet	od County Committee Date: 2024 0F 20
	City/Co		Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	04		:: MN Sampling Point: cdp02
Investigator(s): Jared Booms			
			ef (concave, convex, none): concave
			Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slopes			
Are climatic / hydrologic conditions on the site typical for this time of y			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly			Circumstances" present? Yes No V
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes 🔽 No		Is the Sampled Area within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate report of its located in a drainage way that is planted in agricultural cover hydrology indicators soil surface cracks, drainage patterns, and satu does not meet normal conditions due to vegetation disturbances. VEGETATION - Use scientific names of plants.	r. Wetland c		
		Dominant Indicator	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	
1			Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
3.			
4.			Total Number of Dominant Species Across All Strata: 0 (B)
5.			Percent of Dominant Species That
		= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2.			OBL species0 x1 =0
3			FACW species0 x1 =0
4			FAC species0 x1 =0
5	006	= Total Cover	FACU species 0 x1 = 0
Harbanania Ctratum (Blat aizaiE ff (1 E m) radius OD 2.20 hy 2.20			UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	. ,	, , ,	Column Totals: $0 \times 1 = 0$ (B)
1			Prevalence Index = B/A = NaN
3			Lindrophytic Vegetation Indicators
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			✓ PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Wetland planted with corn.			

Sample Point: cdp02

Depth	ription: (Describe Matrix	——————————————————————————————————————		Redox Feat		Commin	tile abser	ice of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Rer	marks
0-6	10YR - 2/1	100	/				SiCL		
6-25	10YR - 2/1	97	7.5YR-4/6	3	C	M			
25-30	10YR - 4/1	65	7.5YR-4/6	10	С	М	SiCL		
25-30	10YR - 2/1	30	/				SiCL		
ype: C=Cor	ncentration, D=Dep	letion, RM=F	Reduced Matrix, M	 1S=Masked	 I Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.	
ydric Soil II	ndicators:							Indicators for Problematic	: Hydric Soils ³ :
Histosol ((or Histel) (A1) und	lefined		y Gleyed M				Coast Prairie Redox (A	\16)
	ipedon (A2) undefi	ined		y Redox (S	-			Dark Surface (S7)	
	sti (A3) undefined			oed Matrix (Iron-Manganese Mass	es (F12)
_ , ,	n Sulfide (A4)			y Mucky M	, ,			Very Shallow Dark Sur	face (TF12)
	Layers (A5)			y Gleyed N				Other (Explain in Rem	arks)
2 cm Mu	` '			eted Matrix				³ Indicators of hydrophy	tic vegetation and wetla
	Below Dark Surface	ce (A11)		x Dark Sur				hydrology must be pr problematic.	esent, unless disturbed
	rk Surface (A12)				Surface (F7)			рговієтнанс.	
	ucky Mineral (S1) cky Peat or Peat (S	53)	Redo	x Depressi	ons (F8)				
	ayer (if observed)								
						Hyd	lric Soil Pi	resent?	Yes 🔽 No _
Type:									
Depth (ir	nches):								
Depth (ir									
Depth (ir emarks:	GY .					_		Cocondon Indicators (minim	um of two required)
Depth (ir emarks:	GY rology Indicators:		check all that ar	unhy)				Secondary Indicators (minimum	um of two required)
Depth (ir Depth (ir emarks:	GY rology Indicators: ators (minimum of o				aves (B9)			✓ Surface soil cracks (B6)	
Depth (ir emarks: 'DROLOG 'etland Hyd rimary Indica Surface v	GY rology Indicators: ators (minimum of o		Water	-stained lea	. ,			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10)	
Depth (ir emarks: 'DROLOG /etland Hyd rimary Indica Surface v High water	rology Indicators: ators (minimum of owater (A1) er table (A2)		Water- Aquati	-stained lea ic fauna (B	13)			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table	
Depth (ir Depth (ir)Depth (ir Depth (ir)Depth (ir Depth (ir)Depth	rology Indicators: ators (minimum of owater (A1) er table (A2) in (A3)		Water Aquati True a	-stained lea ic fauna (Ba aquatic plan	13) nts (B14)			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	(C2)
Depth (ir emarks: 'DROLOG /etland Hyd rimary Indica Surface v High wate Saturatio Water ma	rology Indicators: ators (minimum of owater (A1) er table (A2) in (A3) arks (B1)		Water-Aquati True a Hydro	-stained lea ic fauna (Bi aquatic plan gen sulfide	13) nts (B14) odor (C1)	living root	es (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on aer	(C2) ial imagery (C9)
Depth (ir emarks: 'DROLOG /etland Hyd rimary Indica Surface v High wate Saturatio Water ma Sediment	rology Indicators: ators (minimum of owater (A1) er table (A2) in (A3) arks (B1) t deposits (B2)		Water- Aquati True a Hydro	-stained lea ic fauna (B: aquatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•	is (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on aer Stunted or stressed plan	(C2) rial imagery (C9) nts (D1)
Depth (ir emarks: DROLOG Vetland Hyd rimary Indica Surface v High wate Saturatio Water ma Sediment Drift depo	rology Indicators: ators (minimum of owater (A1) er table (A2) in (A3) arks (B1) t deposits (B2) osits (B3)		Water-Aquati True a Hydroi Oxidiz	estained lead ic fauna (Bana aquatic plana gen sulfide ded rhizosplance of redu	13) hts (B14) odor (C1) heres along uced iron (C	4)	, ,	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on aer Stunted or stressed plan Geomorphic position (D2)	(C2) rial imagery (C9) nts (D1)
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Depth (ir emarks: DROLOG etland Hyd imary Indica Surface v High wate Saturatio Water ma Sediment Drift depo Algal mat Iron depo Inundatio Sparsely etld Observ urface Wate fater Table Featuration Presidudes capi escribe Recommends:	rology Indicators: ators (minimum of owater (A1) er table (A2) in (A3) arks (B1) t deposits (B2) osits (B3) t or crust (B4) osits (B5) on visible on aerial vegetated concave rations: r Present? esent? esent? elilary fringe)	imagery (B7) e surface (B8 Yes Yes n gauge, more	Water- Aquati True a Hydror Oxidiz Preser Recen Thin n Gauge Other No	stained leadic fauna (B: aquatic plan gen sulfide ed rhizosph nce of redu at iron reduct nuck surface or well da (Explain in Depth (inch Depth (inch al photos, p	nts (B14) odor (C1) heres along uced iron (Citon in tilled te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s) cland Hydr	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) ✓ Saturation visible on aer Stunted or stressed plan Geomorphic position (D2 FAC-neutral test (D5)	(C2) rial imagery (C9) nts (D1) 2)

Project/Site: Lemon Hill	City/Cc	ount a Earmina	nton/Olmete	nd County	Compling Date: 2	024 05 20
Project/Site: Lemon Hill Applicant/Owner: Ranger Power	City/Co					
• •	Coat			: MN	Sampling Point: <u>G</u>	цроз
Investigator(s): <u>Jared Booms</u> Lanform(hillslope, terrace, etc): <u>Concave drainage</u>				ef (concave, convex, no	ono): concave	
			_	er (concave, convex, no	,	S 84
Soil Map Unit Name: 131C: Massbach silt loam, 6 to 12 percent slope						
Are climatic / hydrologic conditions on the site typical for this time of y				(If no, explain		
				-		
Are Vegetation, Soil, or Hydrology Significantly Are Vegetation, Soil, or Hydrology naturally pro				Circumstances" present		<u> </u>
Are vegetation , Soil , or Hydrology	biemauc?	(11.1	ieeaea, ex	plain any answers in R	temarks.)	
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	ocation	s, transects, imp	ortant featur	es, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No						
Hydric Soil Present? Yes _ ✓ No		Is the Sar within a V		t	Yes	✓ No
Wetland Hydrology Present? Yes No					·	
Remarks: (Explain alternative procedures here or in a separate report of its located in a drainage way that is planted in agricultural cover hydrology indicators including soil surface cracks, drainage patterns, the top of the hill by a very steep flashy upland drainage channel. Of to a floodplain type wetland system. Vegetation is disturbed due to a VEGETATION - Use scientific names of plants.	. Wetland c saturation once the slo	air imagery a pe decreases	nd geomor the wetlar	phic position. Wetland nd opens up to a drain	is connected to ar age basin which is	nother wetland at
·		Dominant		Dominance Test Wo	arkahaat	
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species?	Status			
1				Number of Dominant Are OBL, FACW, or		<u>1</u> (A)
3.				Total Number of Don	minant Species	
4.				Across All Strata:		<u>2</u> (B)
5.				Percent of Dominant	Species That	
	0%	= Total Cove	er	Are OBL, FACW, or		50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index w	orksheet:	
1				Total % Cover	r of: Mu	Itiply by:
2					0 x1 =	
3				FACW species		
4					2 x1 =	
5	00/	- Total Cove		l -	<u>2</u> x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		= Total Cove		UPL species	<u>0</u> x1 =	
Equisetum arvense, Field Horsetail		yes	FAC	Column Totals:	<u>4</u> x1 =	14 (B)
0 0 1 71 1		yes	FACU	Prevalenc	ce Index = B/A =	3.500
Cirsium arvense, Canadian Thistie			TACO	Hydrophytic Vegeta	ntion Indicators:	
4.						
5.				1 - Rapid Test f	, , ,	getation
6.				2 - Dominance		
7					Index is <= 3.0 ¹	
8					cal Adaptations ¹ (P in Remarks or on	
9				supporting data sheet)	, III Remarks or on	a separate
10				✓ PROBLEMATIC	Hydrophytic Vege	etation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	4%	= Total Cove	er	¹ Indicators of hy	ydric soil and wetla	and hydrology
1.				•	, a	a or problematic.
2				Hydrophytic Vegetation		
	0%	= Total Cove	er	Present?	Yes	s <u> </u>
Remarks: (Include photo numbers here or on a separate sheet.) Wetland planted with corn.						

Sample Point: cdp03

Color (most) 56 Color (most) 56 Color (most) 56 Type4 Color Texture Remarks		cription: (Describe Matrix	to the depti		Redox Feat				e of indicators.	
24-30 10YR - 4/1 65 7.5YR-4/6 10 C M SICL 24-30 10YR - 2/1 30	Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Ren	narks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Pyrone C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Indicators for Problematic Hydric Soils*: Coast Prains Redux (AL16) Dark Surface (A2) Dark Surface (A2) Dark Surface (A2) Dark Surface (A2) Depletion Matrix, (E3) Pederot Dark Surface (F1) Pederot Dark Surface (F2) Problematic Hydric C=Concentration in Remarks: **Problematic Hydric Dark Surface (F2) Trick Dark Surface (A11) Pederot Dark Surface (F2) Problematic Hydric Dark Surface (F3) **Problematic Hydric Dark Surface (F3) **Pyrone Surface Matrix (F2) **Pyrone Matrix (F2) **Pyrone Lining, Methods (F12) **Puring Matrix (F2) **Puring Mat	0-24	10YR - 2/1	95	7.5YR-4/6	5			SiCL		
Type: C=Concentration, D=Depletion, RN=Reduced Matrix, MS=Masked Sand Grains. **Pytric Soil Indicators:** Histosc (or Hister) (A1) undefined	24-30	10YR - 4/1	65	7.5YR-4/6	10	С	М	SiCL		
Type: C=Concentration. D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Pytric Soil Indicators:** Histosc (or Hister) (A1) undefined	24-30		30	/				SiCL		
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Sandy Redox (S5) Black Histi (A3) undefined Sandy Redox (S5) Black Histi (A3) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Depleted Edevio Dark Surface (F12) Depleted Dark Surface (A11) Pepeleded Edevio Dark Surface (F12) Depleted Wartix (F2) Sandy Mucky Mineral (S1) Firm Mucky Mineral (S1) Som Mucky Pheat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Semarks: WERMARKS: WERMA		20111 2/2		· · · · · · · · · · · · · · · · · · ·	-				- -	
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Retox (S5) Black Histi (A3) undefined Sandy Retox (S5) Black Histi (A3) undefined Sandy Retox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Ede Davis Surface (F12) Depleted Davis Surface (A11) Phydrogen Depleted Below Dark Surface (A11) Phydrogen Depleted Davis Surface (A12) Depleted Davis Surface (A12) Som Mucky Mineral (S1) Som Mucky Pheat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (inche									-	
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epiperion (A2) undefined Sandy Redox (S5) Black Histis (A3) undefined Sandy Redox (S5) Black Histis (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (E1) Depleted Edwo Mark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F2) Sandy Mucky Mineral (E1) Prince Pact or Pact (A12) September (A2) Sandy Mucky Mineral (E1) Finish Dark Surface (A12) Pepted Matrix (F2) Sandy Mucky Mineral (S1) Sen Mucky Pact or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (in								• •	· -	
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (E1) Loamy Mucky Mineral (E1) Depleted Edebow Dark Surface (F12) Depleted Develow Dark Surface (F12) Depleted Develow Dark Surface (A11) Zeroby Metland (A3) Tinick Dark Surface (A12) Depleted Dark Surface (F6) Sorm Mucky Pheat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (i										
Histosol (or Histel) (A1) undefined	Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	/IS=Masked	d Sand Grai	ns.	Location: PL	=Pore Lining, M=Matrix.	
Histic Epipedon (A2) undefined Sandy Redox (S5) Dark Surface (S7) Black Histi (A3) undefined Shipped Matrix (S6) Black Histi (A3) undefined Shipped Matrix (S6) Black Histi (A3) undefined Shipped Matrix (S6) Brown Manageres Masses (F12) Loany Mucky Mineral (F1) Loany Mucky Mineral (F1) Loany Mucky Mineral (F2) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) So m Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches):	lydric Soil	Indicators:							Indicators for Problematic	Hydric Soils ³ :
Black Histi (A3) undefined	Histoso	ol (or Histel) (A1) und	defined						Coast Prairie Redox (A	16)
Hydrogen Sulfide (A4) Startified Layers (A5) Loamy Mucky Mineral (F1) Zem Muck (A10) Depleted Below Dark Surface (A11) Zem Houk (A12) Depleted Below Dark Surface (A11) Zend Muck (A12) Depleted Dark Surface (F6) Sardy Mucky Mineral (S1) Sem Mucky Mineral (S1) Sem Mucky Mineral (S1) Sem Mucky Mineral (S1) Sestrictive Layer (if observed): Type: Deplet (inches): Depleting Mineral (S1) Surface water (A1) Water-stained leaves (B9) Surface water (A1) Water-stained leaves (B9) Surface water (A1) Water-stained leaves (B9) Aquatic fauna (B13) Water marks (B1) Sediment deposits (B2) Oxidized mizospheres along living roots (C3) Algal mat or crust (B4) Iron deposits (B3) Spersely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Indicators (minimum of two required) Zemarks: VPROLOGY Water-stained leaves (B9) Aquatic fauna (B13) Water marks (B1) Depleted Below Dark Surface (C7) Sediment deposits (B2) Oxidized mizospheres along living roots (C3) Sediment deposits (B3) Presence of reduced iron (C4) Recent iron reduction in tilled soils (C6) Iron deposits (B3) Presence of reduced iron (C4) Recent iron reduction in tilled soils (C6) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Other (Explain in Remarks) Field Observations: Wetland Hydrology Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present?			ined		•	•			Dark Surface (S7)	
Stratified Layers (A5)						` '				
2 cm Muck (A10) Depleted Matrix (F3) 3Indicators of hydrophytic vegetation and wella hydrology must be present, unless disturbed in 2 miles of hydrology must be present, unless disturbed in problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) Hydrology must be present, unless disturbed in problematic. From Mucky Peat or Peat (S3) Redox Depressions (F8) Hydrology must be present, unless disturbed in problematic. From Mucky Peat or Peat (S3) Redox Depressions (F8) Hydric Soil Present? Yes No Depth (inches):	′ ′	` ,			-					
Depleted Below Dark Surface (A11)									_	•
Thick Dark Surface (A12) Depleted Dark Surface (F7) Problemátic. Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:		,	re (Δ11)	 :		` '				
Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Hydric Soil Present? Yes/ No Secondary Indicators (minimum of two required) Frimary Indicators (minimum of one required): check all that apply) Surface water (A1)			ce (AII)			` ,				esent, uniess disturbed t
Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Remarks: Hydric Soil Present? Yes _ No _ Depth (inches): Secondary Indicators (minimum of two required) Yes _ No _ Depth (inches): Secondary Indicators (minimum of two required) Yes _ No _ Depth (inches): Surface water (A1)		• •								
Type: Depth (inches): Per Mo Depth (inches): Per Moder Per Per Per Per Per Per Per Per Per P			S3)		х 2 оргосо.	.00 (. 0)				
Type: Depth (inches): Popth (inches):	Restrictive	Laver (if observed)	:							
Depth (inches): Remarks: VPROLOGY							Hve	dric Soil Pre	sent?	Yes ✔ No
Wettand Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Water-stained leaves (B9) Water marks (B1) Hydrogen sulfide odor (C1) Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Drift deposits (B3) Presence of reduced iron (C4) Iron deposits (B3) Presence of reduced iron (C4) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Weter Table Present? Yes No Depth (inches): Wetland Hydrology Indicators (minimum of two required) Primary Indicators (B10) Pri										
Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) High water table (A2) Saturation (A3) Water marks (B1) Water marks (B1) Dry-season water table (C2) Sediment deposits (B2) Drift deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Inim muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Wetland Hydrology Present? Yes No Depth (inches): Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth	(inches): <u></u>					_ `			
Surface water (A1)	Depth (· · ·					_			
High water table (A2) Saturation (A3) True aquatic fauna (B13) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inudation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Water Table Present? Water Table Present? Yes No Depth (inches): Saturation (B13) True aquatic plants (B14) Crayfish burrows (C8) Crayfish burrows (C8) Crayfish burrows (C8) Stunted or stressed plants (D1) Facenorizing roots (C3) Stunted or stressed plants (D1) Faceno	Depth (Remarks:	DGY							econdary Indicators (minimu	ım of two required)
Saturation (A3)	Depth (Remarks:	DGY vdrology Indicators:		; check all that ap	oply)			_		ım of two required)
Water marks (B1)	Depth (Remarks: YDROLO Wetland Hy Primary Indi	OGY vdrology Indicators: icators (minimum of o		•		aves (B9)			✓ Surface soil cracks (B6)	ım of two required)
Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Drift deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Similar (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Depth (Remarks: YDROLO Wetland Hy Primary Indi Surface	OGY /drology Indicators: icators (minimum of of water (A1)		Water-	-stained lea ic fauna (B	13)			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10)	
Drift deposits (B3)	Primary Indi Surface High wa Saturati	OGY rdrology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3)		Water- Aquati True a	-stained lea ic fauna (B aquatic plar	13) nts (B14)			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8)	C2)
Algal mat or crust (B4)	Primary Indi Surface High wa Saturati Water r	order (A1) ater table (A2) ion (A3) marks (B1)		Water-Aquati True a	-stained lea ic fauna (B aquatic plar gen sulfide	13) nts (B14) e odor (C1)			✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri	C2) al imagery (C9)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indi Surface High wa Saturati Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water-Aquati True a Hydro	-stained lea ic fauna (B aquatic plar gen sulfide red rhizosp	nts (B14) odor (C1) heres along	•	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan	C2) al imagery (C9) ts (D1)
Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present?	Primary Indi Surface High wa Saturati Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water-Aquati True a Hydroi Oxidiz	-stained lea ic fauna (B aquatic plar gen sulfide ted rhizosp nce of redu	nts (B14) e odor (C1) heres along uced iron (C	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	OGY /drology Indicators: icators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water- Aquati True a Hydroi Oxidiz Presei Recen	-stained leadic fauna (Baquatic planagen sulfide red rhizospence of reduttion redutir ron redutic stains and redutir ron redutir ron redutic redutir ron redutir redutic redutir redut	nts (B14) e odor (C1) heres along uced iron (C	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches):	YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de	or o	one required	Water- Aquati True a Hydro Oxidiz Presei Recen Thin n	-stained leading for fauna (Baquatic planagen sulfide sed rhizospence of redution redunuck surfacents	nts (B14) e odor (C1) heres along uced iron (C oction in tilled ce (C7)	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No Depth (inches): (includes capillary fringe)	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat	order variable (A2) control (A3) marks (B1) control (B3) mat deposits (B2) control (B4) posits (B5) tion visible on aerial	one required	Water- Aquati True a Hydro Oxidiz Preset Recen Thin n Gauge	-stained lea ic fauna (B aquatic plan gen sulfide red rhizosp nce of redu nt iron redu nuck surface e or well da	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9)	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No Depth (inches): No Depth	YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel	or or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	one required	Water- Aquati True a Hydro Oxidiz Preset Recen Thin n Gauge	-stained lea ic fauna (B aquatic plan gen sulfide red rhizosp nce of redu nt iron redu nuck surface e or well da	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9)	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
Saturation Present? Yes No ✓ Depth (inches):	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel	or or crust (B4) posits (B5) tion visible on aerial ly vegetated concave vertations:	one required imagery (B7	Water- Aquati True a Hydro Oxidiz Presei Recen Thin n Gauge B) Other	stained lea ic fauna (B aquatic plan gen sulfide red rhizosp nce of redu nuck surface or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C action in tilled ce (C7) ata (D9) a Remarks)	4)	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2)	C2) al imagery (C9) ts (D1)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	order variable (A2) control (A3) control (B3) control (B4) control (B5) control (B5) control (B5) control (B4) control (B4	imagery (B7 e surface (B8	Water- Aquati True a Hydron Oxidiz Presen Recen Thin n Gauge Other	-stained leading for the stained leading for the stained lead rhizosponce of redution reduntion reduction well do (Explain in Depth (inc.)	nts (B14) nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) n Remarks) hes):	4) d soils (C	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
	Primary Indi Surface High water r Sedime Drift de Algal m Iron del Inundat Sparsel Field Obser Surface Water Table	pogy Indicators:	imagery (B7 e surface (B8 Ye:	Water- Aquati True a Hydro Oxidiz Presel Recen Thin n Gauge Other No No	stained leadic fauna (Baquatic planagen sulfide led rhizospunce of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B	4) d soils (C	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Remarks:	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P	Pogy Indicators:	imagery (B7 e surface (B8 Ye:	Water- Aquati True a Hydro Oxidiz Presel Recen Thin n Gauge Other No No	stained leadic fauna (Baquatic planagen sulfide led rhizospunce of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B	4) d soils (C	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
Remarks:	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	order various incators: icators (minimum of order water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained leadic fauna (Baquatic planagen sulfide lead rhizospance of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B	4) d soils (Co	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	order various incators: icators (minimum of order water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained leadic fauna (Baquatic planagen sulfide lead rhizospance of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B	4) d soils (Co	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)
	Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	order various incators: icators (minimum of order water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial ly vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water-	stained leadic fauna (Baquatic planagen sulfide lead rhizospance of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B	4) d soils (Co	ts (C3)	✓ Surface soil cracks (B6) ✓ Drainage patterns (B10) Dry-season water table (Crayfish burrows (C8) ✓ Saturation visible on aeri Stunted or stressed plan ✓ Geomorphic position (D2 FAC-neutral test (D5)	C2) al imagery (C9) ts (D1)

SOIL

Project/Site: Lemon Hill			ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			e: MN Sampling Point: cdp04
Investigator(s): Jared Booms	Secti	ion, Township, Range: <u>S</u>	18 T107N S012W
			ef (concave, convex, none): none
Slope(%): <u>3-7</u> Lat: <u>44.07297</u>			
Soil Map Unit Name: 131C: Massbach silt loam, 6 to 12 percent slope	es .		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes N	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly		Are "Normal (Circumstances" present? Yes 🗸 No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS. Attack sits man showin	a compli	na naint laastion	a transacta important factures ata
SUMMARY OF FINDINGS - Attach site map showin		ing point location ⊤	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	1
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		within a Wetland?	Yes No <u>✓</u>
Remarks: (Explain alternative procedures here or in a separate repo Upland data point located on a side slope next to a flashy upland d		em. Located in planted	corn field.
VEGETATION - Use scientific names of plants.			
•	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 0 (A)
3			Total Number of Dominant Species Across All Strata: 0 (B)
4			Across All Strata:0 (B)
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	<u> </u>	- Iolai Covei	Prevalence Index worksheet:
1			
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species 0 x1 = 0
5			FAC species0 x1 =0
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, , ,	UPL species $0 \times 1 = 0$ Column Totals: $0 \times 1 = 0$ (B)
1			Column Totals: 0 x1 = 0 (B) Prevalence Index = B/A = NaN
2			
3			Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separatesheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2		- Total Course	Vegetation
	0%	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.) Planted in corn			

Sample Point: cdp04

	cription: (Describe matrix	to the depth		Redox Feat		or commin	ille absei	ice of mulcators.)	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-26	10YR - 2/1	100	/				SiCL		
26-30	10YR - 3/2	99	7.5YR-4/6	1	C	M	SiCL		
pe: C=C	oncentration, D=Dep	letion, RM=F	 Reduced Matrix, N	IS=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problematic Hydric So	oils ³ :
-	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)	
	Epipedon (A2) undefi	ned	·	y Redox (S				Dark Surface (S7)	
_	Histi (A3) undefined			ed Matrix (` '			Iron-Manganese Masses (F12)	
- ' '	en Sulfide (A4)			-	Mineral (F1)			Very Shallow Dark Surface (TF12))
	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
_	luck (A10)	(444)		eted Matrix				³ Indicators of hydrophytic vegetati	ion and we
	ed Below Dark Surfac	:e (A11)		x Dark Sur				hydrology must be present, unles problematic.	ss disturbe
	Dark Surface (A12)				Surface (F7)			problematio.	
_ ′	Mucky Mineral (S1)	20)	Redo:	x Depressi	ons (F8)				
	lucky Peat or Peat (S Layer (if observed)								
Type:	·					Hyd	lric Soil Pi	resent? Yes	No _
	·								
Depth marks:	(inches): <u></u>								
marks:						_			
marks:	OGY							Secondary Indicators (minimum of two n	equired)
DROLO	DGY rdrology Indicators:		check all that ap	DIV)				Secondary Indicators (minimum of two re Surface soil cracks (B6)	equired)
DROLC tland Hy	OGY			oply) stained lea	aves (B9)				equired)
DROLO tland Hy mary Indi _ Surface	OGY vdrology Indicators:		Water-	stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	equired)
DROLO tland Hy mary Indi _ Surface _ High w	oGY vdrology Indicators: icators (minimum of o		Water- Aquati		13)			Surface soil cracks (B6)	equired)
DROLO tland Hy mary Indi _ Surface _ High w Saturat	oddy rdrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquati True a	stained lea c fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
DROLO tland Hy mary Indi Surface High w Saturat Water r	ordrology Indicators: icators (minimum of of extra (A1) ater table (A2) ion (A3)		Water- Aquati True a Hydrog	stained lea c fauna (Ba quatic plan gen sulfide	13) nts (B14)	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	•	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery	
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1)	
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)		Water- Aquati True a Hydrog Oxidiz Preser Recen	estained lea c fauna (B. aquatic plan gen sulfide ed rhizosph nce of redu it iron reduct	nts (B14) codor (C1) heres along uced iron (C ction in tilled	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	pogy Indicators: Ideators (minimum of of extra table (A2) Ideator (A3) Ideator (A3	one required	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu it iron reductuck surfac	13) hts (B14) c odor (C1) heres along uced iron (C ction in tilled	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLC tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)	one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m Gauge	estained lea c fauna (B. aquatic plan gen sulfide ed rhizosph nce of redu it iron reduct	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLO tland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order various indicators: icators (minimum of of exactors (M2) ion (A3) marks (B1) ion deposits (B2) ion deposits (B3) inat or crust (B4) posits (B5) ition visible on aerial in exactors (M2) ion visible on aerial in exactors (M2)	one required	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu it iron reduct it iron reduct e or well da (Explain in	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	4)	, ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2)	
DROLO Itland Hy Mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Itld Obsel	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) surface (B8)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	estained lead control of the control	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes):	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO Itland Hy mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8) Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No	estained lea c fauna (B: cquatic plan gen sulfide ed rhizosph nce of redu it iron reduct nuck surfact e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO Itland Hy Mary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset fface Water Table turation F	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8) Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	estained lea c fauna (B: cquatic plan gen sulfide ed rhizosph nce of redu it iron reduct nuck surfact e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	j)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Water Table curation Feludes ca	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: capana	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s) cland Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO tland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Water Table curation Feludes ca	order of the content	imagery (B7) e surface (B8) Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: capana	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s) cland Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Water Table uration F ludes ca scribe Re	order of the content	imagery (B7) e surface (B8 Yes Yes n gauge, mor	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: capana	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s) cland Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	(C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Id Obset face Water Table uration F cludes ca scribe Re	order of the content	imagery (B7) e surface (B8 Yes Yes n gauge, mor	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	stained lead of fauna (B: capana	13) nts (B14) nodor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	4) d soils (C6	s) cland Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	

Project/Site: Lemon Hill	City/Co	ounty: Farmi	naton/∩lmst	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	City/CC			e: MN Sampling Point: cdp05
Investigator(s): Jared Booms	Soct			
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07173				Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slopes				
				o (If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of y				
Are Vegetation , Soil , or Hydrology Significantly		, ,		Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(l	f needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ıg sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes 🔽 No			ampled Area Wetland?	a. Yes ✔ No
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate report Road ditch depression at the top of a hill. Open depression that train has fresh wet meadow cover. No soil pit due to road right of way so VEGETATION - Use scientific names of plants.	nsitions into			
,		Dominant		
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test Worksheet
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4 5.				, 、,
5		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species0 x1 =0
3				FACW species 100 x1 = 200
4				FAC species0 x1 =0
5	0%	= Total Co		FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	70%	yes	FACW	Column Totals: 100 x1 = 200 (B)
Solidago gigantea, Late Goldenrod	30%	ves	FACW	Prevalence Index = B/A = 2.000
3				Hydrophytic Vegetation Indicators:
4.				
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				✓ 2 - Dominance Test is > 50%
7				3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide
9				supporting data in Remarks or on a separate sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	100%	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology
1				must be present, unless disturbed or problematic.
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: cdp05

Depth (inches) Color (mois	t) %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Re	marks
Type: C=Concentration, D	=Depletion, RM=	=Reduced Matrix, M	S=Masked	I Sand Grair	ns. ² Lo	ocation: PL	_=Pore Lining, M=Matrix.	
ydric Soil Indicators: Histosol (or Histel) (A2) Histic Epipedon (A2) u Black Histi (A3) undet Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral 5 cm Mucky Peat or F	ndefined ined Surface (A11) 12) (S1)	Sandy Stripp Loamy Loamy Deple Redox	y Gleyed M ted Matrix k Dark Sur	(S6) (S6) Ilineral (F1) Matrix (F2) (F3) (F3) face (F6) Surface (F7)			Indicators for Problemati Coast Prairie Redox (Dark Surface (S7) Iron-Manganese Mass Very Shallow Dark Su Other (Explain in Rem 3Indicators of hydroph hydrology must be p problematic.	A16) ses (F12) rface (TF12)
estrictive Layer (if obse								
Type:	,				Hydri	c Soil Pre	esent?	Yes _ 🗸 No
Depth (inches): emarks: o soil pit due to road righ	of way, soils as	ssumed hydric base	d on geom	norphic posit	ion and hyd	drophytic v		
Depth (inches): <u></u> emarks: o soil pit due to road righ	of way, soils as	ssumed hydric base	d on geom	norphic posit	ion and hyc	drophytic v		
Depth (inches): emarks: o soil pit due to road righ		ssumed hydric base	d on geom	norphic posit	ion and hyc		regetation.	num of two required)
Depth (inches): emarks: o soil pit due to road right //DROLOGY	tors:			norphic posit	ion and hyc		regetation. Secondary Indicators (minim	
Depth (inches): emarks: o soil pit due to road righ	tors:	ed; check all that ap			ion and hyd		regetation.)
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indicatrimary Indicators (minimu	tors:	ed; check all that ap Water-	ply)	aves (B9)	ion and hyd		regetation. Secondary Indicators (minim Surface soil cracks (B6))
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indicarrimary Indicators (minimu Surface water (A1)	tors:	ed; check all that ap Water- Aquatio	ply) stained lea	aves (B9)	ion and hyd		egetation. Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10))
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indication //etland Hydrology Indicators (minimu // Surface water (A1) // High water table (A2)	tors:	ed; check all that ap Water- Aquati True a	ply) stained lea c fauna (B:	aves (B9) 13) ats (B14)	ion and hyd		Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table)) (C2)
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indication rimary Indicators (minimu Surface water (A1) High water table (A2) Saturation (A3)	itors: m of one require	ed; check all that ap Water- Aquation True a Hydrog	ply) stained lea c fauna (B: quatic plan gen sulfide	aves (B9) 13) ats (B14)		<u>s</u> 	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8))) (C2) rial imagery (C9)
Depth (inches): emarks: o soil pit due to road right DROLOGY Vetland Hydrology Indication Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	itors: m of one require	ed; check all that ap — Water- — Aquation — True a — Hydrog — Oxidize	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	aves (B9) 13) ats (B14) odor (C1)	living roots	S	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road righ //DROLOGY //etland Hydrology Indicarimary Indicators (minimu Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	itors: n of one require	ed; check all that ap Water- Aquation True a Hydrog Oxidize	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ice of redu	aves (B9) 13) 1sts (B14) odor (C1) neres along	living roots	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indica rimary Indicators (minimu	itors: m of one require	ed; check all that ap Water- Aquatir True a Hydrog Oxidize Preser Recen	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ice of redu	aves (B9) 13) tts (B14) odor (C1) neres along iced iron (C4)	living roots	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indication //etland Hydrology Indicati	itors: m of one require	ed; check all that ap Water- Aquatir True a Hydrog Oxidize Preser Recen	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	aves (B9) 13) ats (B14) odor (C1) neres along iced iron (C4 ction in tilled	living roots	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	(C2) rial imagery (C9) nts (D1)
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Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indication //exertable Mydrology Indic	tors: In of one require or of one require	ed; check all that ap Water- Aquatic True a Hydrog Oxidize Preser Recen: Thin m 7) Gauge 38) Other of	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tilled ace (C7) ata (D9) Remarks) ares): nes):	living roots 4) I soils (C6)	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road right //DROLOGY //etland Hydrology Indication //exertable (A2) //exertable Present? //exertable Present?	tors: n of one require) erial imagery (B ncave surface (E	ed; check all that ap Water- Aquation True a Hydrog Oxidize Preser Recent Thin m 7) Gauge 38) Other of es No ✓ es No ✓ es No ✓	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in Depth (inch	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tillect ac (C7) ata (D9) Remarks) ness): ness): ness):	living roots 4) I soils (C6) Wetla	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road righ DROLOGY Vetland Hydrology Indication (A1) High water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B3) Algal mat or crust (B4 Iron deposits (B5) Inundation visible on a Sparsely vegetated co ield Observations: urface Water Present? vater Table Present? aturation Present? aturation Present? includes capillary fringe) escribe Recorded Data (se	tors: n of one require) erial imagery (B ncave surface (E	ed; check all that ap Water- Aquation True a Hydrog Oxidize Preser Recent Thin m 7) Gauge 38) Other of es No ✓ es No ✓ es No ✓	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in Depth (inch	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tillect ac (C7) ata (D9) Remarks) ness): ness): ness):	living roots 4) I soils (C6) Wetla	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) rial imagery (C9) nts (D1)
Depth (inches): emarks: o soil pit due to road righ **TDROLOGY** **Jetland Hydrology Indicators (minimu) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on a Sparsely vegetated co- ield Observations: urface Water Present? **Jetling Sparsely Present** **Jetling Sparsely Present	tors: n of one require) erial imagery (B ncave surface (E	ed; check all that ap Water- Aquation True a Hydrog Oxidize Preser Recent Thin m 7) Gauge 38) Other of es No ✓ es No ✓ es No ✓	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in Depth (inch	aves (B9) 13) ats (B14) odor (C1) neres along aced iron (C4 ction in tillect ac (C7) ata (D9) Remarks) ness): ness): ness):	living roots 4) I soils (C6) Wetla	(C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	(C2) rial imagery (C9) nts (D1)

Project/Site: Lemon Hill	Citv/Cc	ounty: Farming	gton/Olmste	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power	0.1,700	-		: MN Sampling Point: cdp06
Investigator(s): Jared Booms	Sect			
3 () <u> </u>			_	ef (concave, convex, none); convex
Slope(%): 3-7 Lat: 44.07175		Long: -92.3		Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slopes				NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of y			s , No	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol	blematic?			plain any answers in Remarks.)
		,		•
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _		le the San	npled Area	
Hydric Soil Present? Yes No		within a V		Yes No
Wetland Hydrology Present? Yes No				
Upland data point located on slight rise before entering the corn field VEGETATION - Use scientific names of plants.	1.			
		Dominant		
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species Across All Strata: 2 (B)
5				Percent of Dominant Species That
	0%	= Total Cove	er	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
Lonicera tatarica, Twinsisters	5%	yes	FACU	Total % Cover of: Multiply by:
2				OBL species $0 \text{ x1} = 0$
3				FACW species0 x1 =0
4 5.				FAC species0 x1 =0
5	5%	= Total Cove	ar	FACU species 90 x1 = 360
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species5 x1 =25
Bromus inermis, Smooth Brome	80%	yes	FACU	Column Totals: 95 x1 = 385 (B)
2. undefined, Wild parsnip	5%	no	UPL	Prevalence Index = B/A = 4.053
3. Asclepias syriaca, Common Milkweed	5%	no	FACU	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10		= Total Cove	or.	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Cove	er	Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	Matrix			Redox Feati					
(inches)	Color (moist)	% <u>C</u>	Color (moist)	%	Type ¹	Loc ² Te	xture	Rema	rks
Туре: С=Со	ncentration, D=Deple	tion, RM=Red	duced Matrix,	MS=Masked	Sand Grains	s. ² Locat	ion: PL=Pore Lini	ing, M=Matrix.	
lydric Soil	ndicators:						Indicators	s for Problematic H	lvdric Soils ³ :
Histosol	(or Histel) (A1) unde	fined	San	dy Gleyed M	latrix (S4)			t Prairie Redox (A16	•
Histic E	oipedon (A2) undefin	ed	San	dy Redox (S	5)			Surface (S7)	•
Black Hi	sti (A3) undefined		Strip	ped Matrix ((S6)		Iron-N	Manganese Masses	(F12)
Hydroge	n Sulfide (A4)		Loar	ny Mucky M	ineral (F1)		Very	Shallow Dark Surface	ce (TF12)
Stratified	l Layers (A5)		Loar	my Gleyed N	Matrix (F2)		Other	r (Explain in Remark	(S)
2 cm Mu	ıck (A10)		Dep	leted Matrix	(F3)		3Indic	cators of hydrophytic	vegetation and wetla
Depleted	d Below Dark Surface	e (A11)	Red	ox Dark Sur	face (F6)		hydı	rology must be pres	ent, unless disturbed of
Thick Da	ark Surface (A12)			leted Dark S			prot	olematic.	
	Mucky Mineral (S1)	. .	Red	ox Depressi	ons (F8)				
	acky Peat or Peat (S3 ayer (if observed):	3)							
Type:						_ Hydric S	oil Present?		Yes No _
Remarks:	nches): <u></u> o presence of right of	way soils as	sumed non hy	dric based o	on lack of hy	drology indicat	ors and dominan	ce of upland vegeta	tion.
Remarks:	presence of right of	way soils as	sumed non hy	rdric based (on lack of hy	_ drology indicat	ors and dominan	ce of upland vegeta	tion.
Remarks: No dig due to	presence of right of	way soils as	sumed non hy	rdric based o	on lack of hy	drology indicat		ce of upland vegeta	
Remarks: No dig due to	o presence of right of				on lack of hy	drology indicat	Secondary		
Remarks: No dig due to YDROLO Wetland Hyo Primary Indic	GY drology Indicators:		heck all that a			drology indicat	SecondarySurface	Indicators (minimum	
Primary Indices	GY Irology Indicators: eators (minimum of or		heck all that a	upply)	ives (B9)	drology indicat	Secondary Surface Drainag	Indicators (minimum e soil cracks (B6)	of two required)
Primary Indices	GY drology Indicators: eators (minimum of orwater (A1) ter table (A2)		heck all that a Wate Aqua	pply) r-stained lea	ives (B9)	drology indicat	Secondary Surface Drainae Dry-see	Indicators (minimum e soil cracks (B6) ge patterns (B10)	of two required)
YDROLO Vetland Hyd Surface High wa Saturatic Water m	GY drology Indicators: actors (minimum of orwater (A1) ter table (A2) on (A3) arks (B1)		heck all that a Wate Aqua True Hydro	upply) r-stained lea tic fauna (B: aquatic plan ogen sulfide	ives (B9) 13) tts (B14) odor (C1)		Secondary Surface Drainag Dry-sea Crayfis Saturat	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial	o of two required) 2) imagery (C9)
YDROLO Vetland Hyo Surface High wa Saturatic Water m Sedimer	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) at deposits (B2)		heck all that a Wate Aqua True Hydro	ipply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl	ives (B9) 13) its (B14) odor (C1) neres along li	ving roots (C3	Secondary Surface Drainag Dry-sea Crayfis Saturat Stunted	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants	o of two required) 2) imagery (C9)
YDROLO YDROLO Wetland Hyo Surface High wa Saturatio Water m Sedimer Drift dep	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) at deposits (B2) electric deposits (B3)		heck all that a Wate Aqua True Hydro Oxidi Prese	apply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu	ives (B9) 13) Its (B14) odor (C1) neres along li ced iron (C4)	ving roots (C3	Secondary Surface Drainag Dry-see Crayfis Satural Stuntee Geome	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2)	o of two required) 2) imagery (C9)
YDROLO Vetland Hyo Primary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) ont deposits (B2) eosits (B3) at or crust (B4)		heck all that a Wate Aqua True Hydro Oxidi Prese	apply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron redu	ives (B9) 13) its (B14) odor (C1) neres along li ced iron (C4)	ving roots (C3	Secondary Surface Drainag Dry-see Crayfis Satural Stuntee Geome	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants	o of two required) 2) imagery (C9)
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YDROLO Vetland Hyo Primary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	GY drology Indicators: eators (minimum of or water (A1) ter table (A2) on (A3) earks (B1) nt deposits (B2) eat or crust (B4) osits (B5) on visible on aerial in a vegetated concave s	ne required; c	heck all that a Wate Aqua True Hydro Oxidi Preso Rece Thin Gaug	apply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron redu muck surfac	aves (B9) 13) ats (B14) odor (C1) neres along li ced iron (C4) ction in tilled e (C7) ta (D9)	ving roots (C3	Secondary Surface Drainag Dry-see Crayfis Satural Stuntee Geome	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2)	o of two required) 2) imagery (C9)
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YDROLOGO Vetland Hyde Primary Indice High wa Saturatice Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	presence of right of present?	nagery (B7) surface (B8) Yes _ Yes _	heck all that a Wate Aqua True Hydro Oxidi Prese Rece Thin Gaug	apply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron redu muck surfac ie or well da r (Explain in _ Depth (incl	aves (B9) 13) tts (B14) odor (C1) neres along li ced iron (C4) ction in tilled e (C7) tta (D9) Remarks) nes): nes):	ving roots (C3) soils (C6)	Secondary Surface Drainag Dry-see Crayfis Satural Stuntee Geome	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2) eutral test (D5)	of two required) 2) imagery (C9) (D1)
YDROLOG Vetland Hyd Surface High wa Saturatio Water m Sedimer Drift dep Algal ma Iron dep Inundatio Sparsely Field Obsen Surface Water Table	presence of right of present? GY Included Include	nagery (B7) surface (B8) Yes _ Yes _	heck all that a Wate Aqua True Hydro Oxidi Prese Rece Thin Gaug Other	apply) r-stained lea tic fauna (B: aquatic plan ogen sulfide zed rhizospl ence of redu nt iron redu muck surfac ie or well da r (Explain in _ Depth (incl	aves (B9) 13) tts (B14) odor (C1) neres along li ced iron (C4) ction in tilled e (C7) tta (D9) Remarks) nes): nes):	ving roots (C3) soils (C6)	Secondary Surface Drainae Dry-see Crayfis Saturae Stuntee Geomo	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2) eutral test (D5)	o of two required) 2) imagery (C9)
YDROLO Vetland Hyd Primary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely Field Obsen Surface Water Water Table Saturation Princludes cap	presence of right of present? GY Included Include	nagery (B7) surface (B8) Yes _ Yes _ Yes _	heck all that a — Wate — Aqua — True — Hydru — Oxidi — Prese — Rece — Thin — Gaug — Other — No — No — No — V	apply) r-stained leatic fauna (B: aquatic planogen sulfide zed rhizosplence of redunt iron reduct surfacte or well dar (Explain in _ Depth (incl_ De	aves (B9) 13) 14s (B14) 15 (B14) 16 (C1) 17 (C4) 18 (C4) 18 (C4) 18 (C7) 18 (C9) 18 (C	ving roots (C3) soils (C6) - Wetland	Secondary Surface Drainag Dry-sea Crayfis Saturat Stunted FAC-ne	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2) eutral test (D5)	of two required) 2) imagery (C9) (D1)
Primary India Surface High wa Saturatia Water m Sedimer Drift dep Algal ma Iron dep Inundatia Sparsely Field Observa Surface Water Table Saturation Princludes cap	GY drology Indicators: ators (minimum of or water (A1) ter table (A2) on (A3) arks (B1) ot deposits (B2) osits (B3) at or crust (B4) osits (B5) on visible on aerial im a vegetated concave serversent? Present? Present? ersent?	nagery (B7) surface (B8) Yes _ Yes _ Yes _	heck all that a — Wate — Aqua — True — Hydru — Oxidi — Prese — Rece — Thin — Gaug — Other — No — No — No — V	apply) r-stained leatic fauna (B: aquatic planogen sulfide zed rhizosplence of redunt iron reduct surfacte or well dar (Explain in _ Depth (incl_ De	aves (B9) 13) 14s (B14) 15 (B14) 16 (C1) 17 (C4) 18 (C4) 18 (C4) 18 (C7) 18 (C9) 18 (C	ving roots (C3) soils (C6) - Wetland	Secondary Surface Drainag Dry-sea Crayfis Saturat Stunted FAC-ne	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2) eutral test (D5)	of two required) 2) imagery (C9) (D1)
Primary Indices Surface High was Saturatices Water m Sedimer Drift dep Algal ma Iron dep Inundatices Sparsely Field Obsen Surface Water Table Saturation Princludes cap Describe Rec	GY drology Indicators: ators (minimum of or water (A1) ter table (A2) on (A3) arks (B1) ot deposits (B2) osits (B3) at or crust (B4) osits (B5) on visible on aerial im a vegetated concave serversent? Present? Present? ersent?	nagery (B7) surface (B8) Yes _ Yes _ Yes _ gauge, monito	heck all that a — Wate — Aqua — True — Hydru — Oxidi — Prese — Rece — Thin — Gaug — Other — No — No — No — V	apply) r-stained leatic fauna (B: aquatic planogen sulfide zed rhizosplence of redunt iron reduct surfacte or well dar (Explain in _ Depth (incl_ De	aves (B9) 13) 14s (B14) 15 (B14) 16 (C1) 17 (C4) 18 (C4) 18 (C4) 18 (C7) 18 (C9) 18 (C	ving roots (C3) soils (C6) - Wetland	Secondary Surface Drainag Dry-sea Crayfis Saturat Stunted FAC-ne	Indicators (minimum e soil cracks (B6) ge patterns (B10) ason water table (C2 th burrows (C8) tion visible on aerial d or stressed plants orphic position (D2) eutral test (D5)	of two required) 2) imagery (C9) (D1)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ed County Sampling Date: 2024-05-29		
Applicant/Owner: Ranger Power			State			
Investigator(s): Jared Booms	Sect	tion, Townsh	ـــــــ ip, Range: ۶	S18 T107N S012W		
				ef (concave, convex, none): convex		
Slope(%): 3-7 Lat: 44.07341		· · · · · · · · · · · · · · · · · · ·				
Soil Map Unit Name: 468: Otter silt loam, channeled		_	,	NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y		o (If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology Significantly			Circumstances" present? Yes , No			
Are Vegetation , Soil , or Hydrology naturally prol				collination present: res / No		
	oronnano.	(pain any anonoro in remainer,		
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes _ ✓ No		l				
Hydric Soil Present? Yes _ ✓ No _			ampled Area Wetland?	a Yes ✔ No		
Wetland Hydrology Present? Yes No						
Remarks: (Explain alternative procedures here or in a separate repo Data point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers an epherometric point is located in PSS shrub car wetland that buffers are point in the part of		m.				
T 01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Dominant		Dominance Test Worksheet		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)		
3				Total Number of Dominant Species		
4.				Across All Strata: 2 (B)		
5.				Percent of Dominant Species That		
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:		
Salix interior, Sandbar Willow	65%	yes	FACW	Total % Cover of: Multiply by:		
2. Lonicera tatarica, Twinsisters	10%	no	FACU	OBL species 0 x1 = 0		
3				FACW species 125 x1 = 250		
4				FAC species 10 x1 = 30		
5				FACU species 10 x1 = 40		
	75%	= Total Co		UPL species 15 x1 = 75		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			,	Column Totals: $160 \times 1 = 395 \text{ (B)}$		
Urtica dioica, Stinging Nettle	60%	yes	FACW	Prevalence Index = $B/A = 2.469$		
2. <u>undefined</u> , undefined		no	UPL			
3. Poa pratensis, Kentucky Blue Grass			FAC	Hydrophytic Vegetation Indicators:		
4 5.				1 - Rapid Test for Hydrophytic Vegetation		
				2 - Dominance Test is > 50%		
6				<u>✓</u> 3 - Prevalence Index is <= 3.0 ¹		
8.				4 - Morphological Adaptations ¹ (Provide		
9.				supporting data in Remarks or on a separate sheet)		
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
	85%	= Total Co	ver			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
1			-	Hydrophytic		
	0%	= Total Cov	ver	Vegetation Present? Yes ✓ No		
Damanika (Include whate numbers have a second of the		10141 00		163 - 100		
Remarks: (Include photo numbers here or on a separate sheet.)						

SOIL Sample Point: cdp07

Profile Desc	cription: (Describe t Matrix	to the dept		ıment the		confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-24	10YR - 3/1	97	7.5YR-4/6	3	С	М	SiCL	
					-		-	-
	·						-	
¹ Type: C=Co	oncentration, D=Depl	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grair	ıs.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	lefined	Sandy	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undefi	ned	Sandy	y Redox (S	S5)			Dark Surface (S7)
Black H	isti (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
	uck (A10)	(411)		ted Matrix				³ Indicators of hydrophytic vegetation and wetland
	d Below Dark Surfact ark Surface (A12)	;e (A11)		x Dark Sur	Tace (F6) Surface (F7)			hydrology must be present, unless disturbed or problematic.
	Mucky Mineral (S1)		 ·	x Depressi	` '			•
	ucky Peat or Peat (S	33)		СВергеззі	0113 (1 0)			
	Layer (if observed):	-						
Type:						Hve	dric Soil Pr	esent? Yes ✓ No
	(inches):					_ ´		···
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators:						:	Secondary Indicators (minimum of two required)
Primary Indi	cators (minimum of c	one required	d; check all that ap	ply)				Surface soil cracks (B6)
	water (A1)			stained lea	, ,		•	Drainage patterns (B10)
	ater table (A2)			c fauna (B	•			Dry-season water table (C2)
Saturati				quatic plar	odor (C1)			Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
	narks (B1) nt deposits (B2)				heres along	livina roo	its (C3)	Stunted or stressed plants (D1)
	posits (B3)			-	iced iron (C4	_	13 (00)	✓ Geomorphic position (D2)
	at or crust (B4)				ction in tilled	-	6)	✓ FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	nuck surfac	ce (C7)		•	
Inundat	ion visible on aerial i	magery (B7	') Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	surface (B	8) Other	(Explain in	Remarks)			
Field Obser	vations:							
Surface Wat		Ye	es No	Depth (inc	hes): <u></u>	_		
Water Table	Present?		es No			We	tland Hydro	ology Present? Yes 🛂 No
Saturation P		Ye	es No 🔽	Depth (inc	hes): <u></u>	_		
	pillary fringe)							
Describe Re	corded Data (stream	ı gauge, mo	nitoring well, aeria	I photos, p	revious insp	ections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmste	ed County Sampling Date: 2024-05-29		
Applicant/Owner: Ranger Power		State: MN Sampling Point: cdp08				
Investigator(s): Jared Booms	Sect	ion, Townsh	ip, Range: <u>S</u>	18 T107N S012W		
Lanform(hillslope, terrace, etc): Sideslope			Local relie	ef (concave, convex, none): convex		
Slope(%): 3-7 Lat: 44.07345		Long: -92.30583Datum: WGS 84				
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y	es 🗸 No	(If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology Significantly	Α	re "Normal C	Circumstances" present? Yes , No			
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(1	f needed, ex	plain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showing	a samnli	ina noint	location	s transects important features etc		
Hydrophytic Vegetation Present? Yes No			·······································			
Hydric Soil Present? Yes No			ampled Area			
Wetland Hydrology Present? Yes No		within a	Wetland?	Yes No <u>✓</u>		
Remarks: (Explain alternative procedures here or in a separate report Upland side slope leading with natural meadow cover. VEGETATION - Use scientific names of plants.	nt.)					
		Dominant Species?		Dominance Test Worksheet		
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1.		Species?	Status			
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)		
3				Total Number of Dominant Species Across All Strata: 3 (B)		
5.				Percent of Dominant Species That		
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 33.333% (A/B)		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:		
Lonicera tatarica, Twinsisters	35%	yes	FACU	Total % Cover of: Multiply by:		
2				OBL species 0 x1 = 0		
3				FACW species 0 x1 = 0		
4				FAC species 40 x1 = 120		
5	35%	= Total Co		FACU species 135 x1 = 540		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species 10 x1 = 50		
Bromus inermis, Smooth Brome	80%	yes	FACU	Column Totals: <u>185</u> x1 = <u>710</u> (B)		
Poa pratensis, Kentucky Blue Grass	400/	yes	FAC	Prevalence Index = B/A = 3.838		
3. Solidago canadensis, Canadian Goldenrod		no	FACU	Hydrophytic Vegetation Indicators:		
4. undefined, Wild parsnip	10%	no	UPL			
5.				1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50%		
6						
7				3 - Prevalence Index is <= 3.0 ¹		
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate		
9				sheet)		
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	150%	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
1				Hydrophytic		
2	0%	= Total Co	ver	Vegetation Present? Yes No _ Yes No _ Yes No		
Remarks: (Include photo numbers here or on a separate sheet.)						

	cription: (Describe matrix	to the depth		edox Featu		r confirm	tne absen	ice of indicators.)	
Depth inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
0-16	10YR - 3/2	100	/				L		
16-25	10YR - 3/1	100	/				CL		
pe: C=C	oncentration, D=Dep	letion, RM=Re	educed Matrix, M	 S=Masked	Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	Indicators:							Indicators for Problematic	Hydric Soils ³ :
-	ol (or Histel) (A1) und			/ Gleyed M				Coast Prairie Redox (A1	6)
_	Epipedon (A2) undefi	nea		/ Redox (S				Dark Surface (S7)	
_	listi (A3) undefined			ed Matrix (. ,			Iron-Manganese Masses	` '
	en Sulfide (A4)			y Mucky M	` ,			Very Shallow Dark Surfa	
	ed Layers (A5)		· 	y Gleyed M				Other (Explain in Remar	ks)
_	luck (A10)	(444)		ted Matrix				³ Indicators of hydrophyti	c vegetation and we
- '	ed Below Dark Surfac	:e (A11)		x Dark Surf	` '			hydrology must be pres problematic.	sent, unless disturbe
_	Dark Surface (A12)				Surface (F7)			problematic.	
-	Mucky Mineral (S1)	20)	Redox	x Depression	ons (F8)				
-	lucky Peat or Peat (S Layer (if observed)	*							
Type:						Hyd	ric Soil Pr	resent?	Yes No
Depth marks:	(inches): <u></u>								
marks:						_			
marks:	OGY							Secondary Indicators (minimum	n of two required)
marks: DROLO	DGY rdrology Indicators:		check all that ap					Secondary Indicators (minimun Surface soil cracks (B6)	n of two required)
DROLO tland Hy mary Indi	OGY			ply) stained lea	aves (B9)				n of two required)
DROLO tland Hy mary Indi _ Surface	OGY vdrology Indicators:		Water-	stained lea	, ,			Surface soil cracks (B6) Drainage patterns (B10)	
DROLO tland Hy mary Indi Surface High wa	oGY vdrology Indicators: icators (minimum of o		Water-		13)			Surface soil cracks (B6)	
DROLO tland Hy mary Indi Surface High wa Saturat	oddy rdrology Indicators: icators (minimum of ce water (A1) ater table (A2)		Water- Aquatio True a	stained lea c fauna (B1	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	:2)
DROLO tland Hy mary Indi Surface High wa Saturat Water r	ordrology Indicators: icators (minimum of of extra (A1) ater table (A2) ion (A3)		Water- Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) nts (B14)	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	:2) I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) its (B14) odor (C1) neres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria	:2) I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3)		Water- Aquation True ao Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu	13) ats (B14) odor (C1) neres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	:2) I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)		Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	nts (B14) odor (C1) neres along aced iron (C	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	:2) I imagery (C9)
PROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	pogy Indicators: Ideators (minimum of of extra table (A2) Ideator (A3) Ideator (A3	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac	ats (B14) odor (C1) neres along iced iron (C ction in tilled	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	ats (B14) odor (C1) neres along aced iron (C ction in tilled be (C7) ata (D9)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	order various indicators: icators (minimum of of exactors (M2) ion (A3) marks (B1) ion deposits (B2) ion deposits (B3) inat or crust (B4) posits (B5) ition visible on aerial in exactors (M2) ivegetated concaver	one required;	Water- Aquation True and Hydrogon Oxidized Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct ouck surfact or well da (Explain in	ats (B14) odor (C1) neres along aced iron (C ction in tilled be (C7) ata (D9) Remarks)	4)	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	I imagery (C9)
DROLO Itland Hy Mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Itld Obsel	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8)	Water- Aquation True accepted Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well da (Explain in	nts (B14) odor (C1) neres along iced iron (C ction in tilled ie (C7) ita (D9) Remarks)	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8) Yes Yes	Water- Aquation True as Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along nced iron (C ction in tilled te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	:2) I imagery (C9)
DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table	pogy rdrology Indicators: icators (minimum of of exater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the control of	imagery (B7) e surface (B8) Yes Yes	Water- Aquation True accepted Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu- t iron reduc nuck surface or well da (Explain in Depth (inch	nts (B14) odor (C1) neres along nced iron (C ction in tilled te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	I imagery (C9)
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DROLO tland Hy mary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Id Obser face Wat ter Table uration F cludes ca scribe Re	order of the content	imagery (B7) e surface (B8) Yes Yes Yes n gauge, mon	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct uck surfact or well da (Explain in Depth (inch Depth (inch	nts (B14) odor (C1) neres along iced iron (C ction in tiller te (C7) ta (D9) Remarks) nes): nes):	4) d soils (C6	s (C3)) land Hydro	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	I imagery (C9)

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u> ı	ngton/Olmsto	ed County Sampling Date: 2024-05-29
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: cdp09
Investigator(s): Jared Booms	Sect	ion, Townsh	ıip, Range: S	S18 T107N S012W
Lanform(hillslope, terrace, etc): Stream Terrace			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07335		Long: -92.	.30828	Datum: WGS 84
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Ye	es 📌 No	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantl	y disturbed?	A	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pr	roblematic?	(11	f needed, ex	xplain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showi		ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sa	ampled Area	a
Hydric Soil Present? Yes ✓ Now Wetland Hydrology Present? Yes ✓ Now Yes			Wetland?	Yes _ 🗸 No
Remarks: (Explain alternative procedures here or in a separate rep				
VEGETATION - Use scientific names of plants.				
	Absolute			Danisana Tari Wallahari
Tree Stratum (Plot size:30-ft (9.1-m) radius)	200/	Species?	Status	Dominance Test Worksheet
Salix nigra, Black Willow		yes	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Juglans nigra, Black Walnut 3.		· ·	FACU	
3				Total Number of Dominant Species Across All Strata:6 (B)
5.				Percent of Dominant Species That
	40%	= Total Cov	ver	Are OBL, FACW, or FAC: 66.667% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. Salix interior, Sandbar Willow	5%	yes	FACW	Total % Cover of: Multiply by:
2. Juglans nigra, Black Walnut	5%	yes	FACU	OBL species 30 x1 = 30
3				FACW species 90 x1 = 180
4				FAC species 25 x1 = 75
5				
				FACU species $15 \text{ x1} = 60$
	10%	= Total Cov		FACU species 15 x1 = 60 UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	8-ft square (1	L-m²) quadra	at)	UPL species
Phalaris arundinacea, Reed Canary Grass	8-ft square (1	L-m²) quadra yes	et) FACW	UPL species
Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Uttica dicina, Chinging Nattle	8-ft square (1 75% 25%	L-m²) quadra <u>yes</u> <u>yes</u>	FACW	UPL species $0 \times 1 = 0$ Column Totals: $160 \times 1 = 345$ (B) Prevalence Index = B/A = 2.156
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 75% 25% 10%	L-m²) quadra yes yes no	et) FACW	UPL species $0 \times 1 = 0$ Column Totals: $160 \times 1 = 345$ (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators:
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 75% 25% 10%	L-m²) quadra yes yes no	FACW FAC FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 75% 25% 10%	L-m²) quadra <u>yes</u> <u>yes</u> <u>no</u>	FACW FAC FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50%
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 5. 	8-ft square (1 75% 25% 10%	L-m²) quadra <u>yes</u> <u>yes</u> <u>no</u>	FACW FAC FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 75% 25% 10%	L-m²) quadra <u>yes</u> <u>yes</u> <u>no</u>	FACW FAC FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹ 4 - Morphological Adaptations¹ (Provide
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 75% 25% 10%	L-m²) quadra yes yes no	FACW FACW FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹
 Phalaris arundinacea, Reed Canary Grass Poa pratensis, Kentucky Blue Grass Urtica dioica, Stinging Nettle 	8-ft square (1 	yes yes no	FACW FACW FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate
1. Phalaris arundinacea, Reed Canary Grass 2. Poa pratensis, Kentucky Blue Grass 3. Urtica dioica, Stinging Nettle 4. 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	8-ft square (1 75% 25% 10%	L-m²) quadra yes yes no	FACW FACW FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) PROBLEMATIC Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology
1. Phalaris arundinacea, Reed Canary Grass 2. Poa pratensis, Kentucky Blue Grass 3. Urtica dioica, Stinging Nettle 4. 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1.	8-ft square (1 75% 25% 10%	yes yes no	FACW FACW FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) PROBLEMATIC Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology
1. Phalaris arundinacea, Reed Canary Grass 2. Poa pratensis, Kentucky Blue Grass 3. Urtica dioica, Stinging Nettle 4. 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	8-ft square (1 75% 25% 10%	yes yes no	FACW FACW FACW FACW FACW	UPL species 0 x1 = 0 Column Totals: 160 x1 = 345 (B) Prevalence Index = B/A = 2.156 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50% 3 - Prevalence Index is <= 3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) PROBLEMATIC Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Sample Point: cdp09

SOIL

Profile Des	cription: (Describe Matrix	to the dept		lment the ledox Fea		r confirm	the absenc	e of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-12	10YR - 3/1	95	7.5YR-3/1	5	C	M	SiCL	
12-24	10YR - 2/1	100	/				SiCL	
	10111 2/1		· · · · · · · · · · · · · · · · · · ·				0.02	-
								-
							-	-
							-	-
¹ Type: C=C	concentration, D=Dep	letion, RM=	Reduced Matrix, M	IS=Maske	d Sand Grai	ns. ²	Location: PL	=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) und				Matrix (S4)			Coast Prairie Redox (A16)
	Epipedon (A2) undef	ined		y Redox (Dark Surface (S7)
	Histi (A3) undefined gen Sulfide (A4)			ed Matrix	Mineral (F1)			Iron-Manganese Masses (F12)
	ed Layers (A5)				Matrix (F2)			Very Shallow Dark Surface (TF12)
	Muck (A10)			ted Matrix				Other (Explain in Remarks)
	ed Below Dark Surfa	ce (A11)			ırface (F6)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	Dark Surface (A12)	,			Surface (F7)			problematic.
Sandy	Mucky Mineral (S1)		Redox	x Depress	sions (F8)			
5 cm M	Mucky Peat or Peat (S3)						
Restrictive	Layer (if observed)):						
Type:	<u> </u>					Нус	dric Soil Pre	sent? Yes <u>✓</u> No
Depth	(inches):							
•	ydrology Indicators:		Is about all that an	only)			<u>s</u>	Secondary Indicators (minimum of two required)
Wetland Hy Primary Indi	ydrology Indicators: icators (minimum of				paves (R9)		<u> </u>	Surface soil cracks (B6)
Wetland Hy Primary Indi	ydrology Indicators: icators (minimum of e water (A1)		Water-	stained le	eaves (B9)		<u> </u>	Surface soil cracks (B6) Drainage patterns (B10)
Wetland Hy Primary Indi Surface High wa	ydrology Indicators: icators (minimum of e water (A1) rater table (A2)		Water- Aquati	stained le c fauna (E	313)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Wetland Hy Primary Indi Surface High wa Saturat	ydrology Indicators: icators (minimum of e water (A1)		Water- Aquati True a	stained le c fauna (E quatic pla	313)		<u>§</u> 	Surface soil cracks (B6) Drainage patterns (B10)
Wetland Hy Primary Indi Surface ✓ High wa Saturat Water r	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3)		Water- Aquati True a Hydrog	stained le c fauna (E quatic pla gen sulfide	313) unts (B14)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Wetland Hy Primary Indi Surface ✓ High wa Saturat Water r Sedime	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1)		Water- Aquati True a Hydroç Oxidiz	stained le c fauna (E quatic pla gen sulfide ed rhizosp	B13) unts (B14) e odor (C1)	-	- - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Wetland Hy Primary Indi Surface ✓ High wa Saturat Water r Sedime Drift de	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroo Oxidize	stained le c fauna (E quatic pla gen sulfide ed rhizosp nce of red	313) ants (B14) e odor (C1) oheres along	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	ydrology Indicators: icators (minimum of e water (A1) vater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required	Water- Aquati True a Hydro Oxidize Preser Recen Thin m	stained le c fauna (E quatic pla gen sulfide ed rhizospace of red t iron redunck surfa	ants (B14) e odor (C1) bheres along fuced iron (C fuction in tilled	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	ydrology Indicators: icators (minimum of e water (A1) vater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained le c fauna (E quatic pla gen sulfide ed rhizospace of red t iron redunuck surfa e or well d	ants (B14) e odor (C1) oheres along luced iron (C luction in tilled luce (C7) lata (D9)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat	ydrology Indicators: icators (minimum of e water (A1) vater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained le c fauna (E quatic pla gen sulfide ed rhizospace of red t iron redunuck surfa e or well d	ants (B14) e odor (C1) bheres along fuced iron (C fuction in tilled	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	ydrology Indicators: icators (minimum of e water (A1) vater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave	one required	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	stained le c fauna (E quatic pla gen sulfide ed rhizospace of red t iron redunuck surfa e or well d	ants (B14) e odor (C1) oheres along luced iron (C luction in tilled luce (C7) lata (D9)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser	ydrology Indicators: icators (minimum of e water (A1) vater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: uter Present?	one required imagery (B7 e surface (Bi	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No No No No	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redunuck surfa e or well d (Explain in	and state of the s	4) 1 soils (Co		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: iter Present?	imagery (B7 e surface (Bi Ye Ye	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge B) Other No No	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inc	and the state of t	4) 1 soils (Co		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation F	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present?	imagery (B7 e surface (Bi Ye Ye	Water- Aquatir True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No No No No	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inc	and the state of t	4) 1 soils (Co		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface ✓ High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: iter Present?	imagery (B7 e surface (Br Ye Ye Ye	Water- Aquati	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inco	and state of the s	4) d soils (Co	tts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Surface Wat Water Table Saturation F (includes ca	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (Br Ye Ye Ye	Water- Aquati	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inco	and state of the s	4) d soils (Co	tts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface ✓ High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (Br Ye Ye Ye	Water- Aquati	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inco	and state of the s	4) d soils (Co	tts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Surface Wat Water Table Saturation F (includes ca	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (Br Ye Ye Ye	Water- Aquati	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inco	and state of the s	4) d soils (Co	tts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obsel Surface Wat Water Table Saturation F (includes ca	ydrology Indicators: icators (minimum of e water (A1) rater table (A2) tion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial ely vegetated concave rvations: ter Present? e Present? epillary fringe)	imagery (B7 e surface (Br Ye Ye Ye	Water- Aquati	stained let c fauna (E quatic pla gen sulfide ed rhizosp nce of red t iron redu nuck surfa e or well d (Explain in Depth (inco	and state of the s	4) d soils (Co	tts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmii	ngton/Olmste	d County San	npling Date: 202	24-05-29	
Applicant/Owner: Ranger Power				MN Sam			
Investigator(s): Jared Booms	Sect			ge: <u>S18 T107N S012W</u>			
Lanform(hillslope, terrace, etc): Sideslope	<u> </u>			f (concave, convex, none):	convex		
Slope(%): <u>3-7</u> Lat: <u>44.07338</u>		Long: -92.	30818		Datum: WGS	84	
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes				NWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Ye	es , No	(If no, explain in Re	emarks.)		
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			ircumstances" present?	res , No		
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			olain any answers in Rema		_	
-							
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, import	ant features	s, etc.	
Hydrophytic Vegetation Present? Yes No		1- 4 0-					
Hydric Soil Present? Yes No			ampled Area Wetland?		Yes	No <u></u> ✓_	
Wetland Hydrology Present? Yes No	<u> </u>						
Remarks: (Explain alternative procedures here or in a separate report Upland side slope above wetland.	ort.)						
Opiana side slope above wetiana.							
VEGETATION - Use scientific names of plants.			<u>, </u>				
Tree Christian (Dist sing 20 ft (0.1 m) radius)		Dominant Species 2		Dominance Test Works	heet		
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1. Juglans nigra, Black Walnut	10%	Species?	Status FACU				
			FACU	Number of Dominant Spe Are OBL, FACW, or FAC		0 (A)	
2. 3.				Total Number of Dominar	at Species		
4.				Across All Strata:	Species	<u>3</u> (B)	
5.				Percent of Dominant Spe	cies That		
	10%	= Total Cov	ver	Are OBL, FACW, or FAC		0% (A/B)	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index works	heet:		
Lonicera tatarica, Twinsisters	5%	yes	FACU	Total % Cover of:	Multi	nly by:	
2					0 x1 =		
3					$\frac{0}{0}$ x1 =		
4					10 x1 =		
5				FACU species	115 x1 =		
	5%	= Total Cov		UPL species	0 x1 =	0	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				Column Totals:	125 x1 =		
1. Bromus inermis, Smooth Brome	90%	yes	FACU		dex = B/A =	()	
2. Poa pratensis, Kentucky Blue Grass	10%	no	FAC		_		
3. Parthenocissus quinquefolia, Virginia-Creeper		no	<u>FACU</u>	Hydrophytic Vegetation	Indicators:		
Rubus idaeus, Common Red Raspberry 5.		<u>no</u>	<u>FACU</u>	1 - Rapid Test for H	ydrophytic Vege	etation	
5. 6.				2 - Dominance Test	is > 50%		
7.				3 - Prevalence Inde	$x is <= 3.0^{1}$		
8.				4 - Morphological Ad	daptations ¹ (Pro	ovide	
9.				supporting data in R sheet)	lemarks or on a	separate	
10				PROBLEMATIC Hyd	tronhytic Vegets	ation ¹ (Explain)	
	110%	= Total Cov	ver				
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric must be present, u	nless disturbed	or problematic.	
1							
2				Hydrophytic Vegetation			
	0%	= Total Cov	ver	Present?	Yes _	No	
Remarks: (Include photo numbers here or on a separate sheet.)							
, ,							

SOIL Sample Point: cdp10

Profile Des	cription: (Describe Matrix	to the dep		ıment the		or confirn	n the absenc	ee of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	 Texture	Remarks
					Туре			
0-24	10YR - 3/1	100					SiL	_ =
24-30	10YR - 3/2	95	7.5YR-4/6	5	C	M	SiCL	-
				-			_	
							_	
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	 IS=Maske	d Sand Grai	ins.	² Location: PL	 =Pore Lining, M=Matrix.
Hydric Soil			· · · · · · · · · · · · · · · · · · ·					
•	ol (or Histel) (A1) un	defined	Sandy	Gleyed I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	Epipedon (A2) undef			, y Redox (Dark Surface (S7)
Black F	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky N	Mineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loam	y Gleyed	Matrix (F2)			Other (Explain in Remarks)
2 cm N	luck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	ed Below Dark Surfa	ce (A11)	Redox	x Dark Su	ırface (F6)			hydrology must be present, unless disturbed or
Thick D	Oark Surface (A12)		Deple	ted Dark	Surface (F7))		problematic.
Sandy	Mucky Mineral (S1)		Redox	x Depress	sions (F8)			
5 cm N	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)):						
Type:						Ну	dric Soil Pre	yes No <u>✓</u>
Depth	(inches): <u></u>							
HYDROLO								
-	drology Indicators		di abaak all that an	. Alan			<u>S</u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	cators (minimum of water (A1)	one require		•	aves (B9)			Drainage patterns (B10)
	ater table (A2)			c fauna (E			_	Dry-season water table (C2)
	ion (A3)		 •	quatic pla	,		-	Crayfish burrows (C8)
	marks (B1)				e odor (C1)		_	Saturation visible on aerial imagery (C9)
	ent deposits (B2)			-	heres along	living roo	ots (C3)	Stunted or stressed plants (D1)
Drift de	posits (B3)		Preser	nce of red	uced iron (C	24)		Geomorphic position (D2)
Algal m	nat or crust (B4)		Recen	t iron redu	uction in tille	d soils (C	(6)	FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	nuck surfa	ce (C7)			
Inundat	tion visible on aerial	imagery (B	7) Gauge	or well d	ata (D9)			
Sparse	ly vegetated concav	e surface (E	38) Other	(Explain ir	n Remarks)			
Field Obser	rvations:							
Surface Wa	ter Present?	Y	es No	Depth (inc	ches): <u></u>			
Water Table	Present?	Y	es No	Depth (inc	ches): <u></u>	We	etland Hydro	logy Present? Yes No <
Saturation F		Y	es No	Depth (inc	ches): <u></u>			
	pillary fringe)							
Describe Re	ecorded Data (strear	n gauge, m	onitoring well, aeria	ıl photos,	previous ins	pections),	, if available:	
Remarks:								
	hydrology indicators	observed.						

Project/Site: Lemon Hill	City/Cc	ountv [.] Farmi	naton/Olmst	ed County Sampling Date: 2024-05-29			
Applicant/Owner: Ranger Power	0.0,700			e: MN Sampling Point: cdp11			
Investigator(s): Jared Booms	Sect						
				ef (concave, convex, none): concave			
Slope(%): 3-7 Lat: 44.07329							
Soil Map Unit Name: 468: Otter silt loam, channeled		_		NWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of	year?	Y	es , N	o (If no, explain in Remarks.)			
Are Vegetation , Soil , or Hydrology Significantly	y disturbed?			Circumstances" present? Yes , No			
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?			xplain any answers in Remarks.)			
<u> </u>		-					
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ing point	location	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes <u>✓</u> No)	la tha C		_			
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	Yes <u> </u>			
Wetland Hydrology Present? Yes ✓ No							
Remarks: (Explain alternative procedures here or in a separate rep Data point is located in a fresh wet meadow that surrounds the top fresh wet meadow. Water table was observed at 8 inches saturatio VEGETATION - Use scientific names of plants.	of a stream	. The strear	n enters the	survey are to the north then relatively disperses into the			
		Dominant		Dominanas Test Workshoot			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test Worksheet			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)			
3.				Total Number of Dominant Species			
4.				Across All Strata:1 (B)			
5				Percent of Dominant Species That			
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)			
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:			
1.				Total % Cover of: Multiply by:			
2.				OBL species0 x1 =0			
3				FACW species90			
5.				FAC species 20 x1 = 60			
	0%	= Total Co	ver	FACU species 0 x1 = 0			
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1	L-m²) quadra	ıt)	UPL species0 x1 =0			
1. Phalaris arundinacea, Reed Canary Grass	85%	yes	FACW	Column Totals: 110 x1 = 240 (B)			
2. <u>Poa pratensis</u> , Kentucky Blue Grass	20%	no	FAC	Prevalence Index = B/A = 2.182			
3. <u>Verbena hastata</u> , Simpler's-Joy	5%	no	FACW	Hydrophytic Vegetation Indicators:			
4				1 - Rapid Test for Hydrophytic Vegetation			
5				2 - Dominance Test is > 50%			
6				3 - Prevalence Index is <= 3.0 ¹			
7				4 - Morphological Adaptations ¹ (Provide			
9.				supporting data in Remarks or on a separate sheet)			
10.							
		= Total Co	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
1				Hydrophytic			
	0%	= Total Cov	ver	Vegetation Present? Yes ✓ No			
Remarks: (Include photo numbers here or on a separate sheet.)				<u> </u>			
and the second s							

OIL								Sample Point: <u>c</u>
Profile Des	scription: (Describe	to the depth				r confirm th	e absen	nce of indicators.)
Depth	Matrix			Redox Feati				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-24	10YR - 2/1	100	/		· <u></u>		SiCL	
								<u> </u>
								<u> </u>
	concentration, D=Dep	letion, RM=Re	educed Matrix, M	1S=Masked	1 Sand Grai	ns. ² Lo	cation: F	PL=Pore Lining, M=Matrix.
-	I Indicators:	dofinod	Cond	v Claved N	Actrix (C4)			Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) un Epipedon (A2) undef			y Gleyed M y Redox (S				Coast Prairie Redox (A16)
	Histi (A3) undefined	illeu		ped Matrix (-			Dark Surface (S7)
	gen Sulfide (A4)				/lineral (F1)			Iron-Manganese Masses (F12)
_ ′ ′	ed Layers (A5)			ny Gleyed N	` '			Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks)
	Muck (A10)			eted Matrix				
Deplete	ed Below Dark Surfa	ce (A11)	Redo	x Dark Sur	rface (F6)			³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Thick D	Dark Surface (A12)		Deple	eted Dark S	Surface (F7)			problematic.
Sandy	Mucky Mineral (S1)		Redo	x Depressi	ons (F8)			
5 cm N	Mucky Peat or Peat (S3)						
Restrictive	Layer (if observed)):						
Type:	<u></u>					Hydric	Soil Pr	resent? Yes _ ✓ No
Deptn	(inches):					_		
YDROLO	OGY							
-	drology Indicators							Secondary Indicators (minimum of two required)
•	icators (minimum of e water (A1)	one requirea;		opiy) -stained lea	2VOC (PQ)			Surface soil cracks (B6) Drainage patterns (B10)
	rater table (A2)			ic fauna (B:	` ,			Dry-season water table (C2)
✓ Saturat			· · · · · · · · · · · · · · · · · · ·	aquatic plan				Crayfish burrows (C8)
	marks (B1)			gen sulfide				Saturation visible on aerial imagery (C9)
	ent deposits (B2)			_		living roots ((C3)	Stunted or stressed plants (D1)
	eposits (B3)				uced iron (C		,	✓ Geomorphic position (D2)
	nat or crust (B4)				ction in tilled			FAC-neutral test (D5)
Iron de	eposits (B5)		Thin n	nuck surfac	ce (C7)			<u> </u>
Inundat	tion visible on aerial	imagery (B7)	Gauge	e or well da	ata (D9)			
Sparse	ly vegetated concav	e surface (B8)	Other	(Explain in	Remarks)			
ield Obse	rvations:							
	ter Present?	Yes		Depth (incl				
Water Table			No			Wetlar	nd Hydr	ology Present? Yes 🗸 No
Saturation F	Present? apillary fringe)	Yes	_ ✓ _ No	Depth (incl	hes): <u>b</u>	_		
	ecorded Data (strear	mon anua mon	itoring well aeris	al nhotoe r	orevious ins	nections) if a	wailahla	
rescribe re	ecorded Data (Streat	i gaage, mon	toring wen, aene	и риосоз, р	nevious iris	pections), ii a	(valiable	•
Remarks:								

Project/Site: Lemon Hill	City/Cc	ounty: <u>Farmi</u>	ngton/Olmste	ed County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power			State	: MN Sampling Point: cdp12
Investigator(s): Jared Booms	Sect	ion, Townsh	ip, Range: <u>S</u>	18 T107N S012W
Lanform(hillslope, terrace, etc): Footslope			Local relie	ef (concave, convex, none): convex
Slope(%): <u>3-7</u> Lat: <u>44.07554</u>		Long: -92.	30892	Datum: WGS 84
Soil Map Unit Name: 477B: Littleton silt loam, 1 to 4 percent slopes				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Ye	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin		ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	ampled Area	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No			Wetland?	Yes No <u>▼</u>
Remarks: (Explain alternative procedures here or in a separate repo				
Upland data point located on agricultural side slope. VEGETATION - Use scientific names of plants.				
		Dominant Species?	Indicator Status	Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1		Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata: 3 (B)
5.				Percent of Dominant Species That
	0%	= Total Cov	ver	Are OBL, FACW, or FAC: 33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1.				Total % Cover of: Multiply by:
2. 3.				OBL species0 x1 =0
4.				FACW species 0 x1 = 0
5				FAC species <u>5</u> x1 = <u>15</u>
<u> </u>	0%	= Total Cov	/er	FACU species <u>5</u> x1 = <u>20</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) guadra	ıt)	UPL species0 x1 =0
Plantago major, Great Plantain	5%	yes	FAC	Column Totals: <u>10</u> x1 = <u>35</u> (B)
2. Taraxacum officinale, Common Dandelion	3%	yes	FACU	Prevalence Index = B/A = 3.500
3. <u>Trifolium repens</u> , White Clover	2%	yes	FACU	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide
8				supporting data in Remarks or on a separate
9				sheet)
10.	10%	= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes No _
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: cdp12

Depth	Matrix		R	ledox Feat	uies		-	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-19	10YR - 3/1	100	/				SiCL	<u> </u>
19-24	10YR - 3/2	98	7.5YR-4/6	2	С	М	SiCL	
							- '-	
_							• •	
					·	-		
ype: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	IS=Maske	d Sand Grai	ns. 2	Location: PL	=Pore Lining, M=Matrix.
dric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) une	defined	Sand	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sand	y Redox (S5)			Dark Surface (S7)
Black F	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
	en Sulfide (A4)				/lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)		· 		Matrix (F2)			Other (Explain in Remarks)
	luck (A10)	00 (011)		eted Matrix				³ Indicators of hydrophytic vegetation and v
	ed Below Dark Surfa	ce (AII)		x Dark Su				hydrology must be present, unless disturber problematic.
	Oark Surface (A12) Mucky Mineral (S1)			x Depress	Surface (F7)	1		p
_	lucky Peat or Peat (S3)	Redo.	x Depiess	ions (Fo)			
	Layer (if observed)							
Type:		·-				Hyr	dric Soil Pre	sent? Yes No
	(inches):					_ ,`		1001
marks:								
	oGY							
DROLC	DGY drology Indicators:						<u>s</u>	econdary Indicators (minimum of two required)
DROLO etland Hy mary Indi	rdrology Indicators cators (minimum of			1 //			<u>S</u>	Surface soil cracks (B6)
DROLC etland Hy mary Indi _ Surface	rdrology Indicators cators (minimum of e water (A1)		Water-	stained le	, ,		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)
DROLO etland Hy mary Indi _ Surface _ High w	rdrology Indicators cators (minimum of water (A1) ater table (A2)		Water-	stained le c fauna (B	313)		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
DROLC etland Hy mary Indi Surface High w Saturat	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained le c fauna (B quatic pla	13) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water r	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a	stained le c fauna (E quatic pla gen sulfide	e odor (C1)	living roo		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained le c fauna (E quatic pla gen sulfide ed rhizosp	a13) nts (B14) e odor (C1) heres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water- Aquati True a Hydrot Oxidiz	estained le c fauna (E quatic pla gen sulfide ed rhizosp nce of redi	e 13) e odor (C1) heres along uced iron (C	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de	rdrology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) at or crust (B4)		Water- Aquati True a Hydrog Oxidiz Preser	estained le c fauna (E quatic pla gen sulfide ed rhizosp nce of redu t iron redu	e odor (C1) heres along uced iron (C	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water i _ Sedime _ Drift de _ Algal m _ Iron de	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)	one required	Water- Aquati True a Hydrou Oxidiz Preseu Recen Thin n	estained le c fauna (E quatic pla gen sulfide ed rhizosp nce of redi	ents (B14) ents (B14) endor (C1) theres along uced iron (C ention in tille ce (C7)	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLC etland Hy mary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained le c fauna (E quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfar e or well da	ents (B14) ents (B14) endor (C1) theres along uced iron (C ention in tille ce (C7)	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water r _ Sedime _ Drift de _ Algal m _ Iron de _ Inundat _ Sparse	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained le c fauna (E quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfar e or well da	ants (B14) a odor (C1) wheres along uced iron (C action in tille ce (C7) ata (D9)	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLC etland Hy imary Indi _ Surface _ High w _ Saturat _ Water i _ Sedime _ Drift de _ Algal m _ Iron de _ Inundai _ Sparse	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required imagery (B7 e surface (B8	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n	stained le c fauna (E quatic pla gen sulfide ed rhizosp nce of redu t iron redu nuck surfar e or well di (Explain ir	ata) ats (B14) a odor (C1) and (C1) and (C1) and (C1) and (C1) and (C1) ata (C1) and	(4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
imary IndiSurfaceHigh wSaturatWater _SedimeDrift deAlgal mIron deInundatSparse	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave	one required imagery (B7 e surface (B6 Ye:	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge B) Other	stained le c fauna (E quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfar e or well da (Explain ir	at13) ants (B14) a odor (C1) aheres along uced iron (C action in tille ace (C7) ata (D9) a Remarks)	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLC etland Hy imary Indi Surface High w Saturat Water i Sedime Drift de Algal m Iron de Inundat Sparse	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B8 Ye:	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained le c fauna (E quatic pla gen sulfide ed rhizospence of redut iron redunuck surface or well de (Explain ir Depth (inc Depth (inc	ents (B14)	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLC etland Hy imary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse eld Obset irface Wa ater Table	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B8 Ye:	Water- Aquati	stained le c fauna (E quatic pla gen sulfide ed rhizospence of redut iron redunuck surface or well de (Explain ir Depth (inc Depth (inc	ents (B14)	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime India Inundai Sparse Eld Obse rface Wa ater Table turation F cludes ca	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present?	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquati	statined le c fauna (E fauna (E c fauna (E f	ental (B14) ents (B14)	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water i _ Sedime _ Drift de _ Algal m _ Iron de _ Inundai _ Sparse eld Obsei rface Wa ater Table turation F cludes ca	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial dy vegetated concave rvations: ter Present? Present? present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquati	statined le c fauna (E fauna (E c fauna (E f	ental (B14) ental	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLC etland Hy mary Indi _ Surface _ High w _ Saturat _ Water i _ Sedime _ Drift de _ Algal m _ Iron de _ Inundai _ Sparse eld Obsei rface Wa ater Table turation F cludes ca	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial dy vegetated concave rvations: ter Present? Present? present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye:	Water- Aquati	statined le c fauna (E fauna (E c fauna (E f	ental (B14) ental	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
DROLC etland Hy mary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundai Sparse eld Obse rface Wa ater Table turation F cludes ca scribe Re	rdrology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial dy vegetated concave rvations: ter Present? Present? present? pillary fringe)	imagery (B7 e surface (B8 Ye: Ye: Ye: n gauge, mo	Water- Aquati	statined le c fauna (E fauna (E c fauna (E f	ental (B14) ental	d soils (C6	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

SOIL

Project/Site: Lemon Hill	City/Co	untv· Farmi	naton/Olmst	ed County	Sampling Date: 2	2024-05-30		
Applicant/Owner: Ranger Power				e: MN				
Investigator(s): Jared Booms	Sect					•		
				ef (concave, convex,				
Slope(%): 3-7 Lat: 44.07559				•		GS 84		
Soil Map Unit Name: 477B: Littleton silt loam, 1 to 4 percent slopes		_		NWI classific				
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Y	es , N	o (If no, expla	in in Remarks.)			
Are Vegetation 🍃 , Soil , or Hydrology Significan	tly disturbed?	Are "Normal Circumstances" present? Yes No						
<u> </u>	oroblematic?			kplain any answers ir		<u> </u>		
<u> </u>					·			
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ing point	location	s, transects, in	nportant featur	es, etc.		
Hydrophytic Vegetation Present? Yes <u>✓</u> N	No	1- 41- 0		_				
Hydric Soil Present? Yes N			ampled Area Wetland?	a	Yes	_ ✓ No		
Wetland Hydrology Present? Yes Yes N								
Remarks: (Explain alternative procedures here or in a separate re Wetland depression in an agricultural field with a combination of		n wetland si	necies and r	nlanted species frest	h wet meadow cover	r		
wettand depression in an agricultural neid with a combination of	natural growing	y welland Sp	occies and p	named species, nesi	T WET INCUGOW COVE	•		
VEGETATION - Use scientific names of plants.								
VEGETATION - OSE SCIENTIFIC Harries of plants.	Abaduta	Dominant	Indicator	Τ				
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?		Dominance Test	Worksheet			
1				Number of Domina	ant Species That			
2				Are OBL, FACW, o	or FAC:	<u>1</u> (A)		
3				Total Number of D	ominant Species	_		
4				Across All Strata:	-	2 (B)		
5	0%	= Total Co		Percent of Domina Are OBL, FACW, o		50% (A/B)		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- 10101 00	VCI	Prevalence Index				
1.						oličeka ka n		
2					ver of: Mu			
3				OBL species	10 x1 =	· ·		
4				FACW species	35 x1 =			
5				FAC species FACU species	20 x1 =	-		
	0%	= Total Co		UPL species	0 x1 =	0		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.3		, ,	•	Column Totals:	85 x1 =	220 (B)		
Phalaris arundinacea, Reed Canary Grass Trifolium rappas White Clover	35%	yes	FACU		ence Index = B/A =	(/		
Trifolium repens, White Clover Eleocharis palustris, Common Spike-Rush	20% 10%	yes no	FACU OBL					
Eleocharis palustris, Common Spike-Rush Plantago major, Great Plantain	10%	no	FAC	Hydrophytic Vege	etation Indicators:			
5. Juncus tenuis, Lesser Poverty Rush		no	FAC	1 - Rapid Tes	st for Hydrophytic Ve	egetation		
6. Rumex crispus, Curly Dock				2 - Dominano	ce Test is > 50%			
7				_ ✓ 3 - Prevalenc	ce Index is $\leq 3.0^1$			
8.				4 - Morpholo	gical Adaptations ¹ (F ata in Remarks or or	Provide		
9				supporting da sheet)	ata in Remarks or or	i a separate		
10				PROBLEMAT	TIC Hydrophytic Veg	etation ¹ (Explain)		
	85%	= Total Co	ver		f hydric soil and wetl			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)					esent, unless disturbe			
1				Hydrophytic				
2				Vegetation				
	0%	= Total Co	ver	Present?	Ye	es _ / No		
Remarks: (Include photo numbers here or on a separate sheet.) Significantly disturbed vegetation due to agricultural practices.								
Significantly disturbed vegetation due to agricultural practices.								

Sample Point: cdp13

	cription: (Describe Matrix	to the dept		ıment the edox Fea		or confirm	n the absen	nce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	 Texture	Remarks
0-20	10YR - 2/1	97	7.5YR-4/6	3	<u>.,,ps</u>	M/PL	SiCL	
		95	7.5YR-4/6					_
20-24	10YR - 4/1	95	7.51R-4/0	5		M	SiCL	:
		-		-				
			_				_	- -
	-			-				
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	 IS=Maske	d Sand Grai	ns.	² Location: F	 PL=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) und	defined	Sandy	Gleyed I	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	y Redox (S5)			Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky N	Mineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed	Matrix (F2)			Other (Explain in Remarks)
2 cm N	luck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
	ed Below Dark Surfa	ce (A11)		x Dark Su				hydrology must be present, unless disturbed or problematic.
	Park Surface (A12)				Surface (F7))		problematic.
	Mucky Mineral (S1)	00)	Redox	x Depress	ions (F8)			
5 cm N	lucky Peat or Peat (S3)						
	Layer (if observed)	:						
Type:						Hy	dric Soil Pr	resent? Yes _ ✓ No
Берит	(inches): <u></u>							
HYDROLO	GY							
-	drology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one required	•		(DO)		<u></u>	Surface soil cracks (B6)
	e water (A1) ater table (A2)			stained le c fauna (E	` ,			Drainage patterns (B10) Dry-season water table (C2)
	ion (A3)			quatic pla	,			Crayfish burrows (C8)
	narks (B1)				e odor (C1)			✓ Saturation visible on aerial imagery (C9)
	ent deposits (B2)			-	heres along	livina ro	ots (C3)	Stunted or stressed plants (D1)
	posits (B3)			•	uced iron (C		0.0 (00)	Geomorphic position (D2)
	nat or crust (B4)				action in tille	•	26)	FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	nuck surfa	ce (C7)	•	•	
 Inundat	ion visible on aerial	imagery (B7	') Gauge	or well d	ata (D9)			
Sparse	ly vegetated concave	e surface (B	8) Other	(Explain ir	n Remarks)			
Field Obse	rvations:							
Surface Wat		Ye	s No _ 🗸	Depth (inc	:hes):			
Water Table		Ye	s No			w	etland Hydro	ology Present? Yes _ ✓ No
Saturation F	Present?	Ye	s No	Depth (inc	:hes): <u></u>			
(includes ca	pillary fringe)							
Describe Re	ecorded Data (strean	n gauge, mo	onitoring well, aeria	ll photos,	previous ins	pections)	, if available:	:
Remarks:								

SOIL

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmst	ed County Sampling Date: 2024-05-30
Applicant/Owner: Ranger Power		-	State	e: MN Sampling Point: cdp14
Investigator(s): Jared Booms	Sect	tion, Townsh	ip, Range: S	S18 T107N S012W
Lanform(hillslope, terrace, etc): Ditch			Local reli	ef (concave, convex, none):
Slope(%): Lat: 44.07579		Long: -92.	.30953	Datum: WGS 84
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slop				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Y	es 🔎 No	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(1:	f needed, ex	plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		le the S	ampled Area	
Hydric Soil Present? Yes _ No			Wetland?	Yes <u> </u>
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate repo				
Fresh wet meadow ditch along road way. Higher diversity, dominated values of plants.	d by rcg.			
		Dominant		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1.				Total % Cover of: Multiply by:
2. 3.				OBL species <u>5</u> x1 = <u>5</u>
3. 4.				FACW species <u>85</u> x1 = <u>170</u>
5.				FAC species5 x1 =15
	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) guadra	nt)	UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	70%	yes	FACW	Column Totals: 95 x1 = 190 (B)
2. Helianthus grosseserratus, Saw-Tooth Sunflower	15%	no	FACW	Prevalence Index = B/A = 2.000
3. Stachys palustris, Woundwort	5%	no	OBL	Hydrophytic Vegetation Indicators:
4. Poa pratensis, Kentucky Blue Grass	5%	no	FAC	✓ 1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10	95%	= Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. 2.				Hydrophytic
	0%	= Total Co	ver	Vegetation Present? Yes✓_ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth	Matrix			edox Featı		. 2	- .		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks
								_	
Гуре: С=С	oncentration, D=Deple	tion, RM=Re	educed Matrix, M	 S=Masked	Sand Grair	ıs. ² L	ocation: P	 L=Pore Lining, M=Matrix.	
ydric Soil	Indicators:							Indicators for Problem	atic Hydric Soils ³ :
Histoso	l (or Histel) (A1) unde	fined	Sandy	Gleyed M	latrix (S4)			Coast Prairie Redox	x (A16)
	pipedon (A2) undefin	ed		Redox (S	-			Dark Surface (S7)	
	isti (A3) undefined			ed Matrix (Iron-Manganese Ma	asses (F12)
_ ′ °	en Sulfide (A4)			y Mucky M				Very Shallow Dark	Surface (TF12)
	d Layers (A5)			y Gleyed N				✓ Other (Explain in Red)	emarks)
	uck (A10)			ted Matrix				³ Indicators of hydro	phytic vegetation and wetl
	d Below Dark Surface	e (A11)		Dark Sur				hydrology must be problematic.	e present, unless disturbed
	ark Surface (A12)				Surface (F7)			problematic.	
	Mucky Mineral (S1) ucky Peat or Peat (S3	3)	Redox	Depression	ons (F8)				
	Layer (if observed):								
emarks:	rinches):	ay. Soils ass	sumed hydrocarb	on based (of wetland h		ic Soil Pro	esent? nd hydrophytic vegetation	
Depth (temarks: lo dig due t	to presence of road w	ay. Soils ass	sumed hydrocarb	on based (of wetland h				Yes <u>✓</u> No _
Depth (demarks: lo dig due to	to presence of road w	ay. Soils ass	sumed hydrocarb	on based (of wetland h		dicators a	nd hydrophytic vegetation	i.
Depth (emarks: o dig due to	to presence of road w				of wetland h		dicators a		imum of two required)
Depth (emarks: lo dig due to /DROLO /etland Hy rimary India	GY drology Indicators:		check all that ap				dicators a	nd hydrophytic vegetation	nimum of two required)
Depth (emarks: lo dig due to /DROLO /etland Hy rimary IndiaSurface	GY drology Indicators: cators (minimum of or		check all that ap Water-	ply)	ıves (B9)		dicators a	nd hydrophytic vegetation Secondary Indicators (mir Surface soil cracks (f	nimum of two required) 36)
Depth (emarks: lo dig due to /DROLO /etland Hy rimary IndiaSurface	GY drology Indicators: cators (minimum of or water (A1) ater table (A2)		check all that ap Water- Aquatio	ply) stained lea	ives (B9)		dicators a	nd hydrophytic vegetation Secondary Indicators (mir Surface soil cracks (F	nimum of two required) 36) 10)
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Depth (Depth (Demarks: Demar	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1)		check all that ap Water- Aquation True ao Hydrog	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	aves (B9) 13) uts (B14) odor (C1)	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (B Drainage patterns (B Dry-season water tab Crayfish burrows (C8 Saturation visible on	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1)
Depth (Depth (Demarks: Depth (Demarks: Demark	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		check all that ap Water- Aquatic True ac Hydrog Oxidize	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ice of redu	aves (B9) 13) tts (B14) odor (C1) neres along	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (t Drainage patterns (B Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p	nimum of two required) (36) (10) (ble (C2) () (aerial imagery (C9) (D2)
Depth (Depth (Demarks: Demar	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		check all that ap Water- Aquatic True ac Hydrog Oxidize Presen Recent	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ice of redu	oves (B9) 13) Its (B14) Odor (C1) Ineres along Ced iron (C4) Ction in tilled	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (t Drainage patterns (B. Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p	nimum of two required) (36) (10) (ble (C2) () (aerial imagery (C9) (D2)
Depth (Depth (Demarks: Demar	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	ne required;	check all that ap Water- Aquatic True ac Hydrog Oxidize Present Recent	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ice of redu	ives (B9) 13) its (B14) odor (C1) neres along ced iron (C4 ction in tilled	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (t Drainage patterns (B. Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p	nimum of two required) (36) (10) (ble (C2) () (aerial imagery (C9) (D2)
Depth (emarks: lo dig due to //DROLO /etland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	ne required;	check all that ap Water- Aquatic True ac Hydrog Oxidize Present Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc auck surfac	oves (B9) 13) ats (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (t Drainage patterns (B. Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p	nimum of two required) (36) (10) (ble (C2) () (aerial imagery (C9) (D2)
Depth (emarks: lo dig due to //DROLO /etland Hy rimary India Surface High wa Saturati Water in Sedime Drift de Algal m Iron dep Inundat Sparsel	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave : vations:	ne required; nagery (B7) surface (B8)	check all that ap Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge	ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in	oves (B9) 13) Its (B14) Odor (C1) Ineres along ced iron (C4) Ction in tilled e (C7) Ita (D9) Remarks)	ydrology in	dicators a	Secondary Indicators (mir Surface soil cracks (t Drainage patterns (B. Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p	nimum of two required) (36) (10) (ble (C2) () (aerial imagery (C9) (D2)
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Depth (demarks: do dig due to demarks: do dig demarks:	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave : vations: er Present? Present? Present? pillary fringe)	nagery (B7) surface (B8) Yes Yes	check all that ap Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (ply) stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da (Explain in Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks) nes): nes):	ydrology in	(C3)	Secondary Indicators (mir Surface soil cracks (I Drainage patterns (B. Dry-season water tab Crayfish burrows (C8 Saturation visible on Stunted or stressed p Geomorphic position FAC-neutral test (D5)	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/	Olmsted County Sampling Date: 2024-05-30)
Applicant/Owner: Ranger Power	0.1,700		State: MN Sampling Point: cdp15	-
Investigator(s): Jared Booms	Secti		- · · · · · · · · · · · · · · · · · · ·	
			cal relief (concave, convex, none): convex	
Slope(%): 3-7 Lat: 44.0758		Long: -92.30956	Datum: WGS 84	
Soil Map Unit Name: 401C2: Mt. Carroll silt loam, 6 to 12 percent slop	es, modera	ately eroded	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Yes ,	No (If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significantly	disturbed?		prmal Circumstances" present? Yes , No	
Are Vegetation , Soil , or Hydrology naturally prol	blematic?		led, explain any answers in Remarks.)	
		,	,	
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point loca	ations, transects, important features, etc.	
Hydrophytic Vegetation Present? Yes No		lo the Comple	d Avon	
Hydric Soil Present? Yes No_		Is the Sample within a Wetla		0 _ <
Wetland Hydrology Present? Yes No No				
Upland data point in an at field edge, above a road ditch. VEGETATION - Use scientific names of plants.				
Trop Stratum (Plot cizo:20 ft (0.1 m) radius)		Dominant Indic Species? Stat		
Tree Stratum (Plot size:30-ft (9.1-m) radius) 1	70 COVE	Species: State	Number of Dominant Species That	
2				<u>0</u> (A)
4.			Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
5	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0	<u>%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:	
1.			Total % Cover of: Multiply by:	
2			OBL species 0 x1 =	0
3 4.			FACW species0 x1 =	0
4			FAC species 10 x1 =	30
·	0%	= Total Cover	FACU species 70	180
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			UPL species0 x1 =	0
Bromus inermis, Smooth Brome	50%	yes FAC	CU Column Totals: 80 x1 = 3	<u>10</u> (B)
2. Solidago canadensis, Canadian Goldenrod	15%	no FAC	CU Prevalence Index = B/A = 3.875	_
3. Poa pratensis, Kentucky Blue Grass	10%	no FA	Hydrophytic Vegetation Indicators:	
4. Asclepias syriaca, Common Milkweed	5%	no FAC	1 - Rapid Test for Hydrophytic Vegetation	
5			2 - Dominance Test is > 50%	
6			3 - Prevalence Index is <= 3.0 ¹	
7			4 - Morphological Adaptations ¹ (Provide	
8			supporting data in Remarks or on a separa	ıte
9			sheet)	
10		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (E	Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrol must be present, unless disturbed or probl	
1.			Hydrophytic	
2.	0%	= Total Cover	Vegetation Present? Yes No	o <u> </u>
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth		1 2 -		
(inches) Color (moist) %	Color (moist) % Typ	pe ¹ Loc ² Te	exture	Remarks
Type: C=Concentration, D=Depletion, RM:	-Paducad Matrix, MS-Masked Sand	Grains ² Locat	tion: PL=Pore Lining, M=Matrix.	
ydric Soil Indicators:	-reduced Matrix, MO-Masked Saria	Grains. Local	Indicators for Problem	
Histosol (or Histel) (A1) undefined	Sandy Gleyed Matrix (S4)	Coast Prairie Redo	-
Histic Epipedon (A2) undefined	Sandy Redox (S5)		Dark Surface (S7)	. (1.23)
Black Histi (A3) undefined	Stripped Matrix (S6)		Iron-Manganese Ma	asses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral	(F1)	Very Shallow Dark	,
Stratified Layers (A5)	Loamy Gleyed Matrix	(F2)	Other (Explain in R	
2 cm Muck (A10)	Depleted Matrix (F3)		3Indicators of hydro	phytic vegetation and wet
Depleted Below Dark Surface (A11)	Redox Dark Surface (I	=6)	hydrology must be	e present, unless disturbed
Thick Dark Surface (A12)	Depleted Dark Surface	e (F7)	problematic.	
_ Sandy Mucky Mineral (S1)	Redox Depressions (F	8)		
_ 5 cm Mucky Peat or Peat (S3)				
estrictive Layer (if observed):				
Typo:		Hydric S	oil Precent?	Voc No
	y, soils assumed non hydric based c		oil Present? veg and wetland hydrology.	Yes No _
Depth (inches): emarks: o dig due to presence of road right of wa	y, soils assumed non hydric based c			Yes No
Depth (inches): emarks: o dig due to presence of road right of wa	y, soils assumed non hydric based c		veg and wetland hydrology.	
Depth (inches): emarks: o dig due to presence of road right of wa			veg and wetland hydrology. Secondary Indicators (mir	nimum of two required)
Depth (inches): emarks: o dig due to presence of road right of wa		of lack of hydrophytic	veg and wetland hydrology.	nimum of two required) 36)
Depth (inches): emarks: o dig due to presence of road right of wa DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require	ed; check all that apply) Water-stained leaves (E	of lack of hydrophytic	veg and wetland hydrology. Secondary Indicators (mir Surface soil cracks (in Drainage patterns (B	nimum of two required) 36) 10)
Depth (inches): emarks: o dig due to presence of road right of was DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require _ Surface water (A1)	ed; check all that apply)	of lack of hydrophytic	veg and wetland hydrology. Secondary Indicators (mir Surface soil cracks (i	nimum of two required) 36) 10) ble (C2)
Depth (inches): emarks: Depth dig due to presence of road right of was DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require Surface water (A1) High water table (A2)	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13)	of lack of hydrophytic 39)	veg and wetland hydrology. Secondary Indicators (min Surface soil cracks (i Drainage patterns (B Dry-season water tab	nimum of two required) 36) 10) ble (C2)
Depth (inches): emarks: o dig due to presence of road right of was DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require _ Surface water (A1) _ High water table (A2) _ Saturation (A3)	ed; check all that apply) — Water-stained leaves (E — Aquatic fauna (B13) — True aquatic plants (B1	of lack of hydrophytic 39) 4) (C1)	Secondary Indicators (mir Surface soil cracks (i Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9)
Depth (inches): emarks: Drock dig due to presence of road right of was Drock dig due to presence of road right of was Drock dig due to presence of road right of was Drock dig due to presence of road right of was Drock dig due to presence of road right of was Drock dig due to presence of road right of was Drock dig due to presence of road right of was Established dig due to presence of road right of was Drock dig due to presence of road right	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (of lack of hydrophytic 39) 4) (C1) along living roots (C3)	veg and wetland hydrology. Secondary Indicators (mir Surface soil cracks (I Drainage patterns (B Dry-season water tal Crayfish burrows (C8 Saturation visible on	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1)
Depth (inches): emarks: Didig due to presence of road right of was DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (Oxidized rhizospheres	of lack of hydrophytic 39) 4) (C1) along living roots (C3 on (C4)	Secondary Indicators (mir Surface soil cracks (i Drainage patterns (B Dry-season water tal Crayfish burrows (CS Saturation visible on Stunted or stressed i	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: D dig due to presence of road right of was DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (Oxidized rhizospheres (Presence of reduced in	of lack of hydrophytic 39) 4) (C1) along living roots (C3 on (C4) n tilled soils (C6)	Secondary Indicators (mir Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: Draw dig due to presence of road right of war and the presence of road right of	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor of the control of the co	of lack of hydrophytic 39) 4) (C1) along living roots (C3 on (C4) n tilled soils (C6)	Secondary Indicators (mir Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor of the company of the co	asp) 4) (C1) along living roots (C3 on (C4) on tilled soils (C6)	Secondary Indicators (mir Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
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Depth (inches): marks: Define dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to present of the presence of the present of the p	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (Oxidized rhizospheres (Presence of reduced iru Recent iron reduction ir Thin muck surface (C7) Gauge or well data (D9 38) Other (Explain in Remains	asy) 4) (C1) along living roots (C3) on (C4) n tilled soils (C6)) urks)	Secondary Indicators (ming and wetland hydrology. Surface soil cracks (incomparing patterns (B) and patterns (Captish burrows (Captish burrow	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: o dig due to presence of road right of ware DROLOGY etland Hydrology Indicators: rimary Indicators (minimum of one require) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B Sparsely vegetated concave surface (I eld Observations: urface Water Present?	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (Oxidized rhizospheres a Presence of reduced iru Recent iron reduction iru Thin muck surface (C7) Gauge or well data (D9 B8) Other (Explain in Remains	asp) 4) (C1) along living roots (C3 on (C4) on tilled soils (C6) o) urks)	Secondary Indicators (mir Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: o dig due to presence of road right of ware DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require) Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B Sparsely vegetated concave surface (I eld Observations: urface Water Present? Saturation Present?	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor (Oxidized rhizospheres (Presence of reduced iru Recent iron reduction ir Thin muck surface (C7) Gauge or well data (D9 38) Other (Explain in Remains	asp) 4) (C1) along living roots (C3 on (C4) on tilled soils (C6) o) urks)	Secondary Indicators (ming and wetland hydrology. Surface soil cracks (incomparing patterns (B) and patterns (Captish burrows (Captish burrow	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: o dig due to presence of road right of ware properties of dig due to presence of road right of ware properties of dig due to presence of road right of ware properties of dig due to presence of road right of ware properties of dig due to presence of road right of ware properties of dig due to presence of road right of ware properties of dig due to present of the ware properties of dig due to present of road right of ware properties of dig due to present of road right of ware properties of dig due to present of road right of ware properties of road right of road right of ware properties of road right of road	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor of the control of the co	asp) 4) (C1) along living roots (C3 on (C4) n tilled soils (C6) b) urks)	Secondary Indicators (min Surface soil cracks (I Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed I Geomorphic position FAC-neutral test (D5)	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: Define dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to present (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (E) Sparsely vegetated concave surface (C) eld Observations: urface Water Present? atter Table Present? Attertation Present?	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor of the company of the co	asp) 4) (C1) along living roots (C3 on (C4) n tilled soils (C6) b) urks)	Secondary Indicators (min Surface soil cracks (I Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed I Geomorphic position FAC-neutral test (D5)	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)
Depth (inches): emarks: Drock dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to presence of road right of was a dig due to present (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (E) Sparsely vegetated concave surface (C) eld Observations: Irface Water Present? Attration Present? Yetturation Present? Yeturation Present?	ed; check all that apply) Water-stained leaves (E Aquatic fauna (B13) True aquatic plants (B1 Hydrogen sulfide odor of the company of the co	asp) 4) (C1) along living roots (C3 on (C4) n tilled soils (C6) b) urks)	Secondary Indicators (min Surface soil cracks (I Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed I Geomorphic position FAC-neutral test (D5)	nimum of two required) 36) 10) ble (C2)) aerial imagery (C9) blants (D1) (D2)

Project/Site: Lemon Hill	City/Co	ounty: Farmi	naton/Olmst	ed County Sampling Date: 2024-05-30			
Applicant/Owner: Ranger Power	City/CC			e: MN Sampling Point: cdp16			
Investigator(s): Jared Booms	Sect						
				ef (concave, convex, none): concave			
				Datum: WGS 84			
Soil Map Unit Name: N518B: Lindstrom silt loam, 2 to 6 percent slope				NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of y		Y	es , No				
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal Circumstances" present? Yes , No					
Are Vegetation , Soil , or Hydrology naturally pro		, ,		cplain any answers in Remarks.)			
		,	•	,			
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes No	✓						
Hydric Soil Present? Yes No			ampled Area Wetland?	a Yes No _ ✓			
Wetland Hydrology Present? Yes Ves No							
Remarks: (Explain alternative procedures here or in a separate repo Vegetated drainage-way that was highlighted on the the desktop rev consistent with upland with clover and wheat and invasives. VEGETATION - Use scientific names of plants.		nd swale furt	ther up hill to	the south. Suspect tile on this parcel. Vegetation			
•	Absolute	Dominant	Indicator				
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)			
2.				, , ,			
3.4.				Total Number of Dominant Species Across All Strata:1 (B)			
5				Percent of Dominant Species That			
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 0% (A/B)			
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:			
1				Total % Cover of: Multiply by:			
2				OBL species 0 x1 = 0			
3				FACW species 0 x1 = 0			
5.				FAC species0 x1 =0			
5	0%	= Total Cov	er	FACU species 105 x1 = 420			
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0			
Trifolium hybridum, Alsike Clover	65%	yes	FACU	Column Totals: 105			
2. Cirsium arvense, Canadian Thistle	20%	no	FACU	Prevalence Index = B/A = 4.000			
3. Dactylis glomerata, Orchard Grass	10%	no	FACU	Hydrophytic Vegetation Indicators:			
4. Taraxacum officinale, Common Dandelion	10%	no	FACU				
5				1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50%			
6							
7				3 - Prevalence Index is <= 3.0 ¹			
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate			
9				sheet)			
10		- Total Co		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Co		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
1.				Hydrophytic			
2	0%	= Total Cov	ver	Vegetation Present? Yes No _✓			
Remarks: (Include photo numbers here or on a separate sheet.)		. 5		100			
Normano. (include prioto numbers fiere of off a separate sheet.)							

Depth	Matrix	 -	F	redux real	ures		•	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-14	10YR - 3/1	100	/				L	
14-24	10YR - 3/2	98	7.5YR-4/6	2	C	M	SiCL	
	oncentration, D=Dep	letion, RM=Re	educed Matrix, N	1S=Masked	d Sand Grai	ins. ²	Location: F	PL=Pore Lining, M=Matrix.
Histosol Histic E Black H Hydroge Stratifie 2 cm M Deplete Thick D	Indicators: (or Histel) (A1) underpipedon (A2) undefined isti (A3) undefined en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfacark Surface (A12) Mucky Mineral (S1)	ined	Sand Stripp Loam Loam Deple Redo	ny Gleyed Metrix x Dark Sur	(S5) (S6) Mineral (F1) Matrix (F2) (F3) rface (F6) Surface (F7))		Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and whydrology must be present, unless disturb problematic.
5 cm M	ucky Peat or Peat (· 				
	Layer (ii observeu)							
Type: Depth (inches):					Hyd	Iric Soil Pi	resent? Yes No
Type: Depth (emarks:						Hyc	Iric Soil Pi	resent? Yes No
Type: Depth (emarks:						Hyc	Iric Soil Pi	resent? Yes No Secondary Indicators (minimum of two required)
Type: Depth (emarks: DROLO etland Hy	GY		check all that ap	oply)		Hyc	Iric Soil Pi	
Type: Depth (emarks: DROLO etland Hy imary India Surface	GY drology Indicators: cators (minimum of water (A1)		Water	-stained lea	. ,	Hyc	Iric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10)
Type: Depth (emarks: DROLO etland Hy imary India Surface High wa	GY drology Indicators: cators (minimum of water (A1) ater table (A2)		Water Aquat	-stained lea ic fauna (B	13)	Hyc	Iric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Type: Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water Aquati True a	-stained lea ic fauna (B aquatic plar	13) nts (B14)	Hyc	Iric Soil Pi	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Type: Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of water (A1) tter table (A2) on (A3) narks (B1)		Water Aquati True a Hydro	-stained lea ic fauna (B aquatic plar gen sulfide	13) nts (B14) e odor (C1)			Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Type: Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedime	drology Indicators: cators (minimum of water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2)		Water Aquati True a Hydro Oxidiz	-stained lea ic fauna (B aquatic plar gen sulfide ed rhizosp	nts (B14) odor (C1) heres along	ı living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
DROLO Tetland Hy Timary India Surface High wa Saturati Water n Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) arks (B1) at deposits (B2) cosits (B3)		Water Aquati True a Hydro Oxidiz Prese	-stained leadic fauna (B aquatic plar gen sulfide ed rhizosp nce of redu	nts (B14) e odor (C1) heres along uced iron (C	J living roo	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (DROLO Tetland Hy Timary India Surface High wa Saturati Water n Sedime Drift del Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water Aquati True a Hydro Oxidiz Presel	-stained leadic fauna (Baquatic plandic plandi	nts (B14) e odor (C1) heres along uced iron (C	J living roo	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth (Demarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep	drology Indicators: cators (minimum of water (A1) atter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required;	Water Aquati True a Hydro Oxidiz Prese Recer	stained leadic fauna (Baquatic planagen sulfide ed rhizospence of redutiron redunuck surfacents	nts (B14) e odor (C1) heres along uced iron (C action in tille ce (C7)	J living roo	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (emarks: DROLO etland Hy imary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron deg Inundati	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required;	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge	-stained leadic fauna (Baquatic plandic plandi	nts (B14) e odor (C1) heres along uced iron (C action in tille ce (C7) ata (D9)	J living roo	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (emarks: TDROLO Tetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep Inundati Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial y vegetated concave vations:	one required; imagery (B7) e surface (B8)	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge	stained lea ic fauna (B aquatic plar gen sulfide ed rhizosp nce of redu at iron redu nuck surfac e or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C action in tille ce (C7) ata (D9) a Remarks)	J living roo	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (emarks: TDROLO Tetland Hy rimary India Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial y vegetated concave vations: er Present?	one required; imagery (B7) e surface (B8) Yes	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge Other	stained leadic fauna (Banquatic planagen sulfide lead rhizosponce of redutiron redunuck surface or well da (Explain in Depth (inc	nts (B14) nts (B14) nodor (C1) heres along uced iron (C ction in tille ce (C7) nta (D9) n Remarks) hes):	J living roo (24) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth (emarks: DROLO Tetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep Inundati Sparsel	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8) Yes Yes	Water Aquati True a Hydro Oxidiz Prese Recer Thin n Gauge	-stained leadic fauna (Baquatic planagen sulfide ed rhizospance of redunt iron redunuck surface or well da (Explain in Depth (inc Depth (inc	nts (B14) nts (B14) nts (B14) nts (G1) heres along uced iron (C oction in tille ce (C7) ata (D9) n Remarks) hes): hes):	J living roo (24) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel eld Obser urface Water Table aturation P ncludes cap	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8) Yes Yes Yes	Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other	stained leadic fauna (B) aquatic plan gen sulfide ed rhizospince of reduction reductio	nts (B14) nts (B	J living roo (24) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth (emarks: DROLO etland Hy rimary India Surface High wa Saturati Water n Sedime Drift de Algal m Iron dep Inundati Sparsel eld Obser urface Water Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) on visible on aerial y vegetated concave vations: er Present? Present? present? present?	imagery (B7) e surface (B8) Yes Yes Yes	Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other	stained leadic fauna (B) aquatic plan gen sulfide ed rhizospince of reduction reductio	nts (B14) nts (B	J living roo (24) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ed County	Sampling Date: 20	24-05-31
Applicant/Owner: Ranger Power	City/Co	State			
-	Sect				511
Lanform(hillslope, terrace, etc): Side hill		Local reli			
Slope(%): 3-7 Lat: 44.07924			•		\$ 84
Soil Map Unit Name: 16: Arenzville silt loam, 0 to 3 per			NWI classifica		
Are climatic / hydrologic conditions on the site typical for			o (If no, explain		
, ,	ŕ	·			
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology			Circumstances" prese	<u></u>	
Are vegetation , Soil , or Hydrology	— Haturally problematic?	(ii fieeded, ex	piairi ariy ariswers iri	Remarks.)	
SUMMARY OF FINDINGS - Attach site n	nap showing sampli	ing point location	s, transects, im	portant feature	s, etc.
Hydrophytic Vegetation Present?	Yes _ < No				
	Yes No	Is the Sampled Are within a Wetland?	a	Yes_	✓ No
Wetland Hydrology Present?	Yes No				
Remarks: (Explain alternative procedures here or in wetland is located on a side hill above a drainage di is located at the interface between the water table ar observed. While tile is present it is not draining the v	itch. Wetland is heavily slop nd the surface. This wetlan wetland to the point of it no	d is impacted by the tile	which is why saturat	tion and surface wate	r is not
Tree Stratum (Plot size:30-ft (9.1-m) radius)	Absolute	Dominant Indicator Species? Status	Dominance Test V	Vorksheet	
1			Number of Domina		
2			Are OBL, FACW, o	r FAC:	<u>1</u> (A)
3			Total Number of Do	ominant Species	4 (-)
4			Across All Strata:		<u>1</u> (B)
5		= Total Cover	Percent of Domina Are OBL, FACW, o		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius))		Prevalence Index	worksheet:	
1.			Total % Cove	er of: Mult	iply by:
2				0 x1 =	
3			FACW species	<u>0</u> x1 =	0
4 5			FAC species	<u>1</u> x1 =	3
5.		= Total Cover	FACU species	<u>0</u> x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OF			UPL species	<u>0</u> x1 =	0
Ambrosia trifida, Great Ragweed	, , ,	, , ,	Column Totals:	<u>1</u> x1 = _	<u>3</u> (B)
2.			Prevaler	nce Index = B/A = _	3.000
3			Hydrophytic Vege	tation Indicators:	
4			1 - Ranid Test	t for Hydrophytic Veg	etation
5			✓ 2 - Dominance	, , , ,	
6			✓ 3 - Prevalence	_	
7				gical Adaptations ¹ (Pro	ovido.
8				ta in Remarks or on a	
9. 10.			sheet)		_
10.	1%	= Total Cover	PROBLEMATI	IC Hydrophytic Veget	ation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of must be pres	hydric soil and wetlar sent, unless disturbed	nd hydrology or problematic.
1.			Hydrophytic		
2	0%	= Total Cover	Vegetation Present?	Yes	✓ No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)				
i					

Sample Point: cdp17

Color (moist)		cription: (Describe to Matrix	to the dept		ment the edox Feat		r confirm t	he absend	ce of indicators.)
Book 10YR - 2/1 60	Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
SGY -5/1	0-8	10YR - 2/1	60	/				SiCL	
8.25			40	/					
Plyne: C=Concentration, D=Depleton, RM=Reduced Matrix, MS=Masked Sand Grains. **Plyne: C=Concentration, D=Depleton, RM=Reduced Matrix, MS=Masked Sand Grains.** **Plyne: C=Concentration, D=Depleton, RM=Reduced Matrix, MS=Masked Sand Grains.** **Indicators for Problematic Hydric Soils**: **Indicators for Problematic Hydric Soils**: **Coast Praine Redox (A16) **Dark Surface (K12) **Depleton Matrix (F3) **Depleton Matrix (F3) **Depleton Bark Surface (K12) **Send Mucky Mineral (K12) **Depleton Bark Surface (K12) **Type: **Depth (inches):*** **Depth (inches):*** **Pirmary Indicators (minimum of non required; check all that apply) **Surface was old racks (K12) **Surface was old racks (K12) **Depth (inches):** **Pirmary Indicators (minimum of non required; check all that apply) **Surface was old racks (K12) **Surface was old racks (K12) **Depth (inches):** **Surface was old racks (K12) **Surface was old racks (K12) **Depth (inches):** **Surface was old racks (K12) **Surface was old racks (K12) **Depth (inches):** **Surface was old racks (K12) **Surface was old racks (K	9-25				95			C	
Pyter: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Pytric Soil Indicators:** Histosso (or Histol) (A1) undefined	0-23								
Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedion (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Sitipped Matrix (S6) Hydrogen Sulfide (A4) Loamy Muky Mineral (F1) Straffield Layers (A5) Loamy Gleyed Matrix (F2) Loepided Matrix (F2) Loepided Below Dark Surface (F1) Trick Dark Surface (A12) Sondy Muky Mineral (S1) Som Muky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Diff (deposition (A3) Diff (deposition				7.51R-4/0			IVI		
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Histosof (or Histel) (A1) undefined	Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F3) Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F3) Stratified Layers (A5) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F2) Loamy Mucky Mineral (F3) Pepleted Below Dark Surface (A12) Depleted Martix (F3) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Depth (i	Histoso	ol (or Histel) (A1) und	lefined	Sandy	Gleyed N	Matrix (S4)			· · · · · · · · · · · · · · · · · · ·
Hydrogen Sulfide (A4) Stratified Layers (A5) Jeanny Gleyed Martix (F2) Other (Explain in Remarks) Depleted Martix (F3) Thick Dark Surface (A11) Thick Dark Surface (A11) Sedimark (S13) Send Mucky Mineral (S1) Sendy Mucky Mineral (S1) Fedox Dark Surface (F7) Sendy Mucky Mineral (S1) Fedox Dark Surface (F7) Sendy Mucky Mineral (S1) Fedox Dark Surface (F7) Femarks: Hydric Soil Present? Wetland Hydrology indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) Surface water (A1) Water stained leaves (B9) Surface water (A2) Aquatic fauna (B13) The aquatic plants (B14) Water marks (B1) Primary Indicators (minimum of one aerial imagery (C9) Sediment deposits (B2) Oritic deposits (B3) Presence of reduced iron (C4) Aquatic for reduction in tilled soils (C6) Thin undation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Wetland Hydrology must be present, unless disturbed or problematic. Very Shallow Dark Surface (F7) Other (Explain in Remarks) Wetland Hydrology must be present, unless disturbed or problematic. Very Shallow Dark Surface (F7) Jenethod Shallow Dark Surfa	Histic E	Epipedon (A2) undefi	ned	Sandy	Redox (S	S5)			Dark Surface (S7)
Stratified Layers (A5)	Black H	Histi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
2 cm Muck (A10)	Hydrog	en Sulfide (A4)		Loamy	/ Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)
					-				Other (Explain in Remarks)
Thick Dark Surface (A12) Depleted Dark Surface (F7) Problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) Restrictive Layer (if observed): Type: Depth (inches): Put (Inches):		,	(444)			` '			³ Indicators of hydrophytic vegetation and wetland
Sandy Mucky Mineral (S1) Redox Depressions (F8) Some Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:			ce (A11)			` ,			
Restrictive Layer (if observed): Type:									p. 62.6.mauc.
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface water (A1) High water table (A2) Saturation (A3) Saturation (A3) True aquatic plants (B14) True aquatic plants (B14) Sediment deposits (B2) Sediment deposits (B2) Soffice to deposits (B3) Presence of reduced iron (C4) Algal mat or crust (B4) Iron deposits (B3) Recent iron reduction in tilled soils (C6) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Yes No Depth (inches)		, , ,	33)	Redox	Depressi	UIIS (F8)			
Type:		•							
Depth (inches): Remarks: IVDROLOGY		Layer (if observed):	i				l la calui	- C-il Du-	Year of No
Name		(inches):					_ Hydri	c Soli Pre	res ves No
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one required; check all that apply) ✓ Surface soil cracks (B6) Surface water (A1) Water-stained leaves (B9) Drainage patterns (B10) High water table (A2) Aquatic fauna (B13) Dry-season water table (C2) Saturation (A3) True aquatic plants (B14) Crayfish burrows (C8) Water marks (B1) Hydrogen sulfide odor (C1) ✓ Saturation visible on aerial imagery (C9) Sediment deposits (B2) Oxidized rhizospheres along living roots (C3) Stunted or stressed plants (D1) Drift deposits (B3) Presence of reduced iron (C4) Geomorphic position (D2) Algal mat or crust (B4) Recent iron reduction in tilled soils (C6) FAC-neutral test (D5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wettand Hydrology Present? Yes No		201							
Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9) Aquatic fauna (B13) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Iron deposits (B5) Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface water (A1) Water stained leaves (B9) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Saturation visible on aerial imagery (C9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									Secondary Indicators (minimum of two required)
Surface water (A1)	-	==		r check all that an	nlv)			_	•
Saturation (A3)		,	5110 10quil 00			aves (B9)			
Water marks (B1)	High wa	ater table (A2)		Aquatio	fauna (B	13)		_	
Sediment deposits (B2)	Saturat	tion (A3)						_	
Drift deposits (B3)		marke (P1)		True a	quatic plar	nts (B14)		-	′
Algal mat or crust (B4)	Water r	marks (B1)						- -	Crayfish burrows (C8)
Iron deposits (B5) Thin muck surface (C7) Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				Hydrog Oxidize	jen sulfide ed rhizospl	odor (C1) heres along	•	_	Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Inundation visible on aerial imagery (B7) Gauge or well data (D9) Sparsely vegetated concave surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present?	Sedime Drift de	ent deposits (B2) eposits (B3)		Hydrog Oxidize Presen	en sulfide ed rhizospl ce of redu	odor (C1) heres along iced iron (C4	4)	_	Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sedime Drift de Algal m	ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5)	(0.7)	Hydrog Oxidize Presen Recent	en sulfide ed rhizospl ce of redu iron redu uck surfac	odor (C1) heres along uced iron (C4 ction in tilled ce (C7)	4)	_	Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat	ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in ly vegetated concave rvations: ter Present?	surface (Bi	— Hydrog	en sulfide ed rhizospl ce of redu i iron redu uck surfac or well da (Explain in	odor (C1) heres along uced iron (C4 ction in tillect ce (C7) ata (D9) Remarks)	4) I soils (C6)	(C3) _	Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table	ent deposits (B2) eposits (B3) nat or crust (B4) eposits (B5) tion visible on aerial in ly vegetated concave rvations: ter Present?	e surface (Bi Ye Ye	Hydrog	en sulfide ed rhizospl ice of redu i iron redu uck surfac or well da Explain in Depth (inci	odor (C1) heres along uced iron (C4 ction in tillec te (C7) ata (D9) Remarks) hes):	4) I soils (C6)	(C3) _	Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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SOIL

Dusines/Cites Lomon Hill	C:t/C-	······································	ed County Sampling Date: 2024-05-31
Project/Site: <u>Lemon Hill</u> Applicant/Owner: Ranger Power	City/Co		e: MN Sampling Point: cdp18
Investigator(s): Jared Booms	Coat		
· · · · · · · · · · · · · · · · · · ·			ef (concave, convex, none): <u>convex</u>
Soil Map Unit Name: 16: Arenzville silt loam, 0 to 3 percent slopes, oc			NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of y		Yes N	
Are Vegetation, Soil, or Hydrology Significantly Are Vegetation, Soil, or Hydrology naturally pro		7.1.0 1.101.11ta. 1	Circumstances" present? Yes No
Are vegetation , Soil , or Hydrology naturally pro	biematic?	(if needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	✓	1	
Hydric Soil Present? Yes No		Is the Sampled Area within a Wetland?	a Yes No_ ✓ _
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate report Upland data point is located on a side slope. Soil is darker than the the creek and it is effectively draining this area. Not enough hydrology VEGETATION - Use scientific names of plants.	sóil uphill a		
VEGETATION - OSC SCIENTING HAInes of plants.	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species Across All Strata: 0 (B)
4			, , ,
<u> </u>		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2.			OBL species0 x1 =0
3			FACW species0 x1 =0
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	L-m²) quadrat)	UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5 6.			2 - Dominance Test is > 50%
6			3 - Prevalence Index is $\leq 3.0^1$
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	0%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sheet.) Located in active agriculture field.			

Depth (inches)	Matrix			edox Featu			ille abselle	e of indicators.)
	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR - 2/1	100	/				SiCL	
14-24	10YR - 2/2	100					L	Organic matter observed looks similar to pea
Туре: С=Со	oncentration, D=Dep	letion, RM=Redu	ıced Matrix, M	S=Masked	Sand Grain	ıs. ² L	ocation: PL	=Pore Lining, M=Matrix.
Histosol Histic E Black H Hydroge Stratifie 2 cm M Deplete Thick D Sandy N	Indicators: I (or Histel) (A1) und Epipedon (A2) undefined en Sulfide (A4) d Layers (A5) luck (A10) d Below Dark Surface lark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (S	ned ce (A11)	Sandy Strippe Loamy Loamy Deplet Redox Deplet	Gleyed Marix (Seed Matrix (Seed Matrix (Seed Matrix (Seed Matrix (Seed Matrix (Dark Surfaced Dark Su	5) S6) neral (F1) atrix (F2) (F3) ace (F6) urface (F7)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and weth hydrology must be present, unless disturbed problematic.
Type:	Layer (if observed) (inches):					Hydi	ric Soil Pre	sent? Yes No
'DROLO	GY							
etland Hy	drology Indicators:							
							<u>S</u>	secondary Indicators (minimum of two required)
Surface High wa Saturati Water n Sedime Drift del Algal m Iron dea	water (A1) ater table (A2)	imagery (B7)	Aquatic True ac Hydrog Oxidize Present Recent Thin me	stained leaver fauna (B1 puatic plant en sulfide of rhizosphate of reduces	s; (B14) codor (C1) eres along ced iron (C4 tion in tilled e (C7) a (D9)	1)	- - - - - - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel Sield Obser Surface Water Table Saturation P Includes cal	water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave rvations: er Present? Present? present? present?	imagery (B7) e surface (B8) Yes Yes Yes	Water-s Aquatic True ac Hydrog Oxidize Presenc Recent Thin m Gauge Other (stained leaving fauna (B1 puatic plant en sulfide di division reduction redu	3) Is (B14) odor (C1) eres along ced iron (C2 tion in tilled e (C7) a (D9) Remarks) es): es):	Soils (C6) Wetl	G (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Water Table iaturation P	water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial i y vegetated concave vations: er Present? Present?	imagery (B7) e surface (B8) Yes Yes Yes	Water-s Aquatic True ac Hydrog Oxidize Presenc Recent Thin m Gauge Other (stained leaving fauna (B1 puatic plant en sulfide di dividualità di rivosphote of reduction reduction reduction well dat Explain in Depth (inche pepth (inche) pepth (inche pe	3) Is (B14) odor (C1) eres along ced iron (C2 tion in tilled e (C7) a (D9) Remarks) es): es):	Soils (C6) Wetl	G (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		State	: Sampling Point: cdp19
Investigator(s): Jared Booms			
			ef (concave, convex, none): convex
Slope(%): 3-7 Lat: 44.07953		Long: -92.31586	Datum: WGS 84
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal C	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	
Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes No		Is the Sampled Area within a Wetland?	Yes No
Remarks: (Explain alternative procedures here or in a separate report Upland point in agriculture field down slope from side hill seep. Mul		ing tiles on the landsca	pe. Area is suspected to be a wetland pre tile based on
soils.		3	
VEGETATION - Use scientific names of plants.			
	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3			Total Number of Dominant Species Across All Strata: 0 (B)
5.			
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	070	- Total Cover	Prevalence Index worksheet:
1			
2			Total % Cover of: Multiply by:
3			OBL species 0 x1 = 0
4			FACW species 0 x1 = 0 FAC species
5			FAC species0 x1 =0 FACU species0 x1 =0
		= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		-m²) quadrat)	Column Totals: $0 \times 1 = 0$ (B)
1. 2.			Prevalence Index = B/A = NaN
2. 3.			
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Weath Mar Ottobury (Plat size 200 ft (0.4 ps) resting)	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1. 2.			Hydrophytic
2		= Total Cover	Vegetation Present? Yes No ✓
Pomarke: (Include photo numbers here or on a congrete cheet.)			100
Remarks: (Include photo numbers here or on a separate sheet.) Active agriculture field.			
			,

Depth	ription: (Describe Matrix		R	edox Feati	ures				
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rer	marks
0-12	10YR - 3/1	97	7.5Y-4/6	3	C	M	SiCL		
.2-24	10YR - 2/1	95	7.5R-3/4	5	C	M	SiC	_ =	
·									
pe: C=Co	 ncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	d Sand Grai	ns. 2	Location: F	PL=Pore Lining, M=Matrix.	
	indicators:			<u> </u>				Indicators for Problematic	c Hydric Soils ³ :
	(or Histel) (A1) und			/ Gleyed M				Coast Prairie Redox (A	\16)
-	oipedon (A2) undefi	nea	·	/ Redox (S				Dark Surface (S7)	
-	sti (A3) undefined			ed Matrix (Iron-Manganese Mass	
	n Sulfide (A4)				fineral (F1)			Very Shallow Dark Sur	
	Layers (A5)			y Gleyed N				Other (Explain in Rem	arks)
_	ıck (A10)			ted Matrix				³ Indicators of hydrophy	ytic vegetation and we
- '	d Below Dark Surfac	:e (А11)		x Dark Sur	` ,			hydrology must be pr problematic.	esent, unless disturbe
_	ark Surface (A12)				Surface (F7)			problematic.	
- 1	lucky Mineral (S1)		Redox	x Depressi	ons (F8)				
5 cm Mu	ıcky Peat or Peat (S	33)							
trictive L	ayer (if observed)	:							
						1.15.44	Inia Cail Du		
Type: Depth (i	 nches): <u></u>					Hyd	Iric Soil Pr	resent?	Yes _ ✓ No _
Type: Depth (i						Hyd	lric Soil Pr	resent?	Yes _ V No _
Type: Depth (in marks:	GY					Hyd			
Type: Depth (in marks: DROLOG tland Hyde	GY drology Indicators:		check all that an	nlv)		Hyd		Secondary Indicators (minimi	
Type: Depth (in marks: DROLOG tland Hydemary Indice	GY drology Indicators: eators (minimum of o				aves (B9)	Hyd		Secondary Indicators (minimi	um of two required)
Type: Depth (in marks: DROLOG tland Hydrary Indic_ Surface to surface to surface the surface to surface the surface to surface to surface the surface the surface the surface that surface the surface the surface that surface the surface the surface that surface th	GY drology Indicators: eators (minimum of o water (A1)		Water-	stained lea	, ,	Hyd		Secondary Indicators (minimi Surface soil cracks (B6) Drainage patterns (B10)	um of two required)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat	GY Irology Indicators: ators (minimum of owater (A1) ter table (A2)		Water-	stained lea c fauna (B	13)	Hyd		Secondary Indicators (minimi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table	um of two required)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface of High wat Saturation	GY Irology Indicators: ators (minimum of of water (A1) ter table (A2) on (A3)		Water- Aquatio True a	stained lea c fauna (B: quatic plan	13) nts (B14)	Hyd		Secondary Indicators (minimi Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8)	um of two required) (C2)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface of High wat Saturatio Water m	drology Indicators: actors (minimum of of water (A1) ter table (A2) on (A3) arks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)			Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer	um of two required) (C2) rial imagery (C9)
Type: Depth (i marks: DROLOC tland Hyd mary Indic Surface High wat Saturatio Water m Sedimen	GY drology Indicators: sators (minimum of of water (A1) ter table (A2) on (A3) sarks (B1) at deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) nts (B14) odor (C1) heres along	living root		Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plan	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatic Water m Sedimen Drift dep	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) at deposits (B2) elosits (B3)		Water- Aquatio True a Hydrog Oxidize Presen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu	13) hts (B14) hodor (C1) heres along uced iron (C	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma	GY drology Indicators: eators (minimum of of water (A1) ter table (A2) on (A3) earks (B1) at deposits (B2) eosits (B3) at or crust (B4)		Water- Aquation True and Hydrogon Oxidize Present Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) codor (C1) heres along uced iron (C ction in tilled	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plan	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron dep	drology Indicators: cators (minimum of owater (A1) ter table (A2) on (A3) carks (B1) at deposits (B2) cosits (B3) at or crust (B4) osits (B5)	one required;	Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct	13) hts (B14) c odor (C1) heres along uced iron (C ction in tilled	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (innarks: DROLOG Itland Hyd nary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depu	drology Indicators: Lators (minimum of of water (A1) Let table (A2) Lon (A3) Larks (B1) Lat deposits (B2) Losits (B3) Lat or crust (B4) Losits (B5) Lon visible on aerial	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (in the property of the property o	GY drology Indicators: eators (minimum of of water (A1)) ter table (A2) on (A3) earks (B1) eat deposits (B2) eosits (B3) at or crust (B4) eosits (B5) en visible on aerial in vegetated concave	one required;	Water- Aquation True and Hydrog Oxidize Present Recent Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduct	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundatic Sparsely	GY drology Indicators: eators (minimum of of water (A1)) ter table (A2) on (A3) earks (B1) eat deposits (B2) eosits (B3) eat or crust (B4) eosits (B5) en visible on aerial in vegetated concave	one required; imagery (B7) e surface (B8	Water- Aquation True as Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc t iron reduc or well da (Explain in	nts (B14) nodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	living root	es (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatio Water m Sedimen Drift dep Algal ma Iron depi Inundatio Sparsely	GY Irology Indicators: eators (minimum of of water (A1)) ter table (A2) on (A3) earks (B1) ent deposits (B2) eosits (B3) eat or crust (B4) eosits (B5) en visible on aerial in a vegetated concave er Present?	imagery (B7) e surface (B8	Water- Aquatio True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc nuck surfac or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes):	living root 4) d soils (C6	is (C3)	Secondary Indicators (minimed) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table of Crayfish burrows (C8) Saturation visible on aer Stunted or stressed planed Geomorphic position (D2) FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) ats (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatio Water m Sedimen Drift dep Algal ma Iron depo Inundatio Sparsely Id Observe face Water	GY Irology Indicators: eators (minimum of of water (A1)) ter table (A2) on (A3) earks (B1) ent deposits (B2) eosits (B3) eat or crust (B4) eosits (B5) en visible on aerial in or crustic concave er Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquation True and Hydrogon Oxidized Presen Recent Thin m Gauge Other (stained lead control from the control fr	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	is (C3)	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed plar Geomorphic position (D2)	um of two required) (C2) rial imagery (C9) rits (D1)
Type: Depth (i marks: DROLOG tland Hyd mary Indic Surface High wat Saturatio Water m Sedimen Drift dep Algal ma Iron depi Inundatio Sparsely Id Observer table for the surface water face Water Table for the surface for the	GY drology Indicators: eators (minimum of of water (A1)) ter table (A2) on (A3) earks (B1) eat deposits (B2) eosits (B3) eat or crust (B4) eosits (B5) en visible on aerial in a vegetated concave evations: er Present? ersent?	imagery (B7) e surface (B8 Yes Yes	Water- Aquatio True a Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lead control from the control fr	nts (B14) odor (C1) heres along uced iron (C ction in tiller ce (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	is (C3)	Secondary Indicators (minimed) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table of Crayfish burrows (C8) Saturation visible on aer Stunted or stressed planed Geomorphic position (D2) FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) ats (D1)
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Type: Depth (in the property of the property o	drology Indicators: sators (minimum of of water (A1) ter table (A2) on (A3) sarks (B1) at deposits (B2) sosits (B3) at or crust (B4) osits (B5) on visible on aerial if of vegetated concave vations: er Present? Present? ersent? illiary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquation True as Hydrog Oxidize Presen Recent Thin m Gauge Other (No V No	stained lead of fauna (B: quatic plan gen sulfide ed rhizosphoce of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) Ints (B14) Indoor (C1) Interes along Intere	living roof 4) d soils (C6	ss (C3)	Secondary Indicators (minimumous Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed planed Geomorphic position (D2) FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) ats (D1)
Type: Depth (i narks: PROLOG Iland Hyd nary Indic Surface High wat Saturatic Water m Sedimen Drift dep Algal ma Iron depi Inundatic Sparsely d Observ face Wate ter Table F uration Pr ludes cap	drology Indicators: sators (minimum of of water (A1) ter table (A2) on (A3) sarks (B1) at deposits (B2) sosits (B3) at or crust (B4) osits (B5) on visible on aerial if of vegetated concave vations: er Present? Present? ersent? illiary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquation True as Hydrog Oxidize Presen Recent Thin m Gauge Other (No V No	stained lead of fauna (B: quatic plan gen sulfide ed rhizosphoce of reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	13) Ints (B14) Indoor (C1) Interes along Intere	living roof 4) d soils (C6	ss (C3)	Secondary Indicators (minimumous Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on aer Stunted or stressed planed Geomorphic position (D2) FAC-neutral test (D5)	um of two required) (C2) rial imagery (C9) ats (D1)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olmst	ted County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			e: MN Sampling Point: cdp20
Investigator(s): Jared Booms	Sect	ion, Township, Range: \$	S12 T107N S013W
Lanform(hillslope, terrace, etc): Stream Terrace		Local reli	ief (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.07991	,	Long: -92.32111	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled		_	NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?		(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro		7.1.0 11011110.	xplain any answers in Remarks.)
—— , 3011 — , 31 Thydrology — Taturuny pro	bicinatic:	(ii needed, ez	than any answers in Remarks.
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point locatior	is, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes 🔽 No		Is the Sampled Are within a Wetland?	a Yes ✔ No
Wetland Hydrology Present? Yes Ves No			
Remarks: (Explain alternative procedures here or in a separate report Data point is located in a fresh wet meadow floodplain. The floodplat dominated by reed canary grass and nettle. VEGETATION - Use scientific names of plants.		topography with stream	terraces at different elevations. This stream terraces is
	Absolute	Dominant Indicator	
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2			,
3			Total Number of Dominant Species Across All Strata: 2 (B)
4 5.			、 ,
J	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 110 x1 = 220
4			FAC species 0 x1 = 0
5		Tatal Causes	FACU species 0 x1 = 0
Harbanana Otatan (District Fit (1 Firs) and a OD 0.00 kg 0.00	0%	= Total Cover	UPL species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28- 1. <i>Phalaris arundinacea</i> , Reed Canary Grass	n square (1 80%	yes FACW	Column Totals: 110 x1 = 220 (B)
0 118 81 08 1 118	30%	yes FACW	Prevalence Index = B/A = 2.000
Urtica dioica, Stinging Nettie			Hydrophytic Vegetation Indicators:
4.			
5.	· · · · · · · · · · · · · · · · · · ·		1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)			

SOIL Sample Point: cdp20

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10YR - 3/1	100	/				SiL	
8-24	10YR - 4/2	95	7.5YR-4/6	5	С	М	SiCL	
								-
Туре: С=Со	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grai	ns. 2	Location: PL	=Pore Lining, M=Matrix.
-	Indicators:							Indicators for Problematic Hydric Soils ³ :
	(or Histel) (A1) und			-	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef	ined		/ Redox (S	•			Dark Surface (S7)
	isti (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)			Other (Explain in Remarks)
	uck (A10)	(0.1.1)	 ·	ted Matrix	` ,			³ Indicators of hydrophytic vegetation and we
	d Below Dark Surfa	ce (A11)		k Dark Sui				hydrology must be present, unless disturbe problematic.
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	20)	Redox	c Depressi	ions (F8)			
	ucky Peat or Peat (-						
Type:	Layer (if observed)	:				Hvd	Iric Soil Pre	sent? Yes 🗸 No
ivue.						пуи	IIIC SUII PIE	Seill?
	inches): <u></u>							
Depth (_		
Depth (emarks:							S	econdary Indicators (minimum of two required)
Depth (emarks: DROLO /etland Hy rimary India	GY drology Indicators: cators (minimum of						<u>s</u>	Surface soil cracks (B6)
Depth (emarks: /DROLO /etland Hy rimary IndiaSurface	GY drology Indicators: cators (minimum of water (A1)		Water-	stained lea			<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa	GY drology Indicators: cators (minimum of water (A1) ater table (A2)		Water- Aquatio	stained lea c fauna (B	313)		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3)		Water- Aquatio True a	stained lea c fauna (B quatic plar	313) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1)		Water- Aquatio True a Hydrog	stained lea c fauna (B quatic plan gen sulfide	e odor (C1)		 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime	drology Indicators: cators (minimum of water (A1) atter table (A2) on (A3) narks (B1) nt deposits (B2)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp	a13) Ints (B14) Ints odor (C1) Inheres along	_		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		Water- Aquatio True a Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu	ents (B14) ents (B14) endor (C1) heres along uced iron (C	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: //DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift dep Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) oosits (B3) at or crust (B4)		Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (Continuo in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (emarks: //DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nice of redu t iron redu nuck surface	ents (B14) ents (B14) endor (C1) theres along fuced iron (Control in tilled to (C7)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep Inundati	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	one required	Water- Aquation True and Hydrog Oxidized Present Recent Thin m Gauge	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep Inundati	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water- Aquation True and Hydrog Oxidized Present Recent Thin m Gauge	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	ents (B14) ents (B14) endor (C1) theres along fuced iron (Control in tilled to (C7)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: Depth	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) ion visible on aerial y vegetated concave vations:	one required imagery (B7 e surface (B	Water- Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge S8) Water- Aquatic	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da (Explain in	at an anti- part (B14) and (C1) are (C7) at a (D9) an Remarks)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron dep Inundati Sparsel ield Obser urface Wat	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) cosits (B3) at or crust (B4) cosits (B5) ion visible on aerial y vegetated concave vations: er Present?	imagery (Bī	Water- Aquation True accepted by the second of the second	stained lead of the control of the c	ants (B14) a odor (C1) a odor	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: 'DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wat	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation True accepted by the second of the second	stained lead of the control of the c	ants (B14) a odor (C1) a odor	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (emarks: DROLO /etland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wat /ater Table aturation P	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation True accepted by the second of the second	stained lead of the control of the c	ants (B14) a odor (C1) a odor	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wate Vater Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	ata) and of the second of the	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wate Vater Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	ata) and of the second of the	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth (emarks: DROLO Vetland Hy rimary India Surface High wa Saturati Water n Sedime Drift del Algal m Iron der Inundati Sparsel ield Obser urface Wate Vater Table aturation P ncludes cal	drology Indicators: cators (minimum of water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present? present? present?	imagery (B7 e surface (B Ye Ye	Water- Aquation	stained lead of the control of the c	ata) and of the second of the	4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olms	ted County Sampling Date: 202	4-05-31
Applicant/Owner: Ranger Power			e: MN Sampling Point: cdp2	
Investigator(s): Jared Booms	Sect	tion, Township, Range:	S12 T107N S013W	
Lanform(hillslope, terrace, etc): Sideslope		Local rel	ief (concave, convex, none): convex	
Slope(%): 0-2 Lat: 44.0799		Long: -92.32111	Datum: WGS	84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1B	
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes 🗸 N	o (If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significan	tly disturbed?	Are "Normal	Circumstances" present? Yes , No	
Are Vegetation , Soil , or Hydrology naturally p	oroblematic?	(If needed, e	xplain any answers in Remarks.)	=
CUMMADY OF FINDINGS. Amosh site was absented	:			-4-
SUMMARY OF FINDINGS - Attach site map show		ing point location	is, transects, important features	, etc.
Hydrophytic Vegetation Present? Yes N		Is the Sampled Are	a	
Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N		within a Wetland?		No <u> </u>
Remarks: (Explain alternative procedures here or in a separate re				
VEGETATION - Use scientific names of plants.				
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet	
1			Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
3.			Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
5.	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		Total Gover	Prevalence Index worksheet:	
1. 2.			Total % Cover of: Multip	oly by:
2. 3.			OBL species 0 x1 =	0
4			FACW species 50 x1 =	100
5.			FAC species 0 x1 =	0
	0%	= Total Cover	FACU species 65 x1 =	260
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.3	28-ft square (1	L-m²) quadrat)	UPL species 10 x1 =	
1. Bromus inermis, Smooth Brome	60%	yes FACU	Column Totals: 125 x1 =	
2. Phalaris arundinacea, Reed Canary Grass	40%	yes FACW	Prevalence Index = B/A =	3.280
3. <u>Urtica dioica</u> , Stinging Nettle	10%	no FACW	Hydrophytic Vegetation Indicators:	
4. <u>undefined</u> , undefined	10%	no UPL	1 - Rapid Test for Hydrophytic Veget	tation
5. <u>Asclepias syriaca</u> , Common Milkweed	5%	no FACU	2 - Dominance Test is > 50%	
6			3 - Prevalence Index is <= 3.0 ¹	
7			4 - Morphological Adaptations ¹ (Prov	vide
8.			supporting data in Remarks or on a	
9. 10.			sheet)	1
10.		= Total Cover	PROBLEMATIC Hydrophytic Vegetat	tion¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		Total Coro.	¹ Indicators of hydric soil and wetland must be present, unless disturbed of	
1			Hydrophytic	
	0%	= Total Cover	Vegetation Present? Yes	No ✓
Remarks: (Include photo numbers here or on a separate sheet.)			1	
Upland veg is wild parsnip				

Depth (inches)	Matrix Color (moist)	04		Redox Feat		Loc ²	Toytur	Domarko
(inches)	Color (moist)		Color (moist)	<u></u> %	_Type ¹		Texture	
0-10	10YR - 3/1	100					SiL	
10-24	10YR - 3/4	95	7.5YR-4/6	5	C	M	SiCL	
Type: C=C	oncentration, D=Dep	letion, RM=R	Reduced Matrix, M	1S=Masked	Sand Grai	 ns. ²	Location: I	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histic E Black F Hydrog Stratifie 2 cm M Deplete Thick E Sandy	of (or Histel) (A1) under Epipedon (A2) under Histi (A3) undefined en Sulfide (A4) and Layers (A5) luck (A10) and Below Dark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (ce (A11)	Sandy Stripp Loam Loam Deple Redo	y Gleyed Meted Matrix x Dark Sur	(S6) (S6) Ilineral (F1) Matrix (F2) (F3) face (F6) Gurface (F7)			Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed of problematic.
	Layer (if observed)					Hyd	Iric Soil P	resent? Yes No ✔
Type: Depth	(inches):					_ ,		
	 (inches): <u></u>							
Depth								
Depth Remarks:								Secondary Indicators (minimum of two required)
Depth Remarks: YDROLO Wetland Hy)GY		; check all that ap	oply)				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface	ody rdrology Indicators cators (minimum of water (A1)		Water-	stained lea	. ,			Surface soil cracks (B6) Drainage patterns (B10)
Depth Remarks: YDROLC Wetland Hy Primary Indi Surface High w.	ordrology Indicators cators (minimum of water (A1) ater table (A2)		Water- Aquati	stained lea c fauna (B	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High w Saturat	ordrology Indicators cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquati True a	stained lea c fauna (B quatic plar	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High w. Saturat Water r	ordrology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquati True a	stained lea c fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indi Surface High was Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living root		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Primary Indi Surface High was Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) odor (C1) heres along uced iron (C	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water-Aquati True a Hydrog Oxidiz	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)		Water- Aquati True a Hydrog Oxidiz Presei Recen	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) odor (C1) heres along aced iron (C	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4)	one required	Water- Aquati True a Hydro Oxidiz Presei Recen	estained lea c fauna (B aquatic plar gen sulfide ed rhizospl nce of redu it iron reduct	nts (B14) odor (C1) heres along aced iron (C ction in tilled the (C7)	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat	order (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5)	one required	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu it iron redu nuck surfac	nts (B14) odor (C1) heres along nced iron (C ction in tiller te (C7) ata (D9)	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	order various (B4) posits (B5) ion visible on aerial by vegetated concaver various (B7)	one required imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu it iron redur nuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along aced iron (C ction in tilled te (C7) ata (D9) Remarks)	living root	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obser	order various (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter drology Indicators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present?	imagery (B7)	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	estained leact c fauna (Bunquatic plan gen sulfide ed rhizosphane of reduit iron reduinuck surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along iced iron (C ction in tiller e (C7) ata (D9) Remarks)	living root 4) d soils (C6	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obsel Surface Wat Water Table Saturation F	order various (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present? Prators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) ion or crust (B4) posits (B5) ion visible on aerial by vegetated concave rvations: ter Present?	imagery (B7) e surface (B8 Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge	estained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of reduct iron reduct surfact e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along aced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living root 4) d soils (C6	es (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Was Water Table Saturation F (includes ca	order various in the content of the	imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydroq — Oxidiz — Preser — Recen — Thin n — Gauge (8) — Other S — No — No —	stained leact c fauna (B. aquatic plan gen sulfide ed rhizosplance of redut iron reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living roof 4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obset Surface Was Water Table Saturation F (includes ca	rdrology Indicators cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave rvations: ter Present? Present? Present? pillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water- Aquati — True a — Hydroq — Oxidiz — Preser — Recen — Thin n — Gauge (8) — Other S — No — No —	stained leact c fauna (B. aquatic plan gen sulfide ed rhizosplance of redut iron reduct iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along uced iron (C ction in tiller te (C7) ata (D9) Remarks) hes): hes):	living roof 4) d soils (C6	ss (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Cc	ounty: Farmi	naton/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power	City/Co			e: MN Sampling Point: cdp22
Investigator(s): Jared Booms	Sect			
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08012				
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	vear?	Y	es , No	
Are Vegetation 🔪 , Soil , or Hydrology Significantly	disturbed?	Δ	re "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?			plain any answers in Remarks.)
		,	•	,
SUMMARY OF FINDINGS - Attach site map showir	ng sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes <u>✓</u> No			ampled Area Wetland?	a. Yes ✔ No
Wetland Hydrology Present? Yes No				
Swale/finger in ag field. Volunteer species, dark soils, and geomorp VEGETATION - Use scientific names of plants.	hic position	points to thi	is depression	n being a seasonally flooded basin.
рини.	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				, 、,
J	0%	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species $0 \times 1 = 0$
3				FACW species 10 x1 = 20
4	. ——			FAC species 0 x1 = 0
5		- Total Co		FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	0%			UPL species0 x1 =0
Equisetum hyemale, Tall Scouring-Rush	5%	yes	FACW	Column Totals: <u>10</u> x1 = <u>20</u> (B)
Salix interior, Sandbar Willow	5%	ves	FACW	Prevalence Index = B/A =2.000
3			171011	Hydrophytic Vegetation Indicators:
4.				
5				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is > 50%
7				✓ 3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
	0%	= Total Co	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sample Point: cdp22

Profile Desc	cription: (Describe Matrix	to the dep		ıment the		r confirm	n the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-6	10YR - 2/1	100	/				SiCL	
6-24	10YR - 2/1	90	7.5YR-4/6	10	C	M	SiCL	
				-				
				-				
·								
							_	-
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masker	d Sand Grain	ns.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
-	l (or Histel) (A1) und	defined	Sand	Gleved N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef			y Redox (S				Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	d Below Dark Surfac	ce (A11)		x Dark Sur	. ,			hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	00)	Redox	x Depressi	ions (F8)			
5 cm M	ucky Peat or Peat (
Restrictive	Layer (if observed)	:						
Type:	<u></u>					_ Hy	dric Soil Pr	esent? Yes <u>✓</u> No
Depth ((inches): <u></u>					_		
İ								
HYDROLO	GY							
Wetland Hy	drology Indicators:	i						Secondary Indicators (minimum of two required)
	cators (minimum of	one require						Surface soil cracks (B6)
	water (A1)			stained lea	` ,			Drainage patterns (B10)
	ater table (A2)			c fauna (B	•			Dry-season water table (C2)
Saturati	narks (B1)			quatic plar	e odor (C1)			Crayfish burrows (C8) ✓ Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	livina roc	nts (C3)	Stunted or stressed plants (D1)
	posits (B3)			•	uced iron (C	-	0.5 (C5)	✓ Geomorphic position (D2)
	at or crust (B4)				iction in tilled	•	6)	FAC-neutral test (D5)
	posits (B5)			nuck surfac		•	,	
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	e surface (E	38) Other	(Explain in	n Remarks)			
Field Obser	vations:							
Surface Wat		Υє	es No 🗸 I	Depth (inc	:hes):			
Water Table		Ye	es No			We	etland Hydro	ology Present? Yes <u>✓</u> No
Saturation P	resent?		es No 🗸 I			_		
(includes ca	pillary fringe)							
Describe Re	corded Data (stream	n gauge, mo	onitoring well, aeria	I photos, p	previous insp	ections),	if available:	
Remarks:								

Project/Site: Lemon Hill	City/Co	unty: <u>Farmington/Olmste</u>	ed County Sampling Date: 2	2024-05-31
Applicant/Owner: Ranger Power		State	: MN Sampling Point: C	dp23
Investigator(s): Jared Booms	Secti	on, Township, Range: <u>S</u>	07 T107N S012W	
Lanform(hillslope, terrace, etc): Footslope		Local relie	ef (concave, convex, none): convex	
Slope(%): <u>3-7</u> Lat: <u>44.08005</u>		Long: -92.31716	Datum: WC	3S 84
Soil Map Unit Name: 312C: Shullsburg silt loam, 6 to 12 p	ercent slopes		NWI classification:	
Are climatic / hydrologic conditions on the site typical for t	his time of year?	Yes , No	(If no, explain in Remarks.)	
Are Vegetation , Soil , or Hydrology	Significantly disturbed?	Are "Normal C	circumstances" present? Yes No	1
Are Vegetation , Soil , or Hydrology	naturally problematic?	(If needed, ex	plain any answers in Remarks.)	<u></u>
SUMMARY OF FINDINGS - Attach site map	snowing sampli	ng point locations	s, transects, important featur	es, etc.
	No	Is the Sampled Area		
	No <u> </u>	within a Wetland?		No
Remarks: (Explain alternative procedures here or in a set Upland data point on foot slope in agriculture field. Tile				
VEGETATION - Use scientific names of pla	ants.			
		Dominant Indicator		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet	
1			Number of Dominant Species That	0 (4)
2			Are OBL, FACW, or FAC:	0 (A)
3. 4.			Total Number of Dominant Species Across All Strata:	<u>0</u> (B)
5.			Percent of Dominant Species That	
	0%	= Total Cover	Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:	
1			Total % Cover of: Mu	ultiply by:
2			OBL species 0 x1 =	0
3.			FACW species0 x1 =	0
4			FAC species 0 x1 =	0
·	0%	= Total Cover	FACU species0 x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.			UPL species0 x1 =	0
1			Column Totals: $0 \times 1 =$	0 (B)
2			Prevalence Index = B/A =	NaN
3			Hydrophytic Vegetation Indicators:	
4			1 - Rapid Test for Hydrophytic Ve	egetation
5			2 - Dominance Test is > 50%	gotation
6			3 - Prevalence Index is <= 3.0 ¹	
7			4 - Morphological Adaptations ¹ (F	Provido
9.			supporting data in Remarks or or	ı a separate
10.			sheet) PROBLEMATIC Hydrophytic Vege	otation ¹ (Evaloin)
	0%	= Total Cover		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetle must be present, unless disturbe	
1.			Hydrophytic	
2		- Total Cover	Vegetation	a Na d
		= Total Cover	Present? Ye	s No
Remarks: (Include photo numbers here or on a separate	e sheet.)			

Sample Point: cdp23

Depth	Matrix		, , ,	edox Feati					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks	
0-45	10YR - 2/1	100	/				SiCL		
Type: C=Cor	ncentration, D=Dep	letion, RM=R	Reduced Matrix, M	 IS=Masked	 I Sand Grai	ns. 2	Location: I	 PL=Pore Lining, M=Matrix.	
lydric Soil Ir	ndicators:							Indicators for Problematic Hydric Soils ³ :	
-	(or Histel) (A1) un	defined	Sandy	y Gleyed M	1atrix (S4)			Coast Prairie Redox (A16)	
Histic Epi	ipedon (A2) undet	ined	Sandy	y Redox (S	55)			Dark Surface (S7)	
Black His	sti (A3) undefined		Stripp	ed Matrix ((S6)			Iron-Manganese Masses (F12)	
Hydroger	Sulfide (A4)		Loam	y Mucky M	lineral (F1)			Very Shallow Dark Surface (TF12)	
Stratified	Layers (A5)		Loam	y Gleyed N	/latrix (F2)			Other (Explain in Remarks)	
2 cm Mu	ck (A10)		Deple	eted Matrix	(F3)			³ Indicators of hydrophytic vegetation ar	nd wetla
Depleted	Below Dark Surfa	ce (A11)	Redo	x Dark Sur	face (F6)			hydrology must be present, unless dis	turbed (
	rk Surface (A12)				Surface (F7)	1		problematic.	
	ucky Mineral (S1) cky Peat or Peat (C2)	Redo	x Depressi	ons (F8)				
	ayer (if observed)								
toothiothe E	ayer (ii observed	,-							
Type:						l Hvd	ric Soil P	resent? Yes	No 🗸
Remarks:	 nches): <u></u> for thick dark surfa	ace, does not	t meet any hydrolo	ogy indicate	ors due to t		ric Soil P	resent? Yes	_ No _
Depth (ir Remarks: Could qualify	for thick dark surfa	ace, does not	t meet any hydrolo	ogy indicate	ors due to t		ric Soil P	resent? Yes	No _
Depth (in Remarks: Could qualify	for thick dark surfa		t meet any hydrolo	ogy indicate	ors due to t		ric Soil P		
Depth (in Remarks: Could qualify	for thick dark surfa	:			ors due to t		ric Soil P	Secondary Indicators (minimum of two require Surface soil cracks (B6)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydicary Indicary	for thick dark surfa	:	; check all that ap				ric Soil P	Secondary Indicators (minimum of two require	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface with the control of the country	for thick dark surface SY rology Indicators ators (minimum of	:	; check all that ap Water-	pply)	aves (B9)		ric Soil P	Secondary Indicators (minimum of two require Surface soil cracks (B6)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface with the control of the country	for thick dark surface For th	:	; check all that ap Water- Aquati	pply) stained lea	aves (B9)		ric Soil P	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indicates Surface verification High water	for thick dark surface For th	:	; check all that ap Water- Aquati True a	oply) estained lea c fauna (B:	aves (B9) 13) ats (B14)		ric Soil P	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydica Surface v High water Saturation Water ma	for thick dark surface For th	:	; check all that ap — Water- — Aquati — True a — Hydrog — Oxidiz	oply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	aves (B9) 13) ats (B14) odor (C1) neres along	ile.		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydica Surface v High water Saturation Water ma	for thick dark surface For th	:	; check all that ap — Water- — Aquati — True a — Hydrog — Oxidiz	oply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl	aves (B9) 13) ots (B14) odor (C1)	ile.		Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface will High water material Sediment Drift depoted Algal materials	for thick dark surface For th	:	; check all that ap Water- Aquati True a Hydroo Oxidiz Preser	oply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu	aves (B9) 13) ats (B14) odor (C1) neres along	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface volume High water manual Sediment Drift depote Algal manual Iron depote the Remarks of the Potential Sediment Drift depote the Remarks of the Potential Sediment Drift depote the Remarks of the Rem	for thick dark surface Frology Indicators ators (minimum of water (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4) posits (B5)	: one required;	; check all that ap — Water- — Aquati — True a — Hydrog — Oxidizon — Preser — Recen — Thin m	oply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	aves (B9) 13) nts (B14) odor (C1) neres along aced iron (C ction in tiller	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (in Remarks: Could qualify YDROLOG Vetland Hydromary Indication Surface v High water material Sediment Drift depote Algal material Iron depote Inundation	for thick dark surface Follogy Indicators ators (minimum of water (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4) posits (B5) n visible on aerial	: one required; imagery (B7)	; check all that ap Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m	oply) -stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron redu e or well da	aves (B9) 13) ots (B14) odor (C1) neres along aced iron (C ction in tiller e (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface v High water material Sediment Drift deport Algal material Iron deport	for thick dark surface Frology Indicators ators (minimum of water (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4) posits (B5)	: one required; imagery (B7)	; check all that ap Water- Aquati True a Hydroq Oxidiz Preser Recen Thin m	oply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	aves (B9) 13) ots (B14) odor (C1) neres along aced iron (C ction in tiller e (C7) ata (D9)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
Depth (in Remarks: Could qualify YDROLOG Wetland Hydromary Indication Surface with High water many Sediment Drift deport Algal many Iron deport Inundation Sparsely Field Observerse	for thick dark surface Frology Indicators ators (minimum of water (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4) posits (B5) n visible on aerial vegetated concaviations:	: one required; imagery (B7) e surface (B8	; check all that ap Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	eply) stained lea c fauna (B: quatic plan gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	aves (B9) 13) odor (C1) neres along iced iron (C ction in tille ie (C7) ita (D9) Remarks)	living root	s (C3)	Secondary Indicators (minimum of two require Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)	
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Project/Site: Lemon Hill	City/Co	unty: <u>Farmi</u>	ngton/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: cdp24
Investigator(s): Jared Booms	Secti	ion, Townsh	ip, Range: S	507 T107N S012W
Lanform(hillslope, terrace, etc): Stream Terrace			Local reli	ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.08024		Long: -92.	.31689	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PEM1B, PSS1B
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y	es 📌 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly Are Vegetation , Soil , or Hydrology naturally pro				Circumstances" present? Yes No plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No			ampled Area Wetland?	Yes <u> </u>
Floodplain forest subject to flooding. VEGETATION - Use scientific names of plants.				
Troo Stratum (Plot cizo:20 ft (0.1 m) radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius) 1. Acer negundo , Ash-Leaf Maple	45%	yes	FAC	
Salix nigra, Black Willow	10%	no	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
3				Total Number of Dominant Species Across All Strata:
5.				Percent of Dominant Species That
	55%	= Total Co	ver	Are OBL, FACW, or FAC: 83.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
Lonicera tatarica, Twinsisters	10%	yes	FACU	Total % Cover of: Multiply by:
2				OBL species NaN x1 = NaN
3				FACW species 25 x1 = 50
4				FAC species65 x1 =195
5	10%	= Total Cov	····	FACU species 10 x1 = 40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Ambrosia trifida, Great Ragweed	10%	yes	FAC	Column Totals: NaN x1 = NaN (B)
Alliaria petiolata, Garlic-Mustard	10%	yes	FAC	Prevalence Index = B/A = NaN
3. Impatiens capensis, Spotted Touch-Me-Not	10%	yes	FACW	Hydrophytic Vegetation Indicators:
4. Phalaris arundinacea, Reed Canary Grass	5%	no	FACW	, , , ,
5. Eutrochium maculatum, Spotted Trumpetweed	undefined%	<u>∕₀ no</u>	OBL	1 - Rapid Test for Hydrophytic Vegetation
6. Parthenocissus quinquefolia, Virginia-Creeper	0%	no	FACU	✓ 2 - Dominance Test is > 50%
7				3 - Prevalence Index is <= 3.0 ¹
8 9	·			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10.				
		= Total Co	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				must be present, unless disturbed or problematic.
Vitis riparia, River-Bank Grape 2.	10%	yes	FACW	Hydrophytic Vegetation
	10%	= Total Cov	ver	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: cdp24

	cription: (Describe Matrix	to the dep		iment the ledox Feat		Commi	tne absend	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-7	10YR - 3/1	100	/				SiL	
7-24	10YR - 3/1	97	7.5YR-4/6	3		M	SiCL	
1 27	1011(3/1		7.511(4/0				SIGE	
				-				-
	-					-		
								-
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grai	ns. ²	Location: Pl	 L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	lefined	Sandy	/ Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undef	ined		y Redox (S				Dark Surface (S7)
	listi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5) luck (A10)			y Gleyed i ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	ed Below Dark Surface	ce (A11)		x Dark Sur	` ,			³ Indicators of hydrophytic vegetation and we hydrology must be present, unless disturbe
	Oark Surface (A12)	,			Surface (F7)			problematic.
Sandy	Mucky Mineral (S1)		Redox	x Depressi	ions (F8)			
5 cm M	lucky Peat or Peat (33)						
Restrictive	Layer (if observed)	:						
Туре:	<u> </u>					Нус	iric Soil Pre	esent? Yes <u>/</u> No
Depth	(inches): <u></u>							
Remarks: Probably me	eets thick dark surfac	ce as well.						
	eets thick dark surfac	ce as well.						
Probably me	ogy							
Probably me	PGY rdrology Indicators:		d: check all that an	pho			-	Secondary Indicators (minimum of two required)
HYDROLO Wetland Hy Primary Indi	OGY rdrology Indicators: cators (minimum of				aves (B9)		-	✓ Surface soil cracks (B6)
HYDROLO Wetland Hy Primary Indi Surface	PGY rdrology Indicators:		Water-	ply) stained lea c fauna (B	, ,		-	· · · · · · · · · · · · · · · · · · ·
HYDROLO Wetland Hy Primary Indi Surface	ordrology Indicators: cators (minimum of exwater (A1) ater table (A2)		Water- Aquatio	stained lea	313)		-	✓ Surface soil cracks (B6) Drainage patterns (B10)
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Probably me HYDROLO Wetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Inundat Sparsel Field Obser Surface Wat Water Table Saturation F (includes ca	redrology Indicators: cators (minimum of executors (minimum of executors) cators (minimum of executors) cators (minimum of executors) cators (Maximum of exe	imagery (B' e surface (E Ye Ye	Water- Aquation	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc Depth (inc	ental part of the second of th	4) d soils (C6	ts (C3)	✓ Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) ✓ Geomorphic position (D2) ✓ FAC-neutral test (D5)

SOIL

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power			State	: MN Sampling Point: Cdp25
Investigator(s): Jared Booms	Sect	tion, Townsh	ip, Range: S	13 T107N S013W
Lanform(hillslope, terrace, etc): Sideslope			Local relie	ef (concave, convex, none): convex
Slope(%): 3-7 Lat: 44.07597		Long: -92.	.32487	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es 🎤 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	a samnli	ina noint	location	s transects important features etc
			. 100411011	s, transcots, important reatures, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No		Is the Sa	ampled Area	1
Wetland Hydrology Present? Yes No		within a	Wetland?	Yes No
Remarks: (Explain alternative procedures here or in a separate repo				
VEGETATION - Use scientific names of plants.				
	Absolute			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. Acer negundo , Ash-Leaf Maple	35%	yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:5 (A)
2. Ulmus americana, American Elm	20%	yes	FACU	
3. Tilia americana, American Basswood	15% 10%	no	<u>FACU</u> FACU	Total Number of Dominant Species Across All Strata: 6 (B)
Quercus alba, Northern White Oak 5.	10%	no	FACU	Percent of Dominant Species That
5	80%	= Total Cov	ver	Are OBL, FACW, or FAC: 83.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0070	Total Co.	• • • • • • • • • • • • • • • • • • • •	Prevalence Index worksheet:
Ribes missourienses, undefined	50%	yes	UPL	
2. Rhamnus cathartica, European Buckthorn	30%	yes	FAC	Total % Cover of: Multiply by:
3				OBL species $0 \times 1 = 0$ FACW species $135 \times 1 = 270$
4				FACW species 135 x1 = 270 FAC species 85 x1 = 255
5				FACU species 25 x1 = 100
	80%	= Total Cov	ver	UPL species 50 x1 = 250
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-		, ,	•	Column Totals: 295 x1 = 875 (B)
1. Impatiens capensis, Spotted Touch-Me-Not	85%	yes	FACW	Prevalence Index = B/A = 2.966
2. Phalaris arundinacea, Reed Canary Grass	30%	yes	FACW	
Hydrophyllum virginianum, Shawnee-Salad Trillium cernuum, Whip-Poor-Will-Flower	<u>10%</u> 5%	no	FAC FAC	Hydrophytic Vegetation Indicators:
5 Mala annala Handad Bloo Valet	F0/	no no	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. Viola sorona, Hooded Blue Violet				✓ 2 - Dominance Test is > 50% .
7.				3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2	0%	= Total Cov	ver	Vegetation Present? Yes _ ✓ No
Demontos (Include whete sumbors have a second to the		TOTAL CO		100
Remarks: (Include photo numbers here or on a separate sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Re	emarks
0-50	10YR - 3/1	100	/		<u> </u>		SiCL		mano
0 00	10111 0/1	100					OIGE		
Type: C=C	C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining, M=Matrix.								
ydric Soil	Indicators:							Indicators for Problemat	ic Hydric Soils ³ :
Histoso	ol (or Histel) (A1) und	defined	Sandy	y Gleyed M	latrix (S4)		•	Coast Prairie Redox (-
Histic E	Epipedon (A2) undef	ined	Sandy	y Redox (S	5)		-	Dark Surface (S7)	7
Black F	Histi (A3) undefined		Stripp	ed Matrix ((S6)		·-	Iron-Manganese Mass	ses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky Mi	ineral (F1)		-	Very Shallow Dark Su	ırface (TF12)
	ed Layers (A5)			y Gleyed M			-	Other (Explain in Ren	narks)
	luck (A10)			ted Matrix				³ Indicators of hydroph	nytic vegetation and wet
_ '	ed Below Dark Surfa	ce (A11)		x Dark Surf	` '			hydrology must be p problematic.	resent, unless disturbed
	Oark Surface (A12)				Surface (F7)			problemation	
	Mucky Mineral (S1) lucky Peat or Peat (S3)	Kedo	x Depressio	uis (Fo)				
	Layer (if observed)	•							
	-a, c. (c.cc. rca)	y							
IVDE						Hydrid	Soil Pres	sent?	Yes No.
	 (inches): <u></u>					Hydrid	c Soil Pres	sent?	Yes No
Depth emarks:						Hydrid	c Soil Pres	sent?	Yes No
Depth emarks:	OGY					Hydrid			
Depth emarks: 'DROLO Vetland Hy	DGY rdrology Indicators:		check all that an	nh/)		Hydrid		econdary Indicators (minim	num of two required)
Depth emarks: 'DROLO /etland Hy rimary India	OGY vdrology Indicators: icators (minimum of				ives (B9)	Hydrid		econdary Indicators (minim Surface soil cracks (B6	num of two required)
Depth emarks: 'DROLO /etland Hy rimary Indi Surface	DGY rdrology Indicators:		Water-	ply) stained lea c fauna (B1	. ,	Hydrid		econdary Indicators (minim	num of two required))
Depth emarks: DROLC fetland Hy rimary Indi Surface High wa	OGY vdrology Indicators: icators (minimum of		Water-	stained lea	13)	Hydrid		econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10	num of two required))
Depth emarks: DROLC retland Hy rimary Indi Surface High wa Saturat	ordrology Indicators: icators (minimum of e water (A1) ater table (A2)		Water- Aquation True a	stained lea c fauna (B1	13) its (B14)	Hydrid		econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two required))) (C2)
Depth emarks: DROLC Vetland Hy rimary Indi Surface High w Saturat Water r	oddy rdrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3)		Water- Aquatio True a Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) ats (B14) odor (C1)	Hydrid	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two required))) (C2) erial imagery (C9)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High wa Saturat Water r Sedime	order (A1) ater table (A2) ion (A3) marks (B1)		Water- Aquatio True a Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) ats (B14) odor (C1)	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth Temarks: TOROLO Tetland Hy Timary Indi Surface High was Saturat Water r Sedime Drift de	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)		Water- Aquation True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc	nts (B14) odor (C1) neres along ced iron (C4)	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth Temarks: TOROLO Tetland Hy rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	ordrology Indicators: icators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required;	Water- Aquation True and Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface	13) ats (B14) odor (C1) heres along ced iron (C4 ction in tilled	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth emarks: DROLO Vetland Hy rimary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3) nat or crust (B4) posits (B5) tion visible on aerial	one required;	Water- Aquation True and Hydrogon Oxidize Present Recent Thin man	stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth emarks: DROLC Tetland Hy rimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat	ordrology Indicators: icators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	one required;	Water- Aquation True and Hydrogon Oxidize Present Recent Thin man	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surface	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth emarks: //DROLO /etland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser	order variable (A2) in (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial by vegetated concave rvations:	one required; imagery (B7) e surface (B8	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well dat (Explain in	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks)	living roots	<u>Se</u> 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth emarks: /DROLO /etland Hy rimary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser urface Water	pogy Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concavervations: ter Present?	one required; imagery (B7) e surface (B8 Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface or well dat (Explain in	tts (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9) Remarks)	living roots 4) I soils (C6)	Se S	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)
Depth emarks: /DROLC /etland Hy rimary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser urface Water Table	pogy ideators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) ant or crust (B4) posits (B5) tion visible on aerial by vegetated concave iter Present? Present?	one required; imagery (B7) e surface (B8 Yes Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface e or well dan (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6)	Se S	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) nts (D1)
Depth emarks: /DROLC /etland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser urface Water Table aturation F	order of the content	one required; imagery (B7) e surface (B8 Yes Yes	Water- Aquation True and Hydrog Oxidize Present Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan- gen sulfide ed rhizosph nce of reduct t iron reduct nuck surface e or well dan (Explain in Depth (inch	tts (B14) odor (C1) neres along ced iron (C4 ction in tillect e (C7) tta (D9) Remarks) nes): nes):	living roots 4) I soils (C6)	Se S	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)
Depth remarks: DROLC Vetland Hy rimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obset urface Water Table aturation F ncludes ca	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillection e (C7) ta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetlan	Se 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)
Depth emarks: DROLC Vetland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obset vater Table aturation F ncludes ca	order of the content	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc t e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillection e (C7) ta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetlan	Se 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)
Depth emarks: //DROLO /etland Hy rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser urface Water Table aturation F ncludes ca escribe Re	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc cuck surfac e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillection e (C7) ta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetlan	Se 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)
Depth emarks: DROLC letland Hy rimary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse eld Obset lurface Water Table aturation F ncludes ca	order order of the content of the co	imagery (B7) e surface (B8 Yes Yes	Water- Aquation	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc t iron reduc cuck surfac e or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillection e (C7) ta (D9) Remarks) nes): nes):	living roots 4) I soils (C6) Wetlan	Se 	econdary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ac Stunted or stressed pla Geomorphic position (D	num of two required))) (C2) erial imagery (C9) ints (D1)

Project/Site: Lemon Hill	City/Co	ounty: <u>Farmi</u>	ngton/Olmst	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		-	State	: MN Sampling Point: cdp26
Investigator(s): Jared Booms	Sect	ion, Townsh	ip, Range: S	S13 T107N S013W
Lanform(hillslope, terrace, etc): Shoulder			Local reli	ef (concave, convex, none): convex
Slope(%): 3-7 Lat: 44.07601		Long: -92.	.32489	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Y	es 🔎 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(1	f needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ıa samnl	ina noint	location	s transects important features etc
Hydrophytic Vegetation Present? Yes ✓ No	<u> </u>		Toodtion	
Hydric Soil Present? Yes No			ampled Area	
Wetland Hydrology Present? Yes No		within a	Wetland?	Yes <u>✓</u> No
Remarks: (Explain alternative procedures here or in a separate report Data point is located on valley floor specifically on the top of a floor VEGETATION - Use scientific names of plants.				
		Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. Acer negundo , Ash-Leaf Maple	40%	yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2. Ulmus americana, American Elm	20%	yes	FACW	
3. Prunus serotina, Black Cherry			<u>FACU</u>	Total Number of Dominant Species Across All Strata:5 (B)
4				Percent of Dominant Species That
- S	70%	= Total Cov	ver	Are OBL, FACW, or FAC: 80% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. Rhamnus cathartica, European Buckthorn	50%	yes	FAC	
2				
3				FACW species 55 x1 = 110
4				FAC species 100 x1 = 300
5		-		FACU species 65 x1 = 260
	50%	= Total Co		UPL species5 x1 =25
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-π square (1 45%	, ,	FACU	Column Totals: 240 x1 = 710 (B)
Parthenocissus quinquefolia, Virginia-Creeper Urtica dioica, Stinging Nettle	35%	yes yes	FACW	Prevalence Index = B/A =2.958
Lycopus virginicus, Virginia Water-Horehound	15%	no	OBL	Hydrophytic Vegetation Indicators:
Hackelia virginiana, Beggar's-Lice	10%	no	FACU	
5. Viola sororia, Hooded Blue Violet	5%	no	FAC	1 - Rapid Test for Hydrophytic Vegetation
6. <i>undefined</i> , undefined	5%	no	UPL	✓ 2 - Dominance Test is > 50%
7. Geum canadense, White Avens	5%	no	FAC	3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	120%	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2.				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				1
5% upland plant = Ribes Missouri				

Sample Point: cdp26

	cription: (Describe t	to the depth				r confirm t	he abser	nce of indicators.)
Depth	Matrix Calar (maint)			edox Feat		1 2	Tours	Demodia
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	
0-45	10YR - 2/1	100	7.57.00.416				SiCL	
45-50	10YR - 5/1	96	7.5YR-4/6	4	C	M	SiC	
Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, M	 IS=Masked	 I Sand Grai	ns. ² L	ocation: F	PL=Pore Lining, M=Matrix.
ydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) und			y Gleyed M				Coast Prairie Redox (A16)
	Epipedon (A2) undefi	ned	· 	y Redox (S				Dark Surface (S7)
	Histi (A3) undefined			ed Matrix				Iron-Manganese Masses (F12)
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5)			y Gleyed N				Other (Explain in Remarks)
	luck (A10)	(446)		ted Matrix				³ Indicators of hydrophytic vegetation and wetla
	ed Below Dark Surfac	ce (A11)		x Dark Sur	` '			hydrology must be present, unless disturbed of problematic.
	Dark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1) lucky Peat or Peat (S	33)	Redo	x Depressi	ons (F8)			
	Layer (if observed):							
Туре:	<u></u>					Hydr	ic Soil Pi	resent? Yes 🔽 No
Depth	(inches): <u></u>					_		
YDROLO)CV							
	drology Indicators:							Secondary Indicators (minimum of two required)
-	rdrology Indicators: icators (minimum of c	one required:	check all that an	(vlac				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Primary Indi	drology Indicators: icators (minimum of c water (A1)	one required;		oply) estained lea	aves (B9)			
Primary Indi	icators (minimum of c	one required;	Water-	stained lea	` ,			Surface soil cracks (B6) Drainage patterns (B10)
Primary Indi Surface High w	icators (minimum of c e water (A1)	one required;	Water- Aquati		13)			Surface soil cracks (B6)
Primary Indi Surface High wa	icators (minimum of c e water (A1) ater table (A2)	one required;	Water- Aquati True a	stained lea c fauna (B	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Primary Indi Surface High water r	e water (A1) ater table (A2) ion (A3)	one required;	Water- Aquati True a Hydro	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living roots	: (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Primary Indi Surface High water r Sedime	icators (minimum of c e water (A1) ater table (A2) ion (A3) marks (B1)	one required;	Water- Aquati True a Hydroq Oxidiz	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl	13) ats (B14) odor (C1)	•	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Primary Indi Surface High w Saturat Water r Sedime Drift de	icators (minimum of of exwater (A1) atter table (A2) ion (A3) marks (B1) ent deposits (B2)	one required;	Water-Aquati True a Hydro Oxidiz Preser	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	13) ats (B14) odor (C1) neres along	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m	icators (minimum of co e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)	one required;	Water- Aquati True a Hydrog Oxidiz Presei Recen	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) odor (C1) neres along aced iron (Cation in tilled	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m	icators (minimum of content of co		Water- Aquati True a Hydro Oxidiz Presei Recen Thin n	estained lea c fauna (B equatic plar gen sulfide ed rhizospl nce of redu t iron redu	ats (B14) odor (C1) neres along iced iron (Ci ction in tilled	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal manual	icators (minimum of content of co	magery (B7)	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	nts (B14) odor (C1) neres along need iron (Cition in tilled te (C7) ta (D9)	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	icators (minimum of content of co	magery (B7)	Water- Aquati True a Hydro Oxidiz Preser Recen Thin n Gauge	stained lea c fauna (B. quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) odor (C1) neres along need iron (Cition in tilled te (C7) ta (D9)	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High w Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	icators (minimum of content of co	magery (B7) surface (B8) Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) odor (C1) neres along iced iron (Cition in tilled ie (C7) ita (D9) Remarks)	4)	. ,	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal manual Iron de Inundat Sparse Field Obser Kuter Table	icators (minimum of content of the water (A1) attention (A2) attention (A3) marks (B1) and deposits (B2) aposits (B3) and or crust (B4) aposits (B5) attention visible on aerial in the water of the wat	magery (B7) surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redutiron reduction with surfaction well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along nced iron (C ction in tiller te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Primary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Surface Water Table Saturation F	icators (minimum of content of the water (A1) attention (A2) ion (A3) marks (B1) and deposits (B2) apposits (B3) and or crust (B4) apposits (B5) attention visible on aerial in the water of the water o	magery (B7) surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin n Gauge Other	stained leact fauna (B. aquatic plan gen sulfide ed rhizosplance of redutiron reduction with surfaction well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along nced iron (C ction in tiller te (C7) tta (D9) Remarks) nes): nes):	4) d soils (C6)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Sield Obser Surface Water Table Saturation F Includes ca	icators (minimum of contents) e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the contents ly vegetated concave rvations: ter Present? Present? Present? Present? Present?	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leact c fauna (B. aquatic plan gen sulfide ed rhizosphace of redut iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (Cition in tilled te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) Wetla	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse wiface Water Table atturation F ncludes ca escribe Re	icators (minimum of contents) e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the contents ly vegetated concave rvations: ter Present? Present? Present? Present? Present?	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leact c fauna (B. aquatic plan gen sulfide ed rhizosphace of redut iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (Cition in tilled te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) Wetla	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse ield Obser aurface Water Table saturation F ncludes ca	icators (minimum of contents) e water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) ition visible on aerial in the contents ly vegetated concave rvations: ter Present? Present? Present? Present? Present?	magery (B7) surface (B8) Yes Yes Yes	Water- Aquati True a Hydroq Oxidiz Preser Recen Thin n Gauge Other No No No	stained leact c fauna (B. aquatic plan gen sulfide ed rhizosphace of redut iron reduct surface or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) neres along iced iron (Cition in tilled te (C7) ita (D9) Remarks) nes): nes):	4) d soils (C6) Wetla	and Hydr	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	ounty: Farmii	ngton/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power		· ,		:: MN Sampling Point: cdp27
Investigator(s): Jared Booms	Sect	ion. Townsh		
				ef (concave, convex, none): convex
Slope(%): <u>8-15</u> Lat: 44.07712			 '	Datum: WGS 84
Soil Map Unit Name: 251F: Marlean silty clay loam, 25 to 40 percent s		_		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es , No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally prol	blematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showing	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sa	ampled Area	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No			Wetland?	Yes No _ -/ _
Remarks: (Explain alternative procedures here or in a separate repo				
Upland data point on steep side slope above sidehill seep VEGETATION - Use scientific names of plants.				
VEGETATION COS SOICHAING HAINES OF PIANES	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1. <u>Tilia americana</u> , American Basswood	45%	yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2. Ulmus americana, American Elm	15%	no	FACW	
3. Prunus serotina, Black Cherry	10%	no	FACU	Total Number of Dominant Species Across All Strata: 6 (B)
Juglans nigra, Black Walnut Acer negundo , Ash-Leaf Maple	<u>10%</u> 5%	no no	<u>FACU</u> FAC	Percent of Dominant Species That
3. Acer negunuo , Asir-Leai Mapie	85%	= Total Cov		Are OBL, FACW, or FAC: 33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0570	- 10tai Cov	VCI	Prevalence Index worksheet:
Prunus serotina, Black Cherry	15%	yes	FACU	
2. undefined, undefined		yes	UPL	Total % Cover of:Multiply by:
3. Rhamnus cathartica, European Buckthorn		yes	FAC	OBL species 0 x1 = 0 FACW species 40 x1 = 80
4.				FACW species $\frac{40}{5}$ x1 = $\frac{80}{5}$ FAC species $\frac{45}{5}$ x1 = $\frac{135}{5}$
5				FACU species 80 x1 = 320
	40%	= Total Cov	ver	UPL species 45 x1 = 225
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	it)	Column Totals: 210 x1 = 760 (B)
1. <u>undefined</u> , undefined	30%	yes	UPL	Prevalence Index = B/A = 3.619
2. Impatiens capensis, Spotted Touch-Me-Not	25%	yes	FACW	
3. Hydrophyllum virginianum, Shawnee-Salad		no	FAC FAC	Hydrophytic Vegetation Indicators:
4. Trillium cernuum, Whip-Poor-Will-Flower				1 - Rapid Test for Hydrophytic Vegetation
5. Rhamnus cathartica, European Buckthorn		no	FAC	2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9.				sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	85%	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2				Vegetation
	0%	= Total Cov	ver	Present? Yes No _ ✓
Remarks: (Include photo numbers here or on a separate sheet.) Upland species that is blank = ribies missourienses				

Sample Point: cdp27

Profile Description: (Describe to the depth needed to document the indicator or contemporary (inches) Depth (inches) Color (moist) % Color (moist) % Type¹ Log (inches) 10YR - 3/1 100/	Texture SiCL SiCL 2 Location: PL=	Remarks
Depth (inches) Color (moist) Modern Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Setrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	2Location: PL=	=Pore Lining, M=Matrix. ndicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators: Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Sandy Redox (S5) Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Cerm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Set Mucky Mineral (S1) Set Mucky Peat or Peat (S3) Type: Rock/ gravel bar Depth (inches): 13	2Location: PL=	=Pore Lining, M=Matrix. ndicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
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Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Redox (S5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	r - - - -	ndicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Redox (S5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	r - - - -	ndicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Histosol (or Histel) (A1) undefined Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Redox (S5) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Som Mucky Mineral (S1) Som Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	r - - - -	ndicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rendox Dark Surface (F7) Rendox Depleted Dark Surface (F7) Rendox Depressions (F8) Rendox Depressions (F8)	- - - -	Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetle hydrology must be present, unless disturbed
Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) To muck (B10) Bestrictive Layer (if observed): Type: Redox Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8)	Hydric Soil Prese	Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8)	Hydric Soil Prese	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Reck/ gravel bar Depth (inches): 13	- - Hydric Soil Preso	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Set mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	Hydric Soil Preso	³ Indicators of hydrophytic vegetation and wetla hydrology must be present, unless disturbed
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Redox Depressions (F8) Redox Depressions (F8)	Hydric Soil Preso	hydrology must be present, unless disturbed
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	Hydric Soil Preso	
Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	Hydric Soil Prese	·
5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Rock/ gravel bar Depth (inches): 13	Hydric Soil Prese	
Type: Rock/ gravel bar Depth (inches): 13	Hydric Soil Preso	
Depth (inches): 13	Hydric Soil Pres	
		sent? Yes No
Remarks:		
YDROLOGY		
Wetland Hydrology Indicators:	Se	econdary Indicators (minimum of two required) Surface soil cracks (B6)
Primary Indicators (minimum of one required; check all that apply) Surface water (A1) Water-stained leaves (B9)		Drainage patterns (B10)
High water table (A2) Aquatic fauna (B13)		Drainage patterns (B10) Dry-season water table (C2)
Saturation (A3) True aquatic plants (B14)		Crayfish burrows (C8)
Water marks (B1) Hydrogen sulfide odor (C1)	_	Saturation visible on aerial imagery (C9)
Sediment deposits (B2) Oxidized rhizospheres along living	roots (C3)	Stunted or stressed plants (D1)
Drift deposits (B3) Presence of reduced iron (C4)	_	Geomorphic position (D2)
Algal mat or crust (B4) Recent iron reduction in tilled soils	s (C6)	FAC-neutral test (D5)
Iron deposits (B5) Thin muck surface (C7)		
Inundation visible on aerial imagery (B7) Gauge or well data (D9)		
Sparsely vegetated concave surface (B8) Other (Explain in Remarks)		
Field Observations:		
Surface Water Present? YesNo _ ✓ Depth (inches):	Methered Hudrolo	Voc. No.
Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches):	Wetland Hydrolo	ogy Present? Yes No _•
includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:	
	•	
Remarks:		
Tellians.		
No wetland hydrology observed		
No wetland hydrology observed		

Project/Site: Lemon Hill	City/Co	ounty: Farmi	ngton/Olmste	ed County Sampling Date: 2024-05-31
Applicant/Owner: Ranger Power				:: MN Sampling Point: cdp28
Investigator(s): Jared Booms	Sect			
Lanform(hillslope, terrace, etc): Sideslope			Local relie	ef (concave, convex, none): convex
Slope(%): 3-7 Lat: 44.07717		Long: -92.	3253	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled				NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	A	re "Normal C	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			plain any answers in Remarks.)
				
SUMMARY OF FINDINGS - Attach site map showin	g sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes 🗸 No		Is the Sa	ampled Area	
Hydric Soil Present? Yes No Wotland Hydrology Present?			Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate repo				
Side hill seep with fresh wet meadow cover. VEGETATION - Use scientific names of plants.				
·		Dominant		Dominance Test Worksheet
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	
1. 2.				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
3.				Total Number of Dominant Species Across All Strata: 2 (B)
5.				、 ,
	·	= Total Cov	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
3				OBL species0 x1 =0
4				FACW species 140
5.				FAC species0 x1 =0
	0%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	ft square (1	m²) quadra	it)	UPL species0 x1 =0
1. Phalaris arundinacea, Reed Canary Grass	90%	yes	FACW	Column Totals: $\underline{140}$ x1 = $\underline{280}$ (B)
2. Impatiens capensis, Spotted Touch-Me-Not	50%	yes	FACW	Prevalence Index = B/A =2.000
3				Hydrophytic Vegetation Indicators:
4				
5				✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7. 8.				4 - Morphological Adaptations ¹ (Provide
9.	·			supporting data in Remarks or on a separate
10.				sheet)
		= Total Cov	ver	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2.				Hydrophytic
	0%	= Total Cov	ver	Vegetation Present? Yes _ ✓ _ No
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: cdp28

Depth	Matrix			Redox Feat			-			
(inches)	Color (moist)	<u></u> %	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	-	emarks	
0-24	10YR - 2/1	100	/				Mucky Loam			
Гуре: С=С	oncentration, D=Dep	letion, RM=R	Reduced Matrix, N	//S=Masked	d Sand Grain	ns. ²	Location: I	PL=Pore Lining, M=Matrix.		
Histoso Histic E Black H Hydrogo Stratifie 2 cm M Deplete Thick D Sandy I	Indicators: I (or Histel) (A1) under ipipedon (A2) undefined en Sulfide (A4) dd Layers (A5) luck (A10) ed Below Dark Surfar oark Surface (A12) Mucky Mineral (S1) lucky Peat or Peat (Store in Indicators in Indicat	ce (A11)	Sand Stripp Loan Loan Deple Redo	ny Gleyed Meted Matrix ox Dark Sur	(S6) (S6) Mineral (F1) Matrix (F2) (F3) (F3) Fface (F6) Gurface (F7)			Indicators for Problemati Coast Prairie Redox (Dark Surface (S7) Iron-Manganese Mass Very Shallow Dark Su Other (Explain in Ren Indicators of hydroph hydrology must be p problematic.	(A16) ses (F12) urface (TF12) narks) nytic vegetation	and wetla
estrictive	Layer (if observed)									
Type: Depth	 (inches): <u></u>					Hyd	dric Soil P	resent?	Yes <u> </u>	<u>∕</u> No
Type: Depth (emarks:	 (inches):					Hyd	dric Soil P	resent?	Yes	No
Type: Depth of the property of	(inches): OGY drology Indicators:					Hyd	dric Soil P	Secondary Indicators (minim	num of two req	
Type: Depth demarks: 'DROLO Vetland Hy rimary Indi	(inches): OGY Idrology Indicators: cators (minimum of			1 //	ayos (PO)	Hyc	dric Soil P	Secondary Indicators (minim Surface soil cracks (B6	num of two req	
Type: Depth temarks: 'DROLO Vetland Hy rimary Indi Surface	OGY Idrology Indicators: cators (minimum of erwater (A1)		<u></u> ✓ Water	-stained lea	. ,	Hyd	dric Soil P	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10	num of two req)	
Type: Depth Depth Topic depth Dept	inches): OGY Idrology Indicators: cators (minimum of exactors (A1) ater table (A2)		_ ✓ Water Aquat	-stained lea ic fauna (B	13)	Hyd	dric Soil P	Secondary Indicators (minim Surface soil cracks (B6	num of two req)	
Type: Depth Pemarks: POROLO Vetland Hy Primary Indi Surface High wa Saturati	inches): OGY Idrology Indicators: cators (minimum of exactors (A1) ater table (A2)		✓ Water Aquat True a	-stained lea	13) nts (B14)	Hyc	dric Soil P	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table	num of two req))) (C2)	uired)
Type: Depth Permarks: TOROLO Vetland Hy Primary Indi Surface High wa Saturati Water r	e water (A1) ater table (A2) ion (A3)		✓ Water Aquat True a	-stained lea ic fauna (B aquatic plar gen sulfide	13) nts (B14)			Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8)	num of two req)) (C2) erial imagery (C	uired)
Type: Depth Permarks: **Common Common Comm	inches): OGY Odrology Indicators: cators (minimum of exators (A1) atter table (A2) ion (A3) marks (B1)		✓ Water Aquat True a Hydro	-stained lea ic fauna (B aquatic plar gen sulfide ced rhizospl	13) nts (B14) odor (C1)	living roo		Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae	num of two req)) (C2) erial imagery (Cants (D1)	uired)
Type: Depth Cemarks: CDROLO Vetland Hy rimary Indi Surface High wa Saturati Water r Sedime Drift de	oGY drology Indicators: exators (minimum of exators (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2)		✓ Water Aquat True a Hydro Oxidiz Prese	-stained lea ic fauna (B aquatic plar gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living roo	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla	num of two req)) (C2) erial imagery (Cants (D1)	uired)
Type: Depth	inches): OGY Idrology Indicators: cators (minimum of exators	one required	✓ Water Aquat True a Hydro Oxidiz Prese Recer	-stained leadic fauna (Baquatic planagen sulfide ted rhizosplanagen fredunt iron redunuck surfacentics factorial fac	13) hts (B14) c odor (C1) heres along uced iron (C- ction in tilled	living roo	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two req)) (C2) erial imagery (Cants (D1)	uired)
Type: Depth	inches): drology Indicators: cators (minimum of exators (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4)	one required;	Water Aquat True a Hydro Oxidiz Prese Recer Thin r	-stained leadic fauna (Beaquatic pland gen sulfide red rhizosplande of redunt iron redu	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9)	living roo	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two req)) (C2) erial imagery (Cants (D1)	uired)
Type: Depth	inches): OGY Idrology Indicators: cators (minimum of exators In the control of the control of exators (Minimum of exators) In the control of exators (Minimum of exators (Minimum of exators) In the control	one required; imagery (B7) e surface (B8	Aquat Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	-stained lea ic fauna (B aquatic plar gen sulfide ted rhizospl nce of redu nt iron redu nuck surfac e or well da (Explain in	nts (B14) redor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks)	living roo	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two req)) (C2) erial imagery (Cants (D1)	uired)
Type: Depth	inches): OGY Idrology Indicators: cators (minimum of exators) Idrology Indicators: Indicators (Minimum of exators (Mi	one required; imagery (B7) e surface (B8	✓ Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge Other	-stained lea ic fauna (B aquatic plar gen sulfide red rhizospl nce of redu nuck surfac e or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) ata (D9) Remarks) hes): 1	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two req)) (C2) erial imagery (C ints (D1)	uired)
Type: Depth	inches): OGY Idrology Indicators: cators (minimum of exators	imagery (B7) e surface (B8) Yes	✓ Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge Other	-stained lea ic fauna (B aquatic plar gen sulfide ted rhizospl nce of redu nt iron redu nuck surfac e or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (Citon in tilled ce (C7) hata (D9) Remarks) hes): 1 hes): 0	living roo 4) d soils (Co	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D	num of two req)) (C2) erial imagery (C ints (D1)	uired)
Type: Depth	inches): OGY Idrology Indicators: cators (minimum of exators	imagery (B7) e surface (B8) Yes Yes		-stained leadic fauna (Baquatic planagen sulfide ted rhizosplanagen feduration redunt iron redunuck surface or well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (Citor in tilled the (C7) hata (D9) hess): 1 hess): 0 hess): 0	living roo 4) d soils (Cd	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two req)) (C2) erial imagery (C ints (D1)	uired)
Type: Depth	inches): OGY Indrology Indicators: cators (minimum of exater (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vertions: ter Present? Present? present? present?	imagery (B7) e surface (B8) Yes Yes		-stained leadic fauna (Baquatic planagen sulfide ted rhizosplanagen feduration redunt iron redunuck surface or well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (Citor in tilled the (C7) hata (D9) hess): 1 hess): 0 hess): 0	living roo 4) d soils (Cd	ts (C3)	Secondary Indicators (minim Surface soil cracks (B6 Drainage patterns (B10 Dry-season water table Crayfish burrows (C8) Saturation visible on ae Stunted or stressed pla Geomorphic position (D FAC-neutral test (D5)	num of two req)) (C2) erial imagery (C ints (D1)	uired)

Project/Site: Lemon Hill	Citv/Co	unty: Enid/Olmsted Cou	inty	Sampling Date: 2024-06-1	19
Applicant/Owner: Ranger Power		-		Sampling Point: ddp01	-
Investigator(s): Maddie Humphrey					
Lanform(hillslope, terrace, etc): Sideslope		Local reli			
Slope(%): 3-7 Lat: 44.08603		Long: -92.32197	•	Datum: WGS 84	
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classific	ation: PFO1B	
Are climatic / hydrologic conditions on the site typical for the				in in Remarks.)	
Are Vegetation , Soil , or Hydrology S	Significantly disturbed?		——— Circumstances" prese	ent? Yes No	
Are Vegetation , Soil , or Hydrology n	,		plain any answers in	<u></u>	
	, ,	,		,	
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point location	s, transects, in	nportant features, etc	;_
Hydrophytic Vegetation Present? Yes	✓ No				
	No <u>✓</u>	Is the Sampled Area within a Wetland?	a	Yes N	No 🗸
Wetland Hydrology Present? Yes	No <u> </u>				
Remarks: (Explain alternative procedures here or in a se					
Sideslope in mapped NWI. Upslope ddp02 approximately	/ 2-leet.				
VEGETATION - Use scientific names of pla	nts.		1		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test \	Worksheet	
1	· 	·			
2.			Number of Domina Are OBL, FACW, of		<u>2</u> (A)
3.			Total Number of D	ominant Species	
4			Across All Strata:		<u>2</u> (B)
5			Percent of Domina	ant Species That	
	0%	= Total Cover	Are OBL, FACW, o	or FAC:100	<u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index	worksheet:	
1.			Total % Cov	ver of: Multiply by:	<u>. </u>
2.			OBL species	<u> </u>	0
3. 4.			FACW species	<u>40</u> x1 =	80
5.			FAC species	<u>60</u> x1 = <u> </u>	180
S	0%	= Total Cover	FACU species	<u>10</u> x1 =	40
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.2	28- by 3.28-ft square (1	-m²) quadrat)	UPL species	<u>30</u> x1 = <u> </u>	<u>150</u>
Ambrosia trifida, Great Ragweed	60%	yes FAC	Column Totals:	<u>140</u> x1 = <u>4</u>	<u>450</u> (B)
2. Phalaris arundinacea, Reed Canary Grass	40%	yes FACW	Prevale	ence Index = B/A = 3.214	
3. undefined, Parsnip	15%	no UPL	Hydrophytic Vege	etation Indicators:	
4. Hackelia micrantha, Blue Stickseed	15%	no UPL	1 Danid Too	st for Hydrophytic Vegetation	
5. Bromus inermis, Smooth Brome	10%	no FACU	✓ 2 - Dominano	, , , ,	
6			· 	ce Index is <= 3.0 ¹	
7					
8			4 - Morpholog supporting da	gical Adaptations ¹ (Provide ata in Remarks or on a separa	ate
9			sheet)	•	
10.			PROBLEMAT	TC Hydrophytic Vegetation ¹ (Explain)
	140%	= Total Cover	¹ Indicators of	hydric soil and wetland hydro	ology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be pres	sent, unless disturbed or prob	olematic.
1			Hydrophytic		
2		= Total Cover	Vegetation Present?	Yes <u>✓</u> N	Nο
Barradas (habada ghata garabasa hara a		10101 00101	T TOSCILL.		
Remarks: (Include photo numbers here or on a separate	sheet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Rema	arke	
0-18	10YR - 2/1	100	/		Турс		SiL		arks .	
0-10	1011(- 2/1	100					- JIL			
								-		
								-		
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	Sand Grain	ns. ² L	ocation: Pl	 _=Pore Lining, M=Matrix.		
lydric Soil	Indicators:							Indicators for Problematic I	Hydric Soils ³ .	
-	ol (or Histel) (A1) und	defined	Sandy	Gleyed M	atrix (S4)			Coast Prairie Redox (A1		
Histic E	pipedon (A2) undefi	ined	Sandy	Redox (S	5)			Dark Surface (S7)	,	
Black F	Histi (A3) undefined		Stripp	ed Matrix (S6)			Iron-Manganese Masses	s (F12)	
Hydrog	en Sulfide (A4)		Loamy	y Mucky Mi	ineral (F1)			Very Shallow Dark Surfa	ice (TF12)	
	ed Layers (A5)			y Gleyed M	` '			Other (Explain in Remar	ks)	
	luck (A10)			ted Matrix				³ Indicators of hydrophyti	c vegetation an	nd wetlan
	ed Below Dark Surface	ce (A11)		Coark Surf	` ,			hydrology must be pres problematic.	sent, unless dis	turbed o
	Dark Surface (A12)				urface (F7)			problematic.		
	Mucky Mineral (S1) lucky Peat or Peat (S	23)	Redox	c Depressio	ons (F8)					
	• • • • • •									
Type:	Layer (if observed)	•				Hydri	ic Soil Pre	scont?	Yes	No. 🗸
						_ Hyun	ic Juli Fie	Sent:	163	110 _ •
Remarks:	(inches): <u></u> n-hydric due to lack (of hydrology.								
Remarks: Assume nor	n-hydric due to lack o	of hydrology.				_				
Remarks: sssume nor	n-hydric due to lack o					_		Secondary Indicators (minimum	n of two require	2d)
Remarks: Assume nor ADROLO Vetland Hy	n-hydric due to lack o		; check all that ap	oly)			<u>§</u>	Secondary Indicators (minimun Surface soil cracks (B6)	n of two require	ed)
Remarks: Assume nor /DROLO Vetland Hy Primary India	n-hydric due to lack o			ply) stained lea	ves (B9)		9		n of two require	ed)
Pemarks: ASSUME nor ASSUME N	DGY vdrology Indicators:		Water-s			_	<u>S</u>	Surface soil cracks (B6)	·	ed)
Perimary India Surface High was	DGY rdrology Indicators: icators (minimum of example)		Water-s	stained lea	L3)	_	<u>§</u>	Surface soil cracks (B6) Drainage patterns (B10)	·	ed)
Commarks: CONTROLO Vetland Hy Primary Indi Surface High wa Saturat Water r	n-hydric due to lack of the control		Water-s Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	ts (B14) odor (C1)		= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria	c2) Il imagery (C9)	ed)
Primary Indi Surface High was Saturat Water r Sedime	n-hydric due to lack of the hydric due to la		Water-s Aquatic True ac Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	ts (B14) odor (C1) neres along	•	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	c2) Il imagery (C9)	ed)
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/DROLO Vetland Hy Primary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de	pogy rdrology Indicators: icators (minimum of example (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) mat or crust (B4) posits (B5)	one required;	Water-t Aquation True according Oxidize Present Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduc t iron reduc auck surface	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	4)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	c2) Il imagery (C9)	ed)
/DROLC Vetland Hy Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat	n-hydric due to lack of the control	one required	Water-t Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduc t iron reduc uck surface or well da	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	4)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	c2) Il imagery (C9)	ed)
Primary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse	n-hydric due to lack of the control	one required	Water-t Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduc t iron reduc auck surface	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	4)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	c2) Il imagery (C9)	ed)
/DROLO Vetland Hy Primary Indi Surface High was Saturat Water r Sedime Drift de Algal mary Iron de Inundat Sparse	n-hydric due to lack of the control	one required; imagery (B7) e surface (B8	Water-t Aquatic True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduc t iron reduc auck surface or well dat (Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	4)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	c2) Il imagery (C9)	ed)
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Permarks: Assume nor Permary Indi Surface High w. Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparse Field Obsel	n-hydric due to lack of the control	one required; imagery (B7) e surface (B8 Yes	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge 8) — Other (6 — No ✓ [6 — No ✓ [7]	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduct iron reduct or well da (Explain in Depth (inch	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): nes):	4) I soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	22) Il imagery (C9) S (D1)	ed)
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Commarks: Commar	n-hydric due to lack of the control	imagery (B7) e surface (B8) Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduc t iron reduc iuck surface or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tilled e (C7) ta (D9) Remarks) nes): nes):	1) I soils (C6) Wetla	(C3) -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	22) Il imagery (C9) S (D1)	
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Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Co	unty Sampling Date: 2024-06-19
Applicant/Owner: Ranger Power		-	e: MN Sampling Point: ddp02
Investigator(s): Maddie Humphrey			
			ief (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.08599</u>		Long: -92.32186	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classification: PFO1B, R4SBC
Are climatic / hydrologic conditions on the site typical for this time	e of year?	Yes 🗸 N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significa	antly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturall	y problematic?		xplain any answers in Remarks.)
			
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point locatior	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ 🗸	No	La dia Gannala di Anna	
Hydric Soil Present? Yes <u>✓</u>	· · · · · · · · · · · · · · · · · · ·	Is the Sampled Are within a Wetland?	a Yes <u>✓</u> No
Wetland Hydrology Present? Yes <u>✓</u>			
Remarks: (Explain alternative procedures here or in a separate Depressional area adjacent agricultural fields and forested area			
Depressional area adjacent agricultural nelas and lorested area			
VEGETATION - Use scientific names of plants.			
VEGETATION OSC SCIONATIO HARRIES OF PRAIRES	Ahsoluta	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC: 2 (A)
3			Total Number of Dominant Species
4.			Across All Strata:2 (B)
5		- Total Cavar	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species90 x1 =180
5			FAC species30 x1 =90
	0%	= Total Cover	FACU species $10 \text{ x1} = 40$
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by		, , ,	UPL species
Phalaris arundinacea, Reed Canary Grass		yes FACW	Column Totals: $\underline{130}$ x1 = $\underline{310}$ (B)
2. Poa pratensis, Kentucky Blue Grass		<u>yes</u> <u>FAC</u>	Prevalence Index = B/A =2.385
3. Lolium perenne, Perennial Rye Grass		no FACU	Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
5. 6.			_ ✓ 2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	130%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			Lludronhutio
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a separate sheet	.)		

Depth nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR - 2/1	95	10YR-4/6	5	C	M	SiL	
			_		-			
								- -
							-	_
					-	-		_
	·							
pe: C=C	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	Sand Grai	ns. 2	Location: F	L=Pore Lining, M=Matrix.
dric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	efined	Sandy	Gleyed M	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undefi	ned	Sandy	/ Redox (S	65)			Dark Surface (S7)
-	listi (A3) undefined			ed Matrix (-			Iron-Manganese Masses (F12)
_	en Sulfide (A4)			-	lineral (F1)			Very Shallow Dark Surface (TF12)
-	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
-	uck (A10)	(444)		ted Matrix				³ Indicators of hydrophytic vegetation and
	d Below Dark Surfac	e (A11)		CDark Sur				hydrology must be present, unless disturproblematic.
-	ark Surface (A12)				Surface (F7)			problemate.
-	Mucky Mineral (S1) ucky Peat or Peat (S	:2)	Redox	c Depression	ulis (F8)			
-								
	Layer (if observed):							
Type:						Hyd	Iric Soil Pr	esent? Yes <u>✓</u> N
	(inches): <u></u>							
marks:	(inches):							
	(inches): <u></u>					<u> </u>		
	inches): <u></u>					<u> </u>		
	(inches): <u></u>					_		
marks:								Secondary Indicators (minimum of two required)
narks: DROLO	GY	one required	l; check all that ap	ply)				Secondary Indicators (minimum of two required)Surface soil cracks (B6)
PROLO tland Hy nary Indi Surface	drology Indicators: cators (minimum of c	one required	Water-	stained lea	` '			Surface soil cracks (B6) ✓ Drainage patterns (B10)
PROLO tland Hy mary Indi Surface High wa	drology Indicators: cators (minimum of continuous) water (A1) ater table (A2)	one required	Water- Aquatio	stained lea	13)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
PROLO tland Hy mary Indi Surface High wa Saturati	drology Indicators: cators (minimum of control water (A1) ater table (A2) ion (A3)	one required	Water- Aquatio True a	stained lea c fauna (B: quatic plan	13) nts (B14)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
PROLO tland Hy mary Indi Surface High wa Saturati Water r	drology Indicators: cators (minimum of control of the water (A1) ater table (A2) ion (A3) marks (B1)	one required	Water- Aquatio True a Hydrog	stained lea c fauna (B: quatic plan gen sulfide	13) nts (B14) odor (C1)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
PROLO tland Hy nary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of cators (Mini	one required	Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) nts (B14) odor (C1) heres along	•		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
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DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of context) atter table (A2) don (A3) marks (B1) not deposits (B2) posits (B3) at or crust (B4)	one required	Water- Aquation True a Hydrog Oxidizo Preser Recen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron redu	nts (B14) odor (C1) heres along aced iron (C ction in tilled	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
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PROLO Itland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of context) water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4) posits (B5)	magery (B7	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduct	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
DROLO tland Hy mary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of converted (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial if	magery (B7	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph nce of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) heres along nced iron (C ction in tilled te (C7) ata (D9)	4)	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Project/Site: Lemon Hill	Citv/Co	unty: Enid/Olmsted Co	unty Sampling Date: 2024-06-19
Applicant/Owner: Ranger Power		-	re: MN Sampling Point: ddp03
Investigator(s): Maddie Humphrey			
			ief (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08141		Long: -92.31721	Datum: WGS 84
Soil Map Unit Name: 528B: Palms muck, 1 to 6 percent slopes			
Are climatic / hydrologic conditions on the site typical for this tir		Yes , N	
Are Vegetation , Soil , or Hydrology Signif	ficantly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology natura	-		xplain any answers in Remarks.)
<u> </u>	, ,	,	,
SUMMARY OF FINDINGS - Attach site map sh	owing sampli	ng point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No <u></u>		
	No <u> </u>	Is the Sampled Are within a Wetland?	ea. YesNo_✔_
Wetland Hydrology Present? Yes	No <u>-</u>		
Remarks: (Explain alternative procedures here or in a separa	ite report.)		
Sideslope between agriculture fields and wetland			
VEGETATION - Use scientific names of plants	•		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			
2.			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3.			Total Number of Dominant Species
4.			Across All Strata:2 (B)
5			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2			OBL species $0 \times 1 = 0$
3.			FACW species 0 x1 = 0
5.			FAC species0 x1 =0
J		= Total Cover	FACU species 130 x1 = 520
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- b			UPL species15 x1 =75
Bromus inermis, Smooth Brome	90%	yes FACU	Column Totals: <u>145</u> x1 = <u>595</u> (B)
2. Solidago canadensis, Canadian Goldenrod	40%	yes FACU	Prevalence Index = B/A = 4.103
3. undefined, Parsnip	15%	no UPL	Hydrophytic Vegetation Indicators:
4.			Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is > 50%
6			
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	145%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Hydrophytic
2		= Total Cover	Vegetation Present? Yes No _
		= Total Cover	riesent:
Remarks: (Include photo numbers here or on a separate sheet	et.)		

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	R	emarks
0-12	10YR - 2/1	100	/				SiL		emano
0 12	10111 2/1						<u> </u>		
								-	
ype: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix, M	S=Masked	Sand Grain	ns. ² Lo	cation: PL=	Pore Lining, M=Matrix.	
ydric Soil	Indicators:						ı	ndicators for Problema	tic Hydric Soils ³ :
	l (or Histel) (A1) und			Gleyed M			_	Coast Prairie Redox	(A16)
	pipedon (A2) undef	ined		/ Redox (S	-		=	Dark Surface (S7)	
	listi (A3) undefined			ed Matrix (-	Iron-Manganese Mas	` ,
_ ′ °	en Sulfide (A4) ed Layers (A5)			y Mucky Mi y Gleyed M			-	Very Shallow Dark S	
	luck (A10)			ted Matrix			-	Other (Explain in Rer	*
	ed Below Dark Surfa	ce (A11)		x Dark Surf				Indicators of hydrop	hytic vegetation and wet present, unless disturbed
	ark Surface (A12)	,			urface (F7)			problematic.	
Sandy	Mucky Mineral (S1)		Redo	x Depressio	ons (F8)				
5 cm M	lucky Peat or Peat (S3)							
estrictive	Layer (if observed)):							
_									
Type:	<u></u>					Hydrid	Soil Pres	sent?	Yes No _
Depth	 (inches): <u></u>					Hydrid	c Soil Pres	sent?	Yes No _
Depth	<u></u> (inches): <u></u>					Hydrid	c Soil Pres	sent?	Yes No _
Depth emarks:	-					Hydrid	c Soil Pres	sent?	Yes No _
Depth emarks: 'DROLO 'etland Hy	OGY rdrology Indicators:					Hydrid		econdary Indicators (minir	num of two required)
Depth emarks: DROLO Vetland Hy rimary Indi	OGY rdrology Indicators: cators (minimum of			. ,,	uoo (PO)	Hydrid		econdary Indicators (minir Surface soil cracks (B6	mum of two required)
Depth emarks: DROLO Vetland Hy rimary Indi Surface	ody rdrology Indicators: cators (minimum of water (A1)		Water-	stained lea	` '	Hydrid		econdary Indicators (minir Surface soil cracks (B6 Drainage patterns (B10	mum of two required) 5)
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Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Co	ounty Sampling Date: 2024-06-19
Applicant/Owner: Ranger Power		-	te: MN Sampling Point: ddp04
Investigator(s): Maddie Humphrey			
			lief (concave, convex, none): none
Slope(%): 3-7 Lat: 44.08142		Long: -92.31709	Datum: WGS 84
Soil Map Unit Name: 528B: Palms muck, 1 to 6 percent slopes			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significa	antly disturbed?		Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally	problematic?		explain any answers in Remarks.)
<u> </u>			
SUMMARY OF FINDINGS - Attach site map show	wing sampli	ng point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u>	No		
Hydric Soil Present? Yes <u>✓</u>		Is the Sampled Ar within a Wetland?	ea Yes ✔ No
Wetland Hydrology Present? Yes <u>✓</u>	No		
Remarks: (Explain alternative procedures here or in a separate Sloped wetland between agriculture fields and stream	report.)		
Sloped wetland between agriculture fleids and stream			
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2.			Are OBL, FACW, or FAC: 2 (A)
3			Total Number of Dominant Species
4			Across All Strata:2 (B)
5			Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2			OBL species0 x1 =0
3. 4.			FACW species 120
5.			FAC species50 x1 =150
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3	3.28-ft square (1-	-m²) quadrat)	UPL species0 x1 =0
1. Phalaris arundinacea, Reed Canary Grass	100%	yes FACW	Column Totals: <u>170</u> x1 = <u>390</u> (B)
2. Equisetum arvense, Field Horsetail	50%	yes FAC	Prevalence Index = B/A = <u>2.294</u>
3. Urtica dioica, Stinging Nettle	20%	no FACW	Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9			sheet)
10.	170%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology
1			must be present, unless disturbed or problematic.
2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)		
The second secon	,		

	cription: (Describe Matrix	to the dept		ment the edox Feat		r confirr	n the abse	ence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Textur	e Remarks
							Mucky	v
0-12	10YR - 2/1	98	7.5YR-4/4	2	C	PL	Loam	
							<u> </u>	
					·	'		
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Grai	ns.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
	ol (or Histel) (A1) und			-	/atrix (S4)			Coast Prairie Redox (A16)
· 	Epipedon (A2) undef	ined		/ Redox (S	•			Dark Surface (S7)
	Histi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	gen Sulfide (A4)				fineral (F1)			Very Shallow Dark Surface (TF12)
	ed Layers (A5)				Matrix (F2)			Other (Explain in Remarks)
	Muck (A10)	00 (111)		ted Matrix ‹ Dark Sur	` '			³ Indicators of hydrophytic vegetation and wetland
	ed Below Dark Surfa Dark Surface (A12)	ce (AII)			Surface (F7)			hydrology must be present, unless disturbed or problematic.
	Mucky Mineral (S1)			C Depressi				·
	Mucky Peat or Peat (S3)	11646/	СВоргосов	0110 (1 0)			
	Layer (if observed)	-						
Туре:	<u></u>	•				Ну	dric Soil F	Present? Yes <u>✓</u> No
Depth	(inches):							
HYDROLC	OGY							
_	drology Indicators							Secondary Indicators (minimum of two required)
	icators (minimum of	one required		, , ,	(DO)			Surface soil cracks (B6)
	e water (A1) rater table (A2)			stained lea c fauna (B	, ,			✓ Drainage patterns (B10) Dry-season water table (C2)
	tion (A3)		 ·	quatic plar	,			Crayfish burrows (C8)
	marks (B1)				odor (C1)			Saturation visible on aerial imagery (C9)
	ent deposits (B2)				heres along	living ro	ots (C3)	Stunted or stressed plants (D1)
	eposits (B3)				ced iron (C	_	,	Geomorphic position (D2)
Algal m	nat or crust (B4)		Recen	t iron redu	ction in tille	d soils (C	26)	✓ FAC-neutral test (D5)
Iron de	eposits (B5)		<u></u> Thin m	uck surfac	ce (C7)			
Inunda	tion visible on aerial	imagery (B7	7) Gauge	or well da	ata (D9)			
Sparse	ly vegetated concave	e surface (B	8) Other	(Explain in	Remarks)			
Field Obse	rvations:							
	ter Present?		es No _ 🗸 _					
Water Table			es No			We	etland Hyd	rology Present? Yes _ ✓ No
Saturation F	Present? apillary fringe)	Ye	es No _ 🗸 _	Depth (inc	nes): <u></u>	-		
	ecorded Data (stream	n dalide mo	nitoring well aeria	l nhotos r	revious insi	nections)	if available	p·
Describe 14	oorded Bata (Stream	ii gaage, iii	micring well, derid	. priotos, p	nevious insp	pediana	, ii availabit	
Remarks:								
. comano.								

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Co	unty	Sampling Date: 20	024-06-19
Applicant/Owner: Ranger Power		Stat			
Investigator(s): Maddie Humphrey					
		Local rel			
Slope(%): <u>3-7</u> Lat: <u>44.08201</u>		Long: -92.31679		Datum: WG	S 84
Soil Map Unit Name: 176: Garwin silty clay loam			NWI classifi	cation: PEM1B	
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes 🗸 N	lo (If no, expla	ain in Remarks.)	
Are Vegetation , Soil , or Hydrology Significar	itly disturbed?	Are "Normal	Circumstances" pres	ent? Yes , No	
Are Vegetation , Soil , or Hydrology naturally	problematic?		xplain any answers i		
			_	_	
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point locatior	ns, transects, ir	nportant feature	es, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> I		Is the Sampled Are			
Hydric Soil Present? Yes I Wetland Hydrology Present? Yes ✓ I		within a Wetland?	a.	Yes_	No <u></u> ✓
Remarks: (Explain alternative procedures here or in a separate resideslope of stream	eport.)				
VEGETATION - Use scientific names of plants.					
· ·	Absolute	Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet	
1			Number of Domin Are OBL, FACW,		<u>3</u> (A)
3.			Total Number of D	Dominant Species	
4			Across All Strata:		<u>3</u> (B)
5		= Total Cover	Percent of Domin Are OBL, FACW,		100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index	x worksheet:	
1			Total % Co	ver of: Mul	Itiply by:
2			OBL species	0 x1 =	
3.			FACW species		
5.			FAC species	50 x1 =	
J	0%	= Total Cover	FACU species	<u> </u>	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.			UPL species	<u> </u>	0
Ambrosia trifida, Great Ragweed		yes FAC	Column Totals:	<u>130</u> x1 =	310 (B)
2. Phalaris arundinacea, Reed Canary Grass	50%	yes FACW	Preval	ence Index = B/A =	2.385
3. Urtica dioica, Stinging Nettle	30%	yes FACW	Hydrophytic Veg	etation Indicators:	
4			1 Danid To	est for Hydrophytic Veg	rotation
5			'	ist for Hydrophytic veg ice Test is > 50%	getation
6				ice Index is $\leq 3.0^1$	
7			'		
8.			4 - Morphoid supporting d	ogical Adaptations ¹ (Pr lata in Remarks or on	rovide a separate
9.			sheet)		
10		= Total Cover	PROBLEMA	TIC Hydrophytic Vege	tation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	130%	- Iolai Covei		f hydric soil and wetla esent, unless disturbed	
1			Hydrophytic		
2		Total Course	Vegetation	V	d. No
		= Total Cover	Present?	Yes	s No
Remarks: (Include photo numbers here or on a separate sheet.)					

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-22	10YR - 2/1	100	/				SiL	
22-35	5Y - 6/3	40	10YR-5/8	20		M	SiL	
22 00	10YR - 2/1	40	/					
	10TK - 2/1	40						
							·	
							·	
						-		
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Grain	ns. 2	Location: P	 L=Pore Lining, M=Matrix.
	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	defined	Sandy	Gleyed N	/latrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	/ Redox (S	S5)			Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loamy	y Mucky M	1ineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and w
Deplete	d Below Dark Surfa	ce (A11)	Redox	Coark Sur	face (F6)			hydrology must be present, unless disturb
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	00)	Redox	c Depressi	ons (F8)			
5 cm M	ucky Peat or Peat (53)						
Restrictive	Layer (if observed))=						
Type:	 (inches):					Нус	Iric Soil Pre	esent? Yes No
Type:	 (inches):					Hyd	dric Soil Pro	esent? Yes No
Type: Depth	(inches):					Hyd	Iric Soil Pro	esent? Yes No
Type: Depth	GY					Hyd		
Type: Depth Remarks: YDROLO Wetland Hy	GY drology Indicators:		t shock all that an	ah A		Hyd		Secondary Indicators (minimum of two required)
Type: Depth of the control of the co	GY drology Indicators: cators (minimum of				aves (B9)	Hyc		Secondary Indicators (minimum of two required) Surface soil cracks (B6)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface	drology Indicators: cators (minimum of water (A1)		Water-s	stained lea		Hyc		Secondary Indicators (minimum of two required) Surface soil cracks (B6) ✓ Drainage patterns (B10)
Type: Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa	drology Indicators: cators (minimum of water (A1) ater table (A2)		Water-s	stained lea c fauna (B	13)	Hyc		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Torainage patterns (B10) Dry-season water table (C2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water-s Aquatio True ac	stained lea c fauna (B quatic plar	13)	Hyc		Secondary Indicators (minimum of two required) Surface soil cracks (B6) ✓ Drainage patterns (B10)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1)		Water-s Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)		\frac{\sqrt{\sq}\sqrt{\sq}}\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)		Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1)	living roo	\frac{\sqrt{\sq}\sqrt{\sq}}\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)		Water-t Aquatic True ac Hydrog Oxidize Presen	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	13) nts (B14) odor (C1) heres along	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3)		Water-t Aquatic True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	nts (B14) odor (C1) heres along uced iron (Co	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	one required	Water-tAquatioTrue acHydrogOxidizePresenRecentThin m	stained lead c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) hts (B14) codor (C1) heres along uced iron (C- ction in tilled	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	one required	Water-t Aquation True and Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	13) hts (B14) codor (C1) heres along uced iron (C- ction in tilled	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	one required	Water-t Aquation True and Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac or well da	nts (B14) odor (C1) heres along uced iron (Coction in tilled te (C7) ata (D9)	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	imagery (B7 e surface (B	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (stained lead of fauna (B quatic plan gen sulfide ged rhizosplance of redutiron redunuck surfactor well da (Explain in Depth (incl	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) hesh:	living roo		Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave rvations: er Present?	imagery (B7 e surface (B Ye Ye	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (— Oxidize — Oxidize — Oxidize — Presen — Recent — Thin m — Oxidize — Oxidize — Oxidize — Oxidize — Presen — Recent — Thin m — Oxidize — Oxidize	stained lead of fauna (B quatic plan gen sulfide ged rhizosplance of redutiron redunuck surfactor well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron del Inundat Sparsel Field Obser Surface Wat Water Table Saturation P	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	— Water — Aquatic — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge — 88) — Other (stained lead of fauna (B quatic plan gen sulfide ged rhizosplance of redutiron redunuck surfactor well da (Explain in Depth (incl.)	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tilled ce (C7) hata (D9) Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: eer Present? Present? present?	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosplane of redutiron reduction well date (Explain in Depth (include)	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Permarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: er Present? Present?	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosplane of redutiron reduction well date (Explain in Depth (include)	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth Depth Remarks: YDROLO Wetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel Field Obser Surface Wat Water Table Saturation P includes ca Describe Re	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: eer Present? Present? present?	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosplane of redutiron reduction well date (Explain in Depth (include)	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Type: Depth of Depth	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: eer Present? Present? present?	imagery (B7 e surface (B Ye Ye	Water	stained lead of fauna (Bugantic plan sulfide ed rhizosplane of redutiron reduction well date (Explain in Depth (include)	13) nts (B14) nodor (C1) heres along uced iron (Cc tion in tilled te (C7) ata (D9) n Remarks) hes): hes):	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimum of two required) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Coเ	inty Sampling Date: 2024-06-19
Applicant/Owner: Ranger Power		-	e: MN Sampling Point: ddp06
Investigator(s): Maddie Humphrey			
Lanform(hillslope, terrace, etc): Swale		Local reli	ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.05813</u>		Long: -92.33454	Datum: WGS 84
Soil Map Unit Name: M517A: Clyde silty clay loam, 0 to 3 percent	slopes		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significal	ntly disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally	problematic?		plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	ving sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u>		ic the Campled Area	
Hydric Soil Present? Yes		Is the Sampled Area within a Wetland?	Yes No
Wetland Hydrology Present? Yes ✓			
Remarks: (Explain alternative procedures here or in a separate I Swale between agricultural fields.	report.)		
Chao semeen agnoalara notae			
VEGETATION - Use scientific names of plants.			
TEGETHION GOO COLONIANO HAMICO OF PRANCE	Ahsolute	Dominant Indicator	!
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5		- Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species 70
5			FAC species15 x1 =45
	0%	= Total Cover	FACU species 30 x1 = 120
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3	' '	, , ,	UPL species
Phalaris arundinacea, Reed Canary Grass	70%	yes FACW	Column Totals: $115 \times 1 = 305 \times 10^{-1}$ (B) Prevalence Index = B/A = 2.652
2. <u>Dactylis glomerata</u> , Orchard Grass	20%	no FACU	Prevalence index – B/A –
3. Poa pratensis, Kentucky Blue Grass	100/	no FAC	Hydrophytic Vegetation Indicators:
4. Taraxacum officinale, Common Dandelion		no FACU	1 - Rapid Test for Hydrophytic Vegetation
5. 6.			2 - Dominance Test is > 50%
7.			$\underline{\hspace{1cm}}$ 3 - Prevalence Index is <= 3.0^1
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	115%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1			Lhidronhidia
2			Hydrophytic Vegetation
	0%	= Total Cover	Present? Yes _ ✓ _ No
Remarks: (Include photo numbers here or on a separate sheet.)			

Profile Des	cription: (Describe Matrix	to the dep		ument the Redox Feat		r confirm	n the absend	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
				70	туре	LUC		Remains
0-30	10YR - 2/1	100	/		·		SiL	
30-40	10YR - 3/2	80	10YR-2/1	20	<u>C</u>	M	SiL	-
					· ——			
							_	
							_	<u> </u>
¹ Type: C=Co	oncentration, D=Dep	 letion. RM:	 Reduced Matrix. W	 IS=Maske	d Sand Grain		2 Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil		,						•
_	l (or Histel) (A1) und	defined	Sand	v Gleved I	Matrix (S4)			Indicators for Problematic Hydric Soils ³ : Coast Prairie Redox (A16)
	pipedon (A2) undef			y Redox (Dark Surface (S7)
	listi (A3) undefined			ed Matrix	•			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed	Matrix (F2)			Other (Explain in Remarks)
2 cm M	luck (A10)		Deple	eted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	ed Below Dark Surfa	ce (A11)	Redo:	x Dark Su	rface (F6)			hydrology must be present, unless disturbed or
Thick D	ark Surface (A12)		Deple	ted Dark	Surface (F7)			problematic.
Sandy I	Mucky Mineral (S1)		Redo:	x Depress	ions (F8)			
5 cm M	lucky Peat or Peat (S3)						
Restrictive	Layer (if observed)	:						
Type:						Ну	dric Soil Pre	esent? Yes No
Depth	(inches): <u></u>					_		
HYDROLO								
_	drology Indicators:		ud: chock all that an	unly)			<u> </u>	Secondary Indicators (minimum of two required) Surface soil cracks (B6)
_	cators (minimum of water (A1)	one require		stained le	aves (R9)			Drainage patterns (B10)
	ater table (A2)			c fauna (E	` ,		-	Dry-season water table (C2)
Saturati			 '	quatic pla	,		=	Crayfish burrows (C8)
	narks (B1)				e odor (C1)		_	Saturation visible on aerial imagery (C9)
Sedime	nt deposits (B2)		Oxidiz	ed rhizosp	heres along	living roc	ots (C3)	Stunted or stressed plants (D1)
Drift de	posits (B3)		Preser	nce of red	uced iron (C	4)	_	✓ Geomorphic position (D2)
Algal m	at or crust (B4)		Recen	t iron redu	iction in tilled	d soils (C	6)	✓ FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	nuck surfa	ce (C7)			
Inundat	ion visible on aerial	imagery (B		or well d	` ,			
Sparsel	y vegetated concave	e surface (I	38) Other	(Explain ir	n Remarks)			
Field Obser	vations:							
Surface Wat	ter Present?		es No 🔽					
Water Table	Present?		es No			We	etland Hydro	logy Present? Yes _ ✓ No
Saturation P	resent? pillary fringe)	Y	es No	Depth (inc	ches): <u></u>	-		
			onitoring well accid	al photos	orovious inc	octions)	if available:	
Describe Re	ecorded Data (strean	i gauge, iii	ormoring well, aeria	u priotos, _i	previous irist	ections),	ii avaliable.	
D-11 /								
Remarks:								

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Cou	nty	Sampling Date: 20)24-06-19
Applicant/Owner: Ranger Power		State			
Investigator(s): Maddie Humphrey					
Lanform(hillslope, terrace, etc): Sideslope		Local reli			
Slope(%): <u>3-7</u> Lat: <u>44.06945</u>		Long: -92.29806		Datum: WG:	S 84
Soil Map Unit Name: N518B: Lindstrom silt loam, 2 to 6 per	rcent slopes		NWI classific	cation: PEM1B	
Are climatic / hydrologic conditions on the site typical for thi	is time of year?	Yes 🗸 No	(If no, expla	in in Remarks.)	
Are Vegetation , Soil , or Hydrology Si	ignificantly disturbed?		Circumstances" pres	ent? Yes , No	
Are Vegetation , Soil , or Hydrology na	aturally problematic?		plain any answers ir		
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point location	s, transects, in	nportant feature	es, etc.
	No <u> </u>	Is the Sampled Area			
	No	within a Wetland?	i	Yes _	No _ <
	No _ 🗸				
Remarks: (Explain alternative procedures here or in a sep Sideslope in mapped NWI in pasture.	parate report.)				
Classispe in mapped 1444 in pastare.					
VEGETATION - Use scientific names of plan	nte			-	
VEGETATION OSC SCIENTING HAMES OF PIAN		Dominant Indicator			
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet	
1			Number of Domin		2 (1)
2.			Are OBL, FACW,	or FAC:	<u>0</u> (A)
3. 4.			Total Number of D Across All Strata:		<u>3</u> (B)
5		- Total Cover	Percent of Domina		0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover	Prevalence Index		(++-/
1					
2.			Total % Cov	ver of: Mul	tiply by:
3.			OBL species	<u> </u>	
4			FACW species	0 x1 =	
5			FAC species	0 x1 =	
	0%	= Total Cover	FACU species	150 x1 =	
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.2	8- by 3.28-ft square (1-	·m²) quadrat)	UPL species	0 x1 =	0 (7)
Bromus inermis, Smooth Brome		<u>yes</u> <u>FACU</u>	Column Totals:	150 x1 = ence Index = B/A =	600 (B)
Dactylis glomerata, Orchard Grass	30%	<u>yes</u> <u>FACU</u>	Prevaie	ence index = B/A =	4.000
3. Phleum pratense, Common Timothy		yes FACU	Hydrophytic Veg	etation Indicators:	
4. Cirsium arvense, Canadian Thistle	5%	no FACU	1 - Rapid Tes	st for Hydrophytic Veg	getation
-	5%	no FACU	2 - Dominano	ce Test is > 50%	
6.			3 - Prevalend	ce Index is <= 3.0 ¹	
7 8.			4 - Morpholo	gical Adaptations ¹ (Pr	rovide
9.				ata in Remarks or on	
10.				TIC I budus abudis Massa	***************
		= Total Cover		TIC Hydrophytic Veget	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			Indicators of must be pre	f hydric soil and wetlar esent, unless disturbed	nd hydrology d or problematic.
1 2.			Hydrophytic		
		= Total Cover	Vegetation Present?	Yes	No
Domarks: (Include photo numbers here or on a service)			1		
Remarks: (Include photo numbers here or on a separate	sneet.)				

Depth (inches)	Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Rema	rks	
0-12	10YR - 3/2	100	/				SiL			
0 12	10111 0/2						- CIL			
								_		
Type: C=C	oncentration, D=Dep	etion, RM=F	Reduced Matrix, M	S=Masked	Sand Grain	ns. ² L	ocation: Pl	_=Pore Lining, M=Matrix.		
lydric Soil	Indicators:							Indicators for Problematic H	lydric Soils ³ :	
Histoso	l (or Histel) (A1) und	lefined		Gleyed M				Coast Prairie Redox (A16	6)	
	pipedon (A2) undefi	ned		/ Redox (S	-			Dark Surface (S7)		
	listi (A3) undefined			ed Matrix (-			Iron-Manganese Masses		
	en Sulfide (A4)			y Mucky M				Very Shallow Dark Surface		
	d Layers (A5) luck (A10)			y Gleyed M ted Matrix				Other (Explain in Remark	•	
	ed Below Dark Surfac	re (Δ11)		CDark Surf				³ Indicators of hydrophytic hydrology must be pres	vegetation and	d wetlar
	eark Surface (A12)	,C (A11)			Surface (F7)			problematic.	ent, unless disc	uibeu o
	Mucky Mineral (S1)			C Depression						
	lucky Peat or Peat (33)	_		- (- /					
Restrictive	Layer (if observed)	:								
Type:						Hydi	ic Soil Pre	esent?	Yes	No 🗸
Donth										
Depth ((inches): <u></u>									
emarks:	` · · -									
Remarks:	o G Y									-1)
Remarks: /DROLO Vetland Hy	OGY rdrology Indicators:		: check all that ap	olv)			<u>s</u>	Secondary Indicators (minimum Surface soil cracks (B6)	of two required	d)
Pemarks: /DROLO Vetland Hy Primary Indi	o G Y			ply) stained lea	ıves (B9)		<u> </u>	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10)	of two required	d)
Pemarks: /DROLO Vetland Hy Primary Indi Surface	PGY drology Indicators: cators (minimum of o		Water-s		, ,		<u> </u>	Surface soil cracks (B6)	·	d)
Pemarks: /DROLO Vetland Hy Primary Indi Surface	drology Indicators: cators (minimum of of water (A1) ater table (A2)		Water-s	stained lea	13)		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10)	·	d)
Primary Indi Surface High wa Saturati	drology Indicators: cators (minimum of of water (A1) ater table (A2)		Water-s Aquatio True ac	stained lea c fauna (B1	13) its (B14)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	2)	d)
Primary Indi Surface High wa Saturati Water r	rdrology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3)		Water-s Aquatio True ao Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	13) its (B14)	living roots	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	2) imagery (C9)	d)
Primary Indi Surface High wa Saturati Water r Sedime	oGY drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1)		Water-s Aquatio True ao Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	13) ats (B14) odor (C1)	-	= - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (Caccardish burrows (C8) Saturation visible on aerial	2) imagery (C9)	d)
Pemarks: Population of the control	rdrology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) at or crust (B4)		Water-s Aquatio True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of redu t iron reduc	nts (B14) odor (C1) neres along ced iron (C4)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants	2) imagery (C9)	d)
Pemarks: Population of the control	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) aat or crust (B4) posits (B5)	one required	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of redu t iron reduc auck surfac	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	d)
Permarks: Portional Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of of exactors (minimum of of of exactors (minimum of	one required	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduct t iron reduct or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	d)
Permarks: Portional Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) aat or crust (B4) posits (B5)	one required	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of redu t iron reduc auck surfac	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	d)
/DROLO Vetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of ewater (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) nat or crust (B4) posits (B5) ion visible on aerial of the concaver	one required	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc t iron reduc nuck surfac or well da (Explain in	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9) Remarks)	4)	- - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	2) imagery (C9)	d)
Permarks: Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of exactors (minimum of of of exactors (minimum of	imagery (B7) e surface (B8	Water Aquatio — True ac — Hydrog — Oxidize — Presen — Recent — Thin m — Gauge 3) — Other (stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduct t iron reduct auck surfact or well da (Explain in	tts (B14) odor (C1) neres along ced iron (Cation in tilled e (C7) tta (D9) Remarks)	4) I soils (C6)	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)	
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Permarks: POROLO Vetland Hy Primary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel Field Obser Surface Wat Vater Table Saturation P Includes ca	drology Indicators: cators (minimum of of exactions) atter table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial in the concave exactions: ter Present? Present? Present? present?	imagery (B7) e surface (B8) Yes Yes	Water	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph ace of reduct iron reduct or well da (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) neres along ced iron (C4) ction in tillecte (C7) tta (D9) Remarks) nes): nes):	4) I soils (C6) Wetl	(C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)	

Project/Site: Lemon Hill	City/Co	unty: Enid/Olmsted Cou	unty Sampling Date: <u>2024-06-19</u>
Applicant/Owner: Ranger Power			e: MN Sampling Point: ddp08
Investigator(s): Maddie Humphrey	Secti		
Lanform(hillslope, terrace, etc): Depression			ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.06925</u>		Long: -92.29932	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this tim	ne of year?	Yes , N	o (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Signific	cantly disturbed?	Are "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology natural	lly problematic?		xplain any answers in Remarks.)
_			
SUMMARY OF FINDINGS - Attach site map sho	owing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No 🔽	In the Commission Ave.	_
	No	Is the Sampled Area within a Wetland?	Yes No <u> </u>
Wetland Hydrology Present? Yes			
Remarks: (Explain alternative procedures here or in a separate Depression in pasture in mapped NWI.	e report.)		
Depression in pasture in mapped two.			
\			
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
Salix discolor, Pussy Willow	30%		Number of Dominant Species That
2			Are OBL, FACW, or FAC: 2 (A)
3.			Total Number of Dominant Species
4.			Across All Strata: 4 (B)
5			Percent of Dominant Species That
	30%	= Total Cover	Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2			OBL species0 x1 =0
4.			FACW species60 x1 =120
5.			FAC species0 x1 =0
	0%	= Total Cover	FACU species95 x1 =380
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by	3.28-ft square (1	-m²) quadrat)	UPL species0 x1 =0
Phleum pratense, Common Timothy	40%	yes FACU	Column Totals: <u>155</u> x1 = <u>500</u> (B)
2. Bromus inermis, Smooth Brome	30%	yes FACU	Prevalence Index = B/A = 3.226
3. Phalaris arundinacea, Reed Canary Grass	30%	yes FACW	Hydrophytic Vegetation Indicators:
4. <u>Dactylis glomerata</u> , Orchard Grass	10%	no FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Cirsium arvense, Canadian Thistle	10%	no FACU	2 - Dominance Test is > 50%
6. <u>Taraxacum officinale</u> , Common Dandelion	5%	no FACU	3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9			sheet)
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Manda Vine Chatum (Diet sine 20 ft (0.1 m) radius)	125%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1. 2.			Hydrophytic
	0%	= Total Cover	Vegetation Present? Yes No _
Domorkov (Includo pheta primbara hara arraya a			100
Remarks: (Include photo numbers here or on a separate shee	ι.)		

Profile Des	cription: (Describe Matrix	to the dep		iment the		r confir	n the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	– Texture	Remarks
0-6	10YR - 2/1	100	/		Турс		SiL	Nomano
6-12	10YR - 2/1	95	7.5YR-4/4	5		M	SiL	
0-12	101R - 2/1	95	7.51R-4/4			IVI	SIL	
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Maske	d Sand Grain	ns.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	defined	Sandy	/ Gleyed I	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undef	ined	Sandy	Redox (S5)			Dark Surface (S7)
	isti (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5) uck (A10)			y Gieyed ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	d Below Dark Surfa	ce (A11)			rface (F6)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
l — ·	ark Surface (A12)	,			Surface (F7)			problematic.
Sandy I	Mucky Mineral (S1)		Redox	x Depress	ions (F8)			
5 cm M	ucky Peat or Peat (S3)						
Restrictive	Layer (if observed)	:						
Type:						Hy	dric Soil Pr	esent? Yes <u>✓</u> No
Depth	(inches): <u></u>							
HYDROLO								
_	drology Indicators:		di abaak all that an	nh d				Secondary Indicators (minimum of two required) Surface soil cracks (B6)
	cators (minimum of water (A1)	one require			aves (B9)			Drainage patterns (B10)
	ater table (A2)			c fauna (E				Dry-season water table (C2)
Saturati			True a	quatic pla	nts (B14)			Crayfish burrows (C8)
Water r	narks (B1)		Hydro	gen sulfide	e odor (C1)			Saturation visible on aerial imagery (C9)
	nt deposits (B2)			-	heres along	_	ots (C3)	Stunted or stressed plants (D1)
· — ·	posits (B3)				uced iron (C	•	26)	Geomorphic position (D2)
	at or crust (B4) posits (B5)			ı ıron redi nuck surfa	uction in tilled ce (C7)	J SOIIS (C	,0)	FAC-neutral test (D5)
	ion visible on aerial	imagery (B		or well d				
	y vegetated concave				n Remarks)			
Field Obser	vations:							
Surface Wat	er Present?		es No _ 🗸			_		
Water Table			es No			W	etland Hydro	ology Present? Yes No
Saturation P (includes ca	resent? pillary fringe)	Ye	es No	Depth (inc	ches): <u></u>	_		
	corded Data (strean	n gauge, m	onitoring well, aeria	l photos,	previous inst	pections)	, if available:	
	,	0 0 ,	3		'	,		
Remarks:								

Project/Site: Lemon Hill	Citv/Co	untv: Enid/0	Olmsted Cou	nty	Sampling Date: 2	024-06-19
Applicant/Owner: Ranger Power		-			Sampling Point: de	
Investigator(s): Maddie Humphrey						•
				ef (concave, convex,		
Slope(%): 0-2 Lat: 44.0571				•	Datum: WG	SS 84
Soil Map Unit Name: M510A: Maxfield silt loam, 0 to 2 percent sl	opes	- v <u></u>		NWI classific	cation:	
Are climatic / hydrologic conditions on the site typical for this time					in in Remarks.)	
Are Vegetation , Soil , or Hydrology Signification	antly disturbed?			 Circumstances" pres	ent? Yes No	
Are Vegetation , Soil , or Hydrology naturally	-			plain any answers ir	<u></u>	
	, ,	,		,	,	
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point	location	s, transects, in	nportant feature	es, etc.
Hydrophytic Vegetation Present? Yes	No <u>✓</u>					
Hydric Soil Present? Yes			ampled Area Wetland?	ı	Yes	No _ 🗸
Wetland Hydrology Present? Yes <u>✓</u>	No				•	
Remarks: (Explain alternative procedures here or in a separate	report.)					
Swale in agricultural field						
VEGETATION - Use scientific names of plants.						
		Dominant		B	186	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test	Worksheet	
1				Number of Domina Are OBL, FACW,		<u>1</u> (A)
2					_	
3. 4.			-	Total Number of D Across All Strata:	ominant Species	3 (B)
5				Percent of Domina	ant Species That	、 ,
		= Total Co	ver	Are OBL, FACW,		33.333% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index	worksheet	
1.						برجاء استفاد
2.					ver of: Mu	
3				OBL species	0 x1 =	
4				FACW species	30 x1 = 20 x1 =	
5				FACUL species	65 x1 =	
		= Total Co		FACU species UPL species	0 x1 =	0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by		, ,	•	Column Totals:	115 x1 =	380 (B)
1. Bromus inermis, Smooth Brome	30%	yes	FACU		ence Index = B/A =	` ,
Phalaris arundinacea, Reed Canary Grass	30%	yes	FACW			0.004
Lolium perenne, Perennial Rye Grass		yes	FACU	Hydrophytic Veg	etation Indicators:	
4. Ambrosia trifida, Great Ragweed	20%	no	FAC	1 - Rapid Tes	st for Hydrophytic Ve	getation
5. <u>Taraxacum officinale</u> , Common Dandelion	5%	no	FACU	2 - Dominano	ce Test is > 50%	
6				3 - Prevalend	ce Index is <= 3.0 ¹	
				4 - Morpholo	gical Adaptations ¹ (P	Provide
9.				supporting da sheet)	ata in Remarks or on	a separate
10.						1
		= Total Co	ver		TIC Hydrophytic Vege	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of	hydric soil and wetla sent, unless disturbe	and hydrology
1				must be pre	Sent, unless disturbe	d of problematic.
2.				Hydrophytic Vegetation		
	0%	= Total Co	ver	Present?	Yes	s No
Remarks: (Include photo numbers here or on a separate sheet.)					
Tremarks. (medade prioto numbers here of on a separate sheet.	,					

Depth (inches) Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks	
0-9 10YR - 3/2	100	/				SiL		
		,					-	
							-	
						-		
Type: C=Concentration, D=Dep	letion, RM=F	Reduced Matrix, M	S=Masked	Sand Grair	ns. ² I	Location: PL	=Pore Lining, M=Matrix.	
ydric Soil Indicators:							Indicators for Problematic Hydric Soi	ls ³ :
Histosol (or Histel) (A1) un	defined	Sandy	Gleyed M	latrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedon (A2) undef	fined		Redox (S	-			Dark Surface (S7)	
Black Histi (A3) undefined			ed Matrix (-			Iron-Manganese Masses (F12)	
Hydrogen Sulfide (A4)			-	ineral (F1)			Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)			y Gleyed N				Other (Explain in Remarks)	
2 cm Muck (A10)	00 (611)		ted Matrix				³ Indicators of hydrophytic vegetatio	n and wetla
Depleted Below Dark Surfa	ce (AII)		Dark Surf	` '			hydrology must be present, unless problematic.	s aisturbed o
Thick Dark Surface (A12)				Surface (F7)			p	
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox	Depression	JIIS (F0)				
estrictive Layer (if observed)).				Hvd	ric Soil Pre	cent?	No 🗸
					I HVU	IIC SUII FIE	SCIIL:	110
Type: Depth (inches): emarks:								
Depth (inches):								
Depth (inches): <u></u> emarks:	:					<u>s</u>	secondary Indicators (minimum of two re	
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of				(00)		<u>§</u>	econdary Indicators (minimum of two re Surface soil cracks (B6)	
Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators rimary Indicators (minimum ofSurface water (A1)		Water-	stained lea	. ,		<u>s</u>	econdary Indicators (minimum of two red Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inches): emarks: **TDROLOGY **Jetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2)		Water-:	stained lea c fauna (B	13)		S -	secondary Indicators (minimum of two red Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquatio True a	stained lea c fauna (B: quatic plan	13) its (B14)		 - - -	Secondary Indicators (minimum of two red Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	quired)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquatio True ao Hydrog	stained lea c fauna (Bí quatic plan gen sulfide	13) its (B14) odor (C1)		 - - -	Secondary Indicators (minimum of two reductions) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (quired)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquatic True ac Hydrog Oxidize	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph	13) its (B14)	living roots	- s (C3)	Secondary Indicators (minimum of two red Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	quired)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu	13) its (B14) odor (C1) neres along	living roots	s (C3)	iecondary Indicators (minimum of two recondary Indicators (B6) Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (Stunted or stressed plants (D1)	quired)
Depth (inches): emarks: DROLOGY Vetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water Aquatio True ao Hydrog Oxidize Presen Recent	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu	nts (B14) odor (C1) neres along ced iron (C4)	living roots	s (C3)	Secondary Indicators (minimum of two recondary Indicators (minimum of two recondary Indicators (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (Stunted or stressed plants (D1) Geomorphic position (D2)	quired)
Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators rimary Indicators (minimum ofSurface water (A1)High water table (A2)Saturation (A3)Water marks (B1)Sediment deposits (B2)Drift deposits (B3)Algal mat or crust (B4)	one required	Water Aquatio True an Hydrog Oxidize Presen Recent	stained lea c fauna (B. quatic plan gen sulfide ed rhizosph ace of redu t iron reduc	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots	s (C3)	Secondary Indicators (minimum of two recondary Indicators (minimum of two recondary Indicators (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (Stunted or stressed plants (D1) Geomorphic position (D2)	quired)
Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators rimary Indicators (minimum of	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m) Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da	nts (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots	s (C3)	Secondary Indicators (minimum of two recondary Indicators (minimum of two recondary Indicators (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (Stunted or stressed plants (D1) Geomorphic position (D2)	quired)
Depth (inches): emarks: **TDROLOGY **Jetland Hydrology Indicators rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial	one required	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m) Gauge	stained lea c fauna (B: quatic plan gen sulfide ed rhizosph ace of redu t iron reduc uck surfac or well da	tts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) tta (D9)	living roots	s (C3)	Secondary Indicators (minimum of two recondary Indicators (minimum of two recondary Indicators (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (Stunted or stressed plants (D1) Geomorphic position (D2)	quired)
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Project/Site: Lemon Hill	City/Co	ounty: Farmington/Olms	ted County Sampling Date: 2024-06-19
Applicant/Owner: Ranger Power			N Sampling Point: ddp10
Investigator(s): Maddie Humphrey	Sect		
			ief (concave, convex, none): concave
• • • • • • • • • • • • • • • • • • • •			Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam		3	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes , N	lo (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal	Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?		xplain any answers in Remarks.)
		,	,
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		le the Counted Avenue	
Hydric Soil Present? Yes ✓ No		Is the Sampled Are within a Wetland?	Yes <u>✓</u> No
Wetland Hydrology Present? Yes <u>✓</u> No			
Remarks: (Explain alternative procedures here or in a separate report Roadside ditch downslope ddp11 approximately half of a foot.	ort.)		
readility has or a root			
VEGETATION - Use scientific names of plants.			
r =	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:1 (A)
3			Total Number of Dominant Species
4			Across All Strata:1 (B)
5	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3			FACW species 95 x1 = 190
5.			FAC species10 x1 =30
	0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-			UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	95%	yes FACW	Column Totals: 105 x1 = 220 (B)
2. Poa pratensis, Kentucky Blue Grass	10%	no FAC	Prevalence Index = B/A = 2.095
3.			Hydrophytic Vegetation Indicators:
4			 ✓ 1 - Rapid Test for Hydrophytic Vegetation
5			✓ 2 - Dominance Test is > 50%
6			✓ 3 - Prevalence Index is <= 3.0 ¹
7			4 - Morphological Adaptations ¹ (Provide
8			supporting data in Remarks or on a separate
9. 10.			sheet)
10.		= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2.			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes ✓ No
	<u> </u>	TOTAL COVE	165 - 140
Remarks: (Include photo numbers here or on a separate sheet.)			

Sample Point: adp58

Depth	cription: (Describe to Matrix		F						
nches)	Color (moist)	% (Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	R	emarks
rpe: C=Co	oncentration, D=Deple	etion, RM=Re	duced Matrix, N	MS=Masked	Sand Grair	ns. ² Loca	ation: PL=I	Pore Lining, M=Matrix.	
	Indicators:		·					ndicators for Problema	tic Hydric Soils ³ :
_ Histosol	l (or Histel) (A1) unde	fined	Sand	ly Gleyed M	atrix (S4)			Coast Prairie Redox	-
Histic E	pipedon (A2) undefin	ed	Sand	ly Redox (S	5)		_	Dark Surface (S7)	
Black H	isti (A3) undefined		Stripp	ped Matrix (S6)			Iron-Manganese Mas	sses (F12)
_ Hydroge	en Sulfide (A4)		Loam	ny Mucky Mi	ineral (F1)		_	Very Shallow Dark S	urface (TF12)
_	d Layers (A5)			ny Gleyed M			_	Other (Explain in Re	marks)
_	uck (A10)			eted Matrix (³ Indicators of hydrop	hytic vegetation and we
-	d Below Dark Surface	: (A11)		ox Dark Surf				hydrology must be problematic.	present, unless disturbe
	ark Surface (A12)			eted Dark S	, ,			problemade	
	Mucky Mineral (S1) ucky Peat or Peat (S3	3)	Redo	x Depressio	ons (F8)				
trictive	Layer (if observed):								
Type:						Hydric :	Soil Prese	ent?	Yes _ 🗸 No _
Depth (inches): , located in road ROW	√, assume hy	rdric due to pres	sence of hyd	drology indi				Yes <u>✓</u> No _
Depth (V, assume hy	rdric due to pres	sence of hy	drology indi				Yes <u>✓</u> No _
Depth (marks: pit taken	, located in road ROW	V, assume hy	rdric due to pres	sence of hy	drology indi		drophytic v	vegetation.	
Depth (marks: pit taken DROLO tland Hy	GY drology Indicators:				drology indi		drophytic v	vegetation. condary Indicators (mini	mum of two required)
Depth (marks: pit taken DROLO tland Hy mary India	GY drology Indicators:		check all that ap	pply)			drophytic v	vegetation. condary Indicators (mining Surface soil cracks (Br	mum of two required) 6)
Depth (marks: pit taken) DROLO tland Hymany India Surface	GY drology Indicators: cators (minimum of or water (A1)		check all that ap	oply) -stained lea	ves (B9)		drophytic v	vegetation. condary Indicators (mining Surface soil cracks (B1) Drainage patterns (B1)	mum of two required) 6) 0)
Depth (marks: pit taken) DROLO tland Hymary India Surface High wa	GY drology Indicators: cators (minimum of or water (A1) ater table (A2)		check all that ap Water Aquati	pply) stained lea ic fauna (B1	ves (B9)		drophytic v	vegetation. condary Indicators (mining Surface soil cracks (Butterns (B1)) Dry-season water table	mum of two required) 6) 0)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3)		check all that ar Water Aquati True a	pply) stained lea ic fauna (B1 aquatic plant	ves (B9) 13) ts (B14)		drophytic v	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dry-season water table Crayfish burrows (C8)	mum of two required) 6) 0) e (C2)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n	GY drology Indicators: cators (minimum of or water (A1) ater table (A2)		check all that ap Water Aquati True a	pply) -stained lea ic fauna (B1 aquatic plan gen sulfide	ves (B9) L3) ts (B14) odor (C1)		Sec	vegetation. condary Indicators (mining Surface soil cracks (Butterns (B1)) Dry-season water table	mum of two required) 6) 0) e (C2) erial imagery (C9)
Depth (marks: pit taken.) DROLO tland Hymany India Surface High was Saturati Water n Sedimer	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1)		check all that ap Water Aquati True a Hydro Oxidiz	pply) stained lea ic fauna (B1 aquatic plan gen sulfide zed rhizosph	ves (B9) L3) ts (B14) odor (C1) neres along	cators and hyd	Sec	condary Indicators (mining Surface soil cracks (BI Drainage patterns (BI Dry-season water table Crayfish burrows (C8) Saturation visible on a	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High was Saturati Water n Sedimee Drift dep	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2)		check all that ap Water Aquati True a Hydro Oxidiz Prese	pply) -stained lea ic fauna (B1 aquatic plan gen sulfide	ves (B9) 13) ts (B14) odor (C1) neres along ced iron (C4)	cators and hydelectric	Sec.	condary Indicators (mining Surface soil cracks (Bugger Drainage patterns (Bugger) Dry-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed pl	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1)
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Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Id Obser face Wat ter Table uration P	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present?	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken.) DROLO Itland Hymary India Surface High wa Saturati Water m Sedimen Drift dep Algal m Iron dep Inundati Sparsel Ind Obser face Water Table uration P Indes cap	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave : vations: er Present? Present? Present? pillary fringe)	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)
Depth (marks: pit taken.) DROLO tland Hymary India Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Id Obser face Wat ter Table uration P	GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in y vegetated concave s vations: er Present? Present? present? present? present? present? corded Data (stream of	nagery (B7) surface (B8) Yes _ Yes _ Yes _	check all that ap Water Aquati True a Hydro Oxidiz Presel Recer Thin n Gauge Other No No	pply) -stained leavic fauna (B1 aquatic plantingen sulfide ted rhizosphence of reduction reduction reduction reduction (Explain in Depth (inch Depth (inch	ves (B9) L3) ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) nes): 1 nes): nes):	living roots (C4) I soils (C6)	Sec	condary Indicators (mining Surface soil cracks (But Drainage patterns (But Dray-season water table Crayfish burrows (C8) Saturation visible on a Stunted or stressed plus Geomorphic position (FAC-neutral test (D5)	mum of two required) 6) 0) e (C2) erial imagery (C9) ants (D1) D2)

Project/Site: Lemon Hill	City/Co	unty: Farmington/Olmst	ed County	Sampling Date: <u>2024-06-19</u>
Applicant/Owner: Ranger Power				Sampling Point: ddp11
Investigator(s): Maddie Humphrey				
		Local reli		
Slope(%): 0-2 Lat: 44.064262		Long: -92.322182		Datum: WGS 84
Soil Map Unit Name: 401B: Mt. Carroll silt loam, 2 to 6 percent slope		=		cation:
Are climatic / hydrologic conditions on the site typical for this time of	of year?	Yes , N	o (If no, expla	uin in Remarks.)
Are Vegetation , Soil , or Hydrology Significan	tly disturbed?	Are "Normal	Circumstances" pres	ent? Yes . No
Are Vegetation , Soil , or Hydrology naturally	problematic?		kplain any answers in	<u></u> _
_				
SUMMARY OF FINDINGS - Attach site map show	ing sampli	ng point locatior	ıs, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes 🗸 N		Is the Sampled Are	2	
Hydric Soil Present? Yes N		within a Wetland?	a	Yes No
Wetland Hydrology Present? YesN				
Remarks: (Explain alternative procedures here or in a separate re Roadside ditch along Viola Rd NE	eport.)			
Troduction along violation				
VEGETATION - Use scientific names of plants.				
Technical des seismans maines et plante.	Absolute	Dominant Indicator		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species? Status	Dominance Test	Worksheet
1			Number of Domin	
2			Are OBL, FACW,	or FAC:1 (A)
3			Total Number of D	
4			Across All Strata:	<u>1</u> (B)
5		- Total Cayor	Percent of Domina	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		= Total Cover		
1			Prevalence Index	
2.			Total % Cov	ver of: Multiply by:
3.			OBL species	0 x1 =0
4			FACW species	0 x1 =0
5			FAC species	90 x1 = 270
	0%	= Total Cover	FACU species	<u>10</u> x1 = <u>40</u>
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.3	28-ft square (1-	-m²) quadrat)	UPL species	0 x1 =0
Poa pratensis, Kentucky Blue Grass	90%	yes FAC	Column Totals:	100 x1 = 310 (B
2. <u>Medicago lupulina</u> , Black Medick		no FACU	Prevale	ence Index = B/A =
3. <u>Taraxacum officinale</u> , Common Dandelion	5%	no FACU	Hydrophytic Veg	etation Indicators:
4			1 - Rapid Te	st for Hydrophytic Vegetation
5			✓ 2 - Dominane	ce Test is > 50%
6. 7.			3 - Prevalend	ce Index is <= 3.0^1
8.			4 - Morpholo	ogical Adaptations ¹ (Provide
9.			supporting da sheet)	ata in Remarks or on a separate
10.			'	TIC Hydrophytic Vegetation ¹ (Explain)
	100%	= Total Cover		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				f hydric soil and wetland hydrology esent, unless disturbed or problemation
1				
2			Hydrophytic Vegetation	
	0%	= Total Cover	Present?	Yes No
Remarks: (Include photo numbers here or on a separate sheet.)				

Sample Point: adp57

Depth	cription: (Describe to Matrix		F	Redox Featu	ures	_				
nches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks	
								_		
								_		
pe: C=Co	ncentration, D=Deple	etion, RM=Re	educed Matrix, N	//S=Masked	Sand Grain	ns. ² L	ocation: F	PL=Pore Lining, M=Ma	trix.	
	Indicators:							Indicators for Prob	lematic Hydric Soils ³ :	
_	(or Histel) (A1) unde			ly Gleyed M				Coast Prairie R	edox (A16)	
•	pipedon (A2) undefin	ied		ly Redox (S	-			Dark Surface (S	•	
_	isti (A3) undefined			ped Matrix (Iron-Manganese	` '	
-	en Sulfide (A4)			ny Mucky M					ark Surface (TF12)	
_	d Layers (A5) uck (A10)			ny Gleyed M eted Matrix				Other (Explain i	*	
_	d Below Dark Surface	e (A11)		ox Dark Surf				Indicators of hybridicators	drophytic vegetation and the present, unless dist	d we
-	ark Surface (A12)	, (, ,)		eted Dark S	` '			problematic.	t be present, unless dist	uibc
=	Mucky Mineral (S1)			x Depression	` ,					
	ucky Peat or Peat (S	3)			(-)					
	Layer (if observed):									
Type:								acant?	Yes	
Depth (i	inches): -hydric due to lack of	hydrology ir	ndicators. No pit	taken, loca	ated in road		ic Soil Pr	esent:	163	No _
Depth (i marks: ume non-	-hydric due to lack of	f hydrology ir	ndicators. No pit	taken, loca	ted in road		ic Soil Pi	esent:	163	No _
Depth (imarks: sume non-	-hydric due to lack of	f hydrology ir	ndicators. No pit	taken, loca	ated in road					
Depth (in marks: nume non-	-hydric due to lack of				ated in road			Secondary Indicators	(minimum of two required	
Depth (in marks: ume non-	-hydric due to lack of		check all that ay						(minimum of two required	
Depth (in marks: ume non- DROLOG tland Hydray Indic Surface	-hydric due to lack of GY drology Indicators: cators (minimum of or		check all that a	pply)	ıves (B9)			Secondary IndicatorsSurface soil crack	(minimum of two required (ss (B6)	
Depth (in marks: ume non- DROLOG tland Hydray Indic Surface	-hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) tter table (A2)		check all that al Water Aquat	pply) -stained lea	ives (B9)			Secondary Indicators Surface soil crack Drainage patterns	(minimum of two required (ss (B6)) (B10) (table (C2)	
Depth (in marks: nume non- DROLOG tland Hydrogramy Indicate High was Saturation	-hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) tter table (A2)		check all that a Water Aquat True a	pply) stained lea ic fauna (B1	ives (B9) 13) its (B14)			Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows	(minimum of two required (ss (B6)) (B10) (table (C2)	
Depth (innarks: ume non- DROLOG tland Hydrary Indicate High was Saturatic Water m	-hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) tter table (A2) on (A3)		check all that ap Water Aquat True a Hydro Oxidiz	pply) stained lea ic fauna (B1 aquatic plan gen sulfide zed rhizosph	aves (B9) 13) ots (B14) odor (C1) neres along	ROW.		Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows	(minimum of two required (cs (B6)) table (C2) (C8) on aerial imagery (C9)	
Depth (in marks: ume non- DROLOG tland Hyonary Indicated High was a Saturation Water many Sedimer Drift dep	GY drology Indicators: cators (minimum of or water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3)		check all that ap Water Aquat True a Hydro Oxidiz	pply) -stained lea ic fauna (B1 aquatic plan gen sulfide	aves (B9) 13) ots (B14) odor (C1) neres along	ROW.		Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible	(minimum of two required to (B6) to (B10) table (C2) (C8) on aerial imagery (C9) and plants (D1)	
Depth (imarks: sume non- DROLOG tland Hydrogramy Indicated High was saturaticated Water many Sedimer Drift deput Algal marks:	hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)		check all that ap Water Aquat True a Hydro Oxidiz Prese Recer	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu nt iron reduc	oves (B9) 13) Its (B14) Odor (C1) Ineres along Ced iron (Cotion in tilled	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress	(minimum of two required to the control of two required to the	
Depth (in marks: ume non- DROLOG tland Hyomary Indic Surface High wa Saturatio Water m Sedimer Drift dep Algal ma Iron dep	GY drology Indicators: cators (minimum of or water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	ne required;	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu nt iron reduc nuck surfac	oves (B9) 13) Its (B14) Its (B14) Inderes along Its ced iron (Cotion in tilled Its (C7)	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit	(minimum of two required to the control of two required to the	
Depth (inarks: ume non- Depth	GY drology Indicators: cators (minimum of or water (A1) der table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in	ne required;	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r	pply)stained lea ic fauna (B1 aquatic plan igen sulfide ted rhizosph nce of redu nt iron reduc muck surface	oves (B9) 13) uts (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9)	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit	(minimum of two required to the control of two required to the	
Depth (in marks: ume non- DROLOG tland Hyomary Indication Surface High was Saturation Water many Sedimer Drift depth Algal many Iron depth Inundation Sparsely	GY drology Indicators: cators (minimum of or water (A1) tter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in a vegetated concave	ne required;	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu nt iron reduc nuck surfac	oves (B9) 13) uts (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9)	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit	(minimum of two required to the control of two required to the	
Depth (imarks: sume non- DROLOG tland Hyc mary Indic Surface High wa Saturatic Water m Sedimer Drift dep Algal ma Iron dep Inundatic Sparsely	hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) harks (B1) ht deposits (B2) hosits (B3) at or crust (B4) hosits (B5) on visible on aerial in y vegetated concave	ne required; magery (B7) surface (B8)	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu- nt iron reduc muck surfac e or well da (Explain in	oves (B9) 13) uts (B14) odor (C1) neres along ced iron (Citon in tilled e (C7) tta (D9) Remarks)	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit	(minimum of two required to the control of two required to the	
Depth (imarks: sume non-sume nundation sparsely defined observiface Water Market nundation sparsely defined observiface water nundation sume nundation sume nundation sume nundation nundation sume nundatio	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in y vegetated concave vations: er Present?	ne required; magery (B7) surface (B8)	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	oply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu nt iron reduc muck surface e or well da (Explain in	oves (B9) 13) tts (B14) odor (C1) heres along ced iron (C- ction in tilled e (C7) tta (D9) Remarks)	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit FAC-neutral test	(minimum of two required (xs (B6)) (B10) (C8) (C8) on aerial imagery (C9) (cd plants (D1) (D5)	d)
Depth (imarks: sume non-sume nundation sparsely definition deput nundation sparsely definition deput nundation sume non-sume non-	hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) ter table (A2) on (A3) harks (B1) ht deposits (B2) hosits (B3) at or crust (B4) hosits (B5) on visible on aerial in y vegetated concave vations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge	eply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu- nt iron reduce muck surface e or well da (Explain in Depth (inch	aves (B9) 13) ats (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9) Remarks) nes): nes):	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit	(minimum of two required to the control of two required to the	d)
Depth (imarks: sume non-sume n	hydric due to lack of GY drology Indicators: cators (minimum of or water (A1) ter table (A2) on (A3) harks (B1) ht deposits (B2) hosits (B3) at or crust (B4) hosits (B5) on visible on aerial in y vegetated concave vations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	check all that ap Water Aquat True a Hydro Oxidiz Prese Recer Thin r Gauge Other	eply) -stained lea ic fauna (B1 aquatic plan igen sulfide red rhizosph nce of redu- nt iron reduce muck surface e or well da (Explain in Depth (inch	aves (B9) 13) ats (B14) odor (C1) neres along ced iron (C- ction in tilled e (C7) tta (D9) Remarks) nes): nes):	ROW.	s (C3)	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit FAC-neutral test	(minimum of two required (xs (B6)) (B10) (C8) (C8) on aerial imagery (C9) (cd plants (D1) (D5)	d)
Depth (in marks: ume non- DROLOG tland Hydrogram and in mary Indication and in market in mar	drology Indicators: cators (minimum of or water (A1) ater table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in y vegetated concave vations: er Present? Present?	ne required; magery (B7) surface (B8) Yes Yes	check all that and water Aquat True and Hydro Oxidiz Prese Recered Gauge Other	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide ted rhizosph nce of reduce nuck surface e or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	ROW. living roots 4) d soils (C6)	and Hydro	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit FAC-neutral test of	(minimum of two required (xs (B6)) (B10) (C8) (C8) on aerial imagery (C9) (cd plants (D1) (D5)	d)
Depth (imarks: sume non-sume n	drology Indicators: cators (minimum of or water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in a vegetated concave vations: er Present? Present? Present? pillary fringe)	ne required; magery (B7) surface (B8) Yes Yes	check all that and water Aquat True and Hydro Oxidiz Prese Recered Gauge Other	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide ted rhizosph nce of reduce nuck surface e or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	ROW. living roots 4) d soils (C6)	and Hydro	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit FAC-neutral test of	(minimum of two required (xs (B6)) (B10) (C8) (C8) on aerial imagery (C9) (cd plants (D1) (D5)	d)
Depth (in marks: ume non- DROLOG tland Hydrogram and in mary Indication and in market in mar	drology Indicators: cators (minimum of or water (A1) ter table (A2) on (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) on visible on aerial in a vegetated concave vations: er Present? Present? Present? pillary fringe)	ne required; magery (B7) surface (B8) Yes Yes	check all that and water Aquat True and Hydro Oxidiz Prese Recered Gauge Other	pply) -stained lea ic fauna (B1 aquatic plan igen sulfide ted rhizosph nce of reduce nuck surface e or well da (Explain in Depth (inch Depth (inch	aves (B9) 13) uts (B14) odor (C1) neres along ced iron (Cition in tilled e (C7) tta (D9) Remarks) nes): nes):	ROW. living roots 4) d soils (C6)	and Hydro	Secondary Indicators Surface soil crack Drainage patterns Dry-season water Crayfish burrows Saturation visible Stunted or stress Geomorphic posit FAC-neutral test of	(minimum of two required (xs (B6)) (B10) (C8) (C8) on aerial imagery (C9) (cd plants (D1) (D5)	d)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmst	ed County	Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power		,	State	e: MN Sampling Point: dp01
Investigator(s): Andy Kranz	Sect	ion, Townsh	ip, Range: S	S11 T107N R013W
				ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.09299</u>		_ Long: <u>-92</u> .	34308	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam				NWI classification: PSS1D
Are climatic / hydrologic conditions on the site typical for this time of	f year?	Y	es N	o 🗸 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantl	ly disturbed?	А	re "Normal (Circumstances" present? Yes 📌 No
Are Vegetation , Soil , or Hydrology naturally p	roblematic?			xplain any answers in Remarks.)
_				
SUMMARY OF FINDINGS - Attach site map showi	ng sampli	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> N		Is the Sa	ımpled Area	within
Hydric Soil Present? Yes ✓ N Wetland Hydrology Present? Yes ✓ N		a Wetlan		Yes _ 🗸 No
Remarks: (Explain alternative procedures here or in a separate re Shrub-carr component of a wetland complex in a basin. Analysis o		precipitation	n conditions	indicates wetter than normal precipitation conditions on-
site at the time of survey.				
VEGETATION - Use scientific names of plants.				
		Dominant		
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2. 3.				, , ,
3. 4.				Total Number of Dominant Species Across All Strata: 3 (B)
5				Percent of Dominant Species That
		= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. <u>Salix bebbiana</u> , Gray Willow	60%	yes	FACW	Total % Cover of:Multiply by:
2				OBL species 0 x1 = 0
3				FACW species 105 x1 = 210
4				FAC species 0 x1 = 0
5	60%	- Total Co		FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2		= Total Cov		UPL species
Phalaris arundinacea, Reed Canary Grass	25%	yes	FACW	Column Totals: 105
Urtica dioica, Stinging Nettle	15%	yes	FACW	Prevalence Index = B/A = 2.000
3. Impatiens capensis, Spotted Touch-Me-Not	5%	no	FACW	Hydrophytic Vegetation Indicators:
4.				
5				✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is > 50%
6				✓ 3 - Prevalence Index is <= 3.0 ¹
7				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10		= Total Cov		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	4370	- Total Co	vei	¹ Indicators of hydric soil and wetland hydrology
1				must be present, unless disturbed or problematic.
2.				Hydrophytic
	0%	= Total Co	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.)				1
,				
				·

Depth (inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Rema	ırks
0.2	10VD 2/1	100	/				Mucky		
0-2 2-10	10YR - 2/1 10YR - 2/2	95	5YR-4/6	5		M/PL	<u>Loam</u> C		
2-10	101R - 2/2	95	51K-4/0			IVI/PL			
	_			-					
Type: C=Con	ncentration, D=Dep	letion, RM=R	educed Matrix, M	IS=Masked	Sand Grain	ns. ²	Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil Ind	dicators:							Indicators for Problematic Hy	dric Soils ³ :
	(or Histel) (A1) und			y Gleyed M	` '			Coast Prairie Redox (A1	6)
	ipedon (A2) undefi	ned		y Redox (S	•			Dark Surface (S7)	
	sti (A3) undefined			ed Matrix				Iron-Manganese Masses	` ,
, ,	n Sulfide (A4) Layers (A5)			y Mucky IV y Gleyed I				Very Shallow Dark Surfa	
Stratilled 2 cm Mud	, , ,			ted Matrix				Other (Explain in Remar	
	Below Dark Surfa	ce (A11)		x Dark Sur	, ,			³ Indicators of hydrophyti hydrology must be pres	
	rk Surface (A12)	()			Surface (F7)			problematic.	oni, amees astarbea s
Sandy Mu	ucky Mineral (S1)		Redo	x Depressi	ons (F8)				
5 cm Mud	cky Peat or Peat (33)							
Restrictive Lay	yer (if observed):								
Туре:	<u> </u>					Hyc	Iric Soil Pre	sent?	Yes 🗸 No
Туре:	yer (if observed): nches):					Hyc	Iric Soil Pre	sent?	Yes _ ✓ No
Type: Depth (in	<u> </u>					Hyc	Iric Soil Pre	sent?	Yes <u> • </u>
Type: Depth (in	 nches):					Hyc			
Type: Depth (in Remarks: /DROLOG Wetland Hydro	anches):	one required:	check all that an	nlv)		Hyc		Secondary Indicators (minimun	
Type: Depth (in Remarks: 'DROLOG Vetland Hydro Primary Indica	aches): SY ology Indicators: ators (minimum of	one required;			aves (B9)	Hyc			
Type: Depth (in Remarks: 'DROLOG Vetland Hydro Primary Indica	SY ology Indicators: ators (minimum of water (A1)	one required;	<u></u> ✓ Water-	oply) estained lea c fauna (B	` '	Hyc		Secondary Indicators (minimun Surface soil cracks (B6)	n of two required)
Type: Depth (in Remarks: **TOROLOG** Vetland Hydro Primary Indication Surface v	conches): Display Indicators: ators (minimum of water (A1) er table (A2)	one required;	✓ Water-	stained lea	13)	Hyc		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10)	n of two required)
Type: Depth (in Remarks: **TOROLOG** Vetland Hydro Primary Indication Surface v High water	SY ology Indicators: ators (minimum of water (A1) er table (A2) n (A3)	one required;	✓ Water- — Aquati — True a	stained lea c fauna (B	13) nts (B14)	Hyc		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	n of two required)
Type: Depth (in Remarks: /DROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment	conches): nches): nch	one required;	✓ Water- Aquati True a Hydroǫ	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	13) nts (B14) odor (C1) heres along	living roo		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High wate V Saturation Water ma Sediment Drift depo	conches): noches): n	one required;	✓ Water- — Aquati — True a — Hydrog — Oxidizon	stained leace fauna (Buquatic plangen sulfide ed rhizosplance of redu	13) hts (B14) odor (C1) heres along uced iron (C	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo	colongy Indicators: ators (minimum of evater (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4)	one required;	✓ Water- — Aquati — True a — Hydrog — Oxidiza — Preser — Recen	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along nced iron (Cotion in tilled	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo Algal mat Iron depo	conches): conche		Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	nts (B14) odor (C1) heres along uced iron (Coction in tilled	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo Algal mat Iron depo Inundation	colongy Indicators: ators (minimum of water (A1) er table (A2) n (A3) arks (B1) t deposits (B2) posits (B3) t or crust (B4) posits (B5) n visible on aerial	imagery (B7)	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	e tribulation of the control of the	nts (B14) odor (C1) heres along nced iron (Ci ction in tillect te (C7) ata (D9)	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: **TOROLOG** Vetland Hydro Primary Indica Surface v High water Saturation Water ma Sediment Drift depo Algal mat Iron depo Inundation Sparsely	conches): co	imagery (B7)	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	nts (B14) odor (C1) heres along nced iron (Ci ction in tillect te (C7) ata (D9)	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High water Sediment Drift depo Algal mat Iron depo Inundation Sparsely	conches): conche	imagery (B7) e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu t iron redu cuck surfac e or well da (Explain in	nts (B14) odor (C1) heres along iced iron (C- ction in tilled te (C7) ata (D9) Remarks)	living roo	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High water Sediment Drift depo Algal mat Iron depo Inundation Sparsely Field Observa	conches): co	imagery (B7) e surface (B8 Yes	✓ Water— Aquati — True a — Hydroo — Oxidizi — Preser — Recen — Thin m — Gauge S) Other	restained lead of fauna (B) aquatic plar gen sulfide ed rhizosplance of reduct iron reducts surface or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along uced iron (C- ction in tillect e (C7) ata (D9) Remarks)	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High water Sediment Drift depo Algal mat Iron depo Inundation Sparsely	conches): conche	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge	statined lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along aced iron (Ci ction in tillect the (C7) ata (D9) Remarks) hes): hes): 3	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: TOROLOG Vetland Hydro Primary Indica Surface v High water Sediment Drift depo Algal mat Iron depo Inundation Sparsely Field Observa Surface Water Vater Table P	conches): conche	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	statined lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac e or well da (Explain in Depth (incl	nts (B14) odor (C1) heres along aced iron (Ci ction in tillect the (C7) ata (D9) Remarks) hes): hes): 3	living roo 4) I soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 2) I imagery (C9)
Type: Depth (in Remarks: PROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo Algal mat Iron depo Inundation Sparsely Field Observa Surface Water Vater Table P Saturation Presincludes capil	conches): conche	imagery (B7) e surface (B8 Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	statined lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C2 ction in tillect te (C7) heres (D9) Remarks) hes): hes): 2	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 2) I imagery (C9) (D1)
Type: Depth (in Remarks: PROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo Algal mat Iron depo Inundation Sparsely Field Observa Surface Water Vater Table P Saturation Presincludes capil	ology Indicators: ators (minimum of evater (A1) er table (A2) n (A3) arks (B1) t deposits (B2) osits (B3) t or crust (B4) osits (B5) n visible on aerial vegetated concave utions: r Present? esent? ellary fringe)	imagery (B7) e surface (B8 Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	statined lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C2 ction in tillect te (C7) heres (D9) Remarks) hes): hes): 2	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 2) I imagery (C9) (D1)
Type: Depth (in Remarks: PROLOG Vetland Hydro Primary Indica Surface v High wate Saturation Water ma Sediment Drift depo Algal mat Iron depo Inundation Sparsely Field Observa Surface Water Vater Table P Saturation Presincludes capil	ology Indicators: ators (minimum of evater (A1) er table (A2) n (A3) arks (B1) t deposits (B2) osits (B3) t or crust (B4) osits (B5) n visible on aerial vegetated concave utions: r Present? esent? ellary fringe)	imagery (B7) e surface (B8 Yes Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other No No No No No	statined lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac e or well da (Explain in Depth (incl Depth (incl	nts (B14) odor (C1) heres along nced iron (C2 ction in tillect te (C7) heres (D9) Remarks) hes): hes): 2	living roo 4) d soils (C6	ts (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 2) I imagery (C9)

Project/Site: Lemon Hill 2025		City/Co	ounty: Olmsted County	Sampling Date: <u>2025-05-02</u>
Applicant/Owner: Ranger Power			State	e: MN Sampling Point: dp02
Investigator(s): Andy Kranz		Sect	ion, Township, Range: S	11 T107N R013W
Lanform(hillslope, terrace, etc): Footslope			Local reli	ef (concave, convex, none): concave
Slope(%): <u>8-15</u> Lat: <u>44.09274</u>			_ Long: -92.3431	Datum: WGS 84
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 perce	ent slopes			NWI classification:
Are climatic / hydrologic conditions on the site typica	al for this time of y	ear?	Yes No	(If no, explain in Remarks.)
Are Vegetation 🧳 , Soil , or Hydrology	Significantly	disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology	naturally pro	blematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	map snowin	g sampii	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes _ ✓ No		Is the Sampled Area	within
Hydric Soil Present?	Yes No		a Wetland?	Yes No
Wetland Hydrology Present? Remarks: (Explain alternative procedures here or	Yes No			
Upland crop field sampled on a slope. Analysis of survey.	antecedent precip	itation cond	litions indicates wetter tl	nan normal precipitation conditions on-site at the time of
VEGETATION - Use scientific names of	of plants.			
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2.				
3. 4.				Total Number of Dominant Species Across All Strata:0 (B)
5		0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/E
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radi	*			Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species
3				FACW species 0 x1 = 0
4 5.	-			FAC species0 x1 =0
J		0%	= Total Cover	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius	OR 3.28- by 3.28-			UPL species0 x1 =0
1	-			Column Totals: $0 \times 1 = 0$ (E
2.				Prevalence Index = B/A = <u>NaN</u>
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is > 50%
6.	_			3 - Prevalence Index is <= 3.0 ¹
7.				
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9. 10.				sheet)
		0%	= Total Cover	✓ PROBLEMATIC Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius 1.	•			must be present, unless disturbed or problematic
2.		0%	= Total Cover	Hydrophytic Vegetation Present? Yes _ ✓ No
Remarks: (Include photo numbers here or on a se	narata choot \			
		unding uplar	nd. Cirsium canadensis	is present but very sparse in the field at this landscape

Depth (inches) Color (moist)	%	Color (moist)	%	_Type ¹ _	Loc ²	Texture	Remarks
0-10 10YR - 3/2	100	/				SiCL	
10-18 10YR - 3/4	100	/				SiCL	
10 10							
						-	
							-
						-	
			-				
Type: C=Concentration, D=De	oletion, RM=	 Reduced Matrix, M	1S=Masked	d Sand Grair	ns. 2	Location: PL	=Pore Lining, M=Matrix.
lydric Soil Indicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (or Histel) (A1) un	defined	Sandy	y Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic Epipedon (A2) undef	ined	Sandy	y Redox (S	S5)			Dark Surface (S7)
Black Histi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)				/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratified Layers (A5)			y Gleyed N				Other (Explain in Remarks)
2 cm Muck (A10) Depleted Below Dark Surfa	200 (411)		eted Matrix	, ,			³ Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	.ce (AII)		x Dark Sur	Surface (F7)			hydrology must be present, unless distur problematic.
Sandy Mucky Mineral (S1)			x Depressi				
5 cm Mucky Peat or Peat	(S3)		. Боргосо.	.00 (. 0)			
Restrictive Layer (if observed):							
Type:					Hyd	ric Soil Pres	ent? Yes N
							<u></u>
Depth (inches):					_		
Depth (inches): <u></u> Remarks:							
Depth (inches):					_	S	econdary Indicators (minimum of two required)
Depth (inches): Remarks: /DROLOGY	one required	l; check all that ap	ply)		_	9	econdary Indicators (minimum of two required) Surface soil cracks (B6)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators:	one required		oply) stained lea	aves (B9)	_	<u>s</u>	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `
Depth (inches): Remarks: //DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of Surface water (A1) High water table (A2)	one required	Water-	stained lea c fauna (B	13)	_	<u>9</u>	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)	one required	Water- Aquation True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	one required	Water- Aquation True a Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) e odor (C1)			Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Depth (inches): Remarks: **TDROLOGY Vetland Hydrology Indicators: (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	one required	Water- Aquation True a Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizospl	nts (B14) odor (C1) heres along	-		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): Remarks: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	one required	Water- Aquati True a Hydrog Oxidize	stained leace fauna (Buquatic plangen sulfide ed rhizosplance of redu	nts (B14) e odor (C1) heres along uced iron (C4	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	one required	Water- Aquati True a Hydrog Oxidize Preser Recen	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (C4 action in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)		Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	estained lea c fauna (B equatic plar gen sulfide ed rhizospi nce of redu t iron redu nuck surfac	nts (B14) c odor (C1) heres along uced iron (C4 action in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)	imagery (B7	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	e or well da e or well da c fauna (B cquatic plar gen sulfide ed rhizospi nce of redu t iron redu nuck surfac e or well da	nts (B14) c odor (C1) heres along uced iron (C4 action in tilled	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concav	imagery (B7	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	e or well da e or well da c fauna (B cquatic plar gen sulfide ed rhizospi nce of redu t iron redu nuck surfac e or well da	nts (B14) e odor (C1) heres along uced iron (C4 oction in tilled ce (C7) ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Depth (inches): Remarks: POROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial Sparsely vegetated concavarield Observations:	imagery (B7 e surface (B	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge 8) Other	e fauna (Bauquatic plan gen sulfide ed rhizospi nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) e odor (C1) heres along uced iron (C4 oction in tilled ce (C7) ata (D9)	4)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Project/Site: Lemon Hill 2025	City/Cc	ounty: Little (Chute/Olmst	ted County Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power	City/Cc			e: MN Sampling Point: dp03
Investigator(s): Andy Kranz	Sect			
				ief (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.09127				,
Soil Map Unit Name: 176: Garwin silty clay loam		_		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?	Y		lo 🗸 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly				Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro		, ,		xplain any answers in Remarks.)
		,	,	
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point	location	ıs, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes <u>✓</u> No		Is the Sa a Wetlan	ampled Area ıd?	ı within Yes ✔ No
Wetland Hydrology Present? Yes No	<u> </u>			
Remarks: (Explain alternative procedures here or in a separate report Cropped edge of a wetland complex. Sampled at toe of slope. Analyconditions on-site at the time of survey. VEGETATION - Use scientific names of plants.		cedent preci	ipitation con	ditions indicates wetter than normal precipitation
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test Worksheet
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				
3 4				Total Number of Dominant Species Across All Strata: 2 (B)
5				Percent of Dominant Species That
	0%	= Total Co	ver	Are OBL, FACW, or FAC: 100% (A/E
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1				Total 96 Cover of: Multiply by:
2				Total % Cover of: Multiply by: OBL species 0 x1 = 0
3				FACW species 7 x1 = 14
4				FAC species $\frac{5}{2}$ x1 = $\frac{15}{2}$
5				FACU species $0 \times 1 = 0$
	0%			UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28- 1. <i>Ambrosia trifida</i> , Great Ragweed	n square (1 5%	yes	FAC	Column Totals: 12 x1 = 29 (E
Cardamine pensylvanica, Quaker Bittercress	5%	ves	FACW	Prevalence Index = B/A = 2.417
3. Phalaris arundinacea, Reed Canary Grass		no	FACW	Hydrophytic Vegetation Indicators:
4.				
5.				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is > 50%
7				<u>✓</u> 3 - Prevalence Index is <= 3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9				sheet)
10				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	12%		ver	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problemation
1		-		Hydrophytic
2.	0%	= Total Co	ver	Vegetation Present? Yes ✓ No
Remarks: (Include photo numbers here or on a separate sheet.) Residues of 2024 corn crop are less dense than in the adjacent upla	and.			•

Depth (inches)	Color (moist)	<u></u> %	Color (moist)	%	_Type ¹	Loc ²	Texture	Rema	arks
0-12	10YR - 2/1	93	5YR-4/6	5	С	M/PL	SiC		
			10YR-4/1	2		M			
							-		
							-	_	
							-	- -	
							-	- , -	
Type: C=C	oncentration, D=Dep	letion, RM=F		S=Masked	d Sand Grain	ns. 2	Location: P	 L=Pore Lining, M=Matrix.	
lydric Soil	Indicators:							Indicators for Problematic Hy	dric Soils ^{3.}
Histoso	ol (or Histel) (A1) und	lefined	Sandy	Gleyed N	/latrix (S4)			Coast Prairie Redox (A1	
Histic E	Epipedon (A2) undefi	ned	Sandy	Redox (S	65)			Dark Surface (S7)	/
Black H	Histi (A3) undefined		Strippe	ed Matrix	(S6)			Iron-Manganese Masses	s (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky M	lineral (F1)			Very Shallow Dark Surfa	` ,
Stratifie	ed Layers (A5)		Loamy	Gleyed N	Matrix (F2)			Other (Explain in Remar	, ,
2 cm N	luck (A10)		Deplet	ted Matrix	(F3)			³ Indicators of hydrophyti	•
Deplete	ed Below Dark Surfa	ce (A11)	✓ Redox	Dark Sur	face (F6)			hydrology must be pres	sent, unless disturbed
Thick D	Dark Surface (A12)		Deplet	ted Dark S	Surface (F7)			problematic.	
	Mucky Mineral (S1)		Redox	Depressi	ons (F8)				
5 cm M	lucky Peat or Peat (S3)				1			
Restrictive L	_ayer (if observed):								
Type:	<u></u>					Hyd	ric Soil Pre	sent?	Yes 🔽 No
Type:	_ayer (if observed): (inches): <u></u>					Hyd	ric Soil Pre	sent?	Yes _ ✓ No
Type: Depth Remarks:	(inches):					Hyd	ric Soil Pre	sent?	Yes <u>✓</u> No
Type: Depth Remarks:	(inches):					Hyd			
Type: Depth Remarks: /DROLC	(inches): OGY drology Indicators:	one required	· chack all that an	nlv		Hyd		Secondary Indicators (minimun	
Type: Depth Remarks: /DROLO Vetland Hy Primary Ind	(inches): OGY drology Indicators: icators (minimum of	one required		,,	aves (B9)	Hyd		Secondary Indicators (minimun Surface soil cracks (B6)	
Type: Depth Remarks: /DROLC Vetland Hy Primary Indi Surface	OGY drology Indicators: icators (minimum of ea water (A1)	one required	Water-s	stained lea	` '	Hyd		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10)	n of two required)
Type: Depth Remarks: /DROLC Vetland Hy Primary Indi Surface High w	OGY drology Indicators: icators (minimum of e water (A1) ater table (A2)	one required	Water-s	stained lea	13)	Hyd		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C	n of two required)
Type: Depth Remarks: Primary Ind Surface High w Saturat	OGY drology Indicators: icators (minimum of ea water (A1)	one required	Water-s Aquatic True ac	stained lea c fauna (B quatic plar	13)	Hyd		Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10)	n of two required)
Type: Depth Remarks: Primary Ind Surface High w Saturat Water i	OGY drology Indicators: icators (minimum of e water (A1) ater table (A2) icion (A3)	one required	Water-s Aquatic True ac Hydrog	stained lea c fauna (B quatic plar jen sulfide	13) nts (B14)			Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8)	n of two required) 22) I imagery (C9)
Type: Depth Remarks: /DROLC Vetland Hy Primary Ind Surface High w Saturat Water I Sedime	drology Indicators: icators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)	one required	Water-s Aquatio True ac Hydrog Oxidize	stained lea c fauna (B quatic plar jen sulfide ed rhizosp	13) nts (B14) odor (C1)	living root	s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria	n of two required) 22) I imagery (C9)
Type: Depth Remarks: **TOROLO** Vetland Hy Primary Indi Surface High w Saturat Water I Sedime Drift de	drology Indicators: icators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2)	one required	Water-s Aquatic True ac Hydrog Oxidize	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ce of redu	13) nts (B14) odor (C1) heres along	living root	: :s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants	n of two required) 22) I imagery (C9)
Type: Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High w Saturat Water I Sedime Drift de Algal m	drology Indicators: icators (minimum of evater (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3)	one required	Water-s Aquatic True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ce of redu	13) nts (B14) odor (C1) heres along uced iron (C- ction in tilled	living root	: :s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 22) I imagery (C9)
Type: Depth Remarks: /DROLO Vetland Hy Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de	drology Indicators: icators (minimum of evater (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4)		Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ice of redu c iron redu	13) ints (B14) c odor (C1) heres along uced iron (Cition in tilled ce (C7)	living root	: :s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 22) I imagery (C9)
Type: Depth Remarks: Primary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundar	drology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5)	imagery (B7)	Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu i iron redu uck surfac or well da	13) ints (B14) c odor (C1) heres along uced iron (Cition in tilled ce (C7)	living root	: :s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 22) I imagery (C9)
Type: Depth Remarks: Primary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundar	drology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave	imagery (B7)	Water-s Aquatic True ac Hydrog Oxidize Presen Recent Thin m) Gauge	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu i iron redu uck surfac or well da	13) nts (B14) nodor (C1) heres along uced iron (C ction in tilled te (C7) ata (D9)	living root	: :s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 22) I imagery (C9)
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Type: Depth Remarks: /DROLO Vetland Hy Primary Indi Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Gurface Wa Vater Table	drology Indicators: icators (minimum of ele water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave vations: ter Present?	imagery (B7) e surface (B8 Yes Yes	Water-s	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ace of redu iron redu uck surfac or well da (Explain in	13) hts (B14) hodor (C1) heres along uced iron (C ction in tilled ce (C7) hata (D9) hess): hes):	living root 4) d soils (C6	ss (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2)	n of two required) 22) I imagery (C9)
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Type: Depth Remarks: Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Field Obser Surface Wa Vater Table Saturation F includes ca	drology Indicators: icators (minimum of ele water (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave vations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water-s	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ice of redu iron redu uck surfac or well da (Explain in Depth (inc Depth (inc	13) Ints (B14) Indoor (C1) Interes along Intere	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 22) I imagery (C9) 5 (D1)
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Type: Depth Remarks: Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Field Obser Surface Wa Vater Table Saturation F includes ca	drology Indicators: icators (minimum of ele water (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave vations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water-s	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ice of redu iron redu uck surfac or well da (Explain in Depth (inc Depth (inc	13) Ints (B14) Indoor (C1) Interes along Intere	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 22) I imagery (C9) 5 (D1)
Type: Depth Remarks: Primary Ind Surface High w Saturat Water I Sedime Drift de Algal m Iron de Inundat Sparse Field Obser Surface Wa Vater Table Saturation F includes ca	drology Indicators: icators (minimum of ele water (A1) ater table (A2) icion (A3) marks (B1) ent deposits (B2) eposits (B3) nat or crust (B4) posits (B5) tion visible on aerial ly vegetated concave vations: ter Present? e Present? epillary fringe)	imagery (B7) e surface (B8 Yes Yes	Water-s	stained lea c fauna (B quatic plar gen sulfide ed rhizosp ice of redu iron redu uck surfac or well da (Explain in Depth (inc Depth (inc	13) Ints (B14) Indoor (C1) Interes along Intere	living root 4) d soils (C6	s (C3)	Secondary Indicators (minimun Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C Crayfish burrows (C8) Saturation visible on aeria Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	n of two required) 22) I imagery (C9) 5 (D1)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmst	ed County	Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power		,		e: MN Sampling Point: dp04
Investigator(s): Andy Kranz	Sect	tion, Townsh	ip, Range: S	311 T107N R013W
				ef (concave, convex, none): concave
Slope(%): 0-2 Lat: 44.09064		Long: <u>-92.</u>	.33998	Datum: WGS 84
Soil Map Unit Name: 176: Garwin silty clay loam				NWI classification: PFO1D
Are climatic / hydrologic conditions on the site typical for this time of y	ear?	Ye	es N	o 🔪 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	А	re "Normal (Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?	(It	f needed, ex	xplain any answers in Remarks.)
CUMMARY OF FINDINGS. Attack site was abouting				
SUMMARY OF FINDINGS - Attach site map showin		ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is the Sa	ampled Area	within
Wetland Hydrology Present? Yes No		a Wetlan	ıd?	Yes No
Remarks: (Explain alternative procedures here or in a separate repo				
Hardwood swamp component of a wetland complex located in a base	sin. Analysis	s of anteced	lent precipita	ation conditions indicates wetter than normal precipitation
conditions on-site at the time of survey.				
VEGETATION - Use scientific names of plants.				
Tree Charles (Diet eine 20 ft (0.1 m) redive)		Dominant		Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius) 1. Salix amygdaloides, Peach-Leaf Willow	60%	Species? yes	Status FACW	
Sainx arryguaroides, Feach-Lear Willow Populus deltoides, Eastern Cottonwood	10%	no	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3			1710	Total Number of Dominant Species
4.				Across All Strata: 4 (B)
5				Percent of Dominant Species That
	70%	= Total Cov	ver	Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index worksheet:
1. Acer negundo , Ash-Leaf Maple		yes	FAC	Total % Cover of: Multiply by:
2. <u>Cornus alba</u> , Red Osier	2%		<u>FACW</u>	OBL species0 x1 =0
3				FACW species 92 x1 = 184
4 5.				FAC species25 x1 =75
	12%	= Total Cov	ver	FACU species0 x1 =0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species0 x1 =0
Phalaris arundinacea, Reed Canary Grass	15%	yes	FACW	Column Totals: 117 x1 = 259 (B)
2. Impatiens capensis, Spotted Touch-Me-Not	10%	yes	FACW	Prevalence Index = B/A = 2.214
3. <u>Acer negundo</u> , Ash-Leaf Maple	5%	no	FAC	Hydrophytic Vegetation Indicators:
4. Ribes americanum, Wild Black Currant	5%	no	FACW	1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is > 50%
6				3 - Prevalence Index is <= 3.0 ¹
7 8.				4 - Morphological Adaptations ¹ (Provide
8 9				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	35%	= Total Cov	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
	0%	= Total Cov	ver	Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)				

				edox Feat	turoc			e of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR - 2/1	100	/				SiCL	
6-14	10YR - 2/1	85	10YR-5/1	10		M	SiCL	-
					·			
			5YR-3/4	5	<u> </u>	M		-
								·
				-				-
				-				-
							-	·
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Grair		Location: PL	=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histosol	l (or Histel) (A1) unde	efined	Sandy	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undefin	ed	Sandy	/ Redox (S	S5)			Dark Surface (S7)
	listi (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5) uck (A10)			y Gleyed i ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	d Below Dark Surfac	e (A11)		CDark Su	` '			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	ark Surface (A12)	- (- !)			Surface (F7)			problematic.
Sandy N	Mucky Mineral (S1)		Redox	c Depress	ions (F8)			
5 cm M	ucky Peat or Peat (S	3)						
Restrictive L	ayer (if observed):							
Type:						_ Hyd	ric Soil Pres	ent? Yes <u>✓</u> No
Depth ((inches): <u></u>							
Remarks:								
HYDROLO	GY							
Wetland Hyd								
	drology Indicators:						S	econdary Indicators (minimum of two required)
	cators (minimum of o	ne require	-		aves (B0)			Surface soil cracks (B6)
Surface	cators (minimum of o water (A1)	ne require	Water-	stained le	` '		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10)
Surface High wa	cators (minimum of o water (A1) ater table (A2)	ne require	Water- Aquati	stained le c fauna (B	313)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Surface High wa	cators (minimum of o water (A1) ater table (A2)	ne require	Water- Aquati True a	stained lea c fauna (B quatic pla	313)		<u>s</u> 	Surface soil cracks (B6) Drainage patterns (B10)
Surface High wa Saturati Water n	cators (minimum of o water (A1) ater table (A2) ion (A3)	ne require	Water- Aquatio True a Hydrog	stained le c fauna (B quatic pla gen sulfide	313) nts (B14)	living roo	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Surface High wa Saturati Water n	cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1)	ne require	Water- Aquati True a Hydroç Oxidize	stained lea c fauna (B quatic plaa gen sulfide ed rhizosp	813) nts (B14) e odor (C1)	•	- ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Surface High wa Saturati Water n Sedimee Drift dep	cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4)	ne require	Water- Aquati True a Hydrog Oxidize Preser Recen	stained leace fauna (B quatic plan gen sulfide gen rizosp nce of redu t iron redu	nts (B14) e odor (C1) heres along uced iron (C4 action in tilled	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Surface High wa Saturati Water n Sedimee Drift dep Algal m	cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	·	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m	stained leace fauna (B quatic plangen sulfide gen sulfide ged rhizosp nice of redu t iron redu nuck surfac	ents (B14) ents (B14) endor (C1) theres along uced iron (C4 action in tilled cce (C7)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedimen Drift dep Algal m Iron dep	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial in	magery (B	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	ants (B14) a odor (C1) wheres along uced iron (C4 action in tilled cce (C7) ata (D9)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedimen Drift dep Algal m Iron dep	cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	magery (B	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da	ents (B14) ents (B14) endor (C1) theres along uced iron (C4 action in tilled cce (C7)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedimel Drift dep Algal m Iron dep Inundati Sparsel	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave	magery (B' surface (E	Water- Aquation True a Hydrog Oxidize Preser Recent Thin m Gauge 8) Other	stained lea c fauna (B quatic plan gen sulfide ed rhizosp nce of redu t iron redu nuck surfac or well da (Explain ir	at (D9) a Remarks)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedimen Drift dep Algal m Iron dep Inundati Sparsely Field Observ Surface Wat	cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations:	magery (B' surface (E	Water- Aquation True a Hydrog Oxidizo Preser Recen Thin m 7) Gauge 88) Other of	stained leact fauna (Bequatic plan gen sulfide gen sulfide gen fedut iron reduction well da (Explain in Depth (ince	station into (B14) and (B1	soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedimen Drift dep Algal m Iron dep Inundati Sparsely Field Observ Surface Wat Water Table	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge B) Other S No V No V	stained lead of the control of the c	stata) ints (B14) ints (B14) ints (B14) ints (B14) ints (B14) interes along uced iron (C4 iction in tillect iction in ti	soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Surface High wa Saturati Water n Sedimer Drift der Algal m Iron der Inundati Sparsel Field Observ Surface Wat Water Table Saturation P	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidizo Preser Recen Thin m 7) Gauge 88) Other of	stained lead of the control of the c	stata) ints (B14) ints (B14) ints (B14) ints (B14) ints (B14) interes along uced iron (C4 iction in tillect iction in ti	soils (C6	:s (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedimel Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ier Present? Present?	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedimel Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ter Present? Present?	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedimel Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ier Present? Present? pillary fringe)	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedimel Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ier Present? Present? pillary fringe)	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ier Present? Present? pillary fringe)	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Surface High wa Saturati Water n Sedime Drift dep Algal m Iron dep Inundati Sparsel Field Observ Surface Wat Water Table Saturation P (includes cap	cators (minimum of o water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial ir y vegetated concave vations: ier Present? Present? pillary fringe)	magery (B' surface (E Ye Ye	Water- Aquation True a Hydrog Oxidize Preser Recen Thin m T) Gauge 88) Other Control C	stained lead to fauna (Bayantic plan gen sulfide ged rhizosphate of reduction reduction well date (Explain in Depth (incompeth (inco	ental state of the	soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmsted County	Sampling Date: <u>2025-05-02</u>		
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: dp05		
Investigator(s): Andy Kranz	Sect	ion, Township, Range: S	S11 T107N R013W		
Lanform(hillslope, terrace, etc): Footslope		Local reli	ef (concave, convex, none): concave		
		Long: -92.34016 Datum: WGS 84			
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percen	nt slopes				
Are climatic / hydrologic conditions on the site typical	for this time of year?	Yes No	o (If no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology	Significantly disturbed?	Are "Normal (Circumstances" present? Yes No		
Are Vegetation , Soil , or Hydrology	naturally problematic?	(If needed, ex	xplain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site I	man chowing campli	ing point location	se transacte important features etc		
			is, transects, important reatures, etc.		
1	Yes No Yes No	Is the Sampled Area	within		
	Yes No	a Wetland?	Yes No		
Remarks: (Explain alternative procedures here or in					
Upland crop field sampled on foot of slope. Analysis		conditions indicates we	tter than normal precipitation conditions on-site at the		
time of survey.					
VEGETATION - Use scientific names of	plants.				
Tree Stratum (Plot size:30-ft (9.1-m) radius)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Worksheet		
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
3.			Total Number of Dominant Species		
4 5.			Across All Strata: 0 (B)		
	0%	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius	•		Prevalence Index worksheet:		
1.			Total % Cover of:Multiply by:		
3.			OBL species0 x1 =0		
3. 4.			FACW species0 x1 =0		
5.			FAC species0 x1 =0		
	0%	= Total Cover	FACU species 0 x1 = 0		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius O	R 3.28- by 3.28-ft square (1	m²) quadrat)	UPL species0 x1 =0		
1			Column Totals: $0 \times 1 = 0 \times 1 = 0$ (B)		
2			Prevalence Index = B/A = NaN		
3			Hydrophytic Vegetation Indicators:		
4			1 - Rapid Test for Hydrophytic Vegetation		
5 6			2 - Dominance Test is > 50%		
7.			$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$		
8.			4 - Morphological Adaptations ¹ (Provide		
9.			supporting data in Remarks or on a separate sheet)		
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
	0%	= Total Cover			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
2.			Hydrophytic Vegetation		
		= Total Cover	Present? Yes No _		
Remarks: (Include photo numbers here or on a sep-					
Residues of 2024 corn crop or consistent in density	with the surrounding upland	d.			

Profile Des	cription: (Describe Matrix	to the dep		ument the Redox Feat		r confirm	the absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR - 2/1	100	/				SiCL	
			/		· <u></u>			
10-18	2.5Y - 4/3	100	/				SiL	-
				-	·		· <u></u>	<u> </u>
							· 	-
¹ Type: C=C	oncentration, D=Dep	letion, RM=	 Reduced Matrix, M	1S=Maske	 d Sand Grair		Location: Pl	 L=Pore Lining, M=Matrix.
Hydric Soil I								Indicators for Problematic Hydric Soils ³ :
,	l (or Histel) (A1) und	defined	Sand	v Gleved N	Matrix (S4)			Coast Prairie Redox (A16)
	pipedon (A2) undefi			y Redox (S	` '			Dark Surface (S7)
Black H	listi (A3) undefined		Stripp	ed Matrix	(S6)			Iron-Manganese Masses (F12)
Hydrog	en Sulfide (A4)		Loam	y Mucky N	/lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loam	y Gleyed I	Matrix (F2)			Other (Explain in Remarks)
2 cm M	uck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
l — ·	d Below Dark Surfa	ce (A11)	Redo	x Dark Su	rface (F6)			hydrology must be present, unless disturbed or
	ark Surface (A12)				Surface (F7)			problematic.
	Mucky Mineral (S1)	,	Redo	x Depress	ions (F8)			
5 cm M	ucky Peat or Peat (S3)						
Restrictive L	.ayer (if observed):							
Type:						Hyd	Iric Soil Pres	sent? Yes No
Depth	(inches): <u></u>							
HYDROLO	GY							
-	drology Indicators:						9	Secondary Indicators (minimum of two required)
	cators (minimum of	one require			(D0)			Surface soil cracks (B6)
	water (A1)			stained le	` '		-	Drainage patterns (B10)
Saturati	ater table (A2)			c fauna (B	,		-	Dry-season water table (C2) Crayfish burrows (C8)
	narks (B1)			iquatic plai nen sulfide	e odor (C1)		-	Saturation visible on aerial imagery (C9)
	nt deposits (B2)			_	heres along	livina root	ts (C3)	Stunted or stressed plants (D1)
	posits (B3)			•	uced iron (C	•	(/	Geomorphic position (D2)
	at or crust (B4)				ction in tilled	•	- 6)	FAC-neutral test (D5)
Iron de	posits (B5)		Thin n	nuck surfac	ce (C7)		· -	
Inundat	ion visible on aerial	imagery (B	7) Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	e surface (E	88) Other	(Explain ir	Remarks)			
Field Observ	vations:							
Surface Wat	er Present?	Ye	es No	Depth (inc	:hes): <u></u>	_		
Water Table	Present?		es No _ -			Wet	tland Hydrol	ogy Present? Yes No _ 🗸
Saturation P (includes ca	resent? pillary fringe)	Υ€	es No	Depth (inc	:hes): <u></u>	_		
	corded Data (strean	n gauge, me	onitoring well, aeria	al photos, i	orevious insc	ections).	if available:	
	(99-,	g,	,, ,		, ,		
Remarks:								
itemarks.								

Project/Site: Lemon Hill 2025	City/Co	ounty: Little (Chute/Olmst	ed County	Sampling Date: 2	025-05-02	
Applicant/Owner: Ranger Power	City/Cc			e: MN			
Investigator(s): Andy Kranz	Sect			· ·		1	
				ef (concave, convex,			
Slope(%): 0-2 Lat: 44.09307				3		SS 84	
Soil Map Unit Name: 176: Garwin silty clay loam		NWI classification: PEM1D					
Are climatic / hydrologic conditions on the site typical for this time of y	vear?	Yes No 🗸 (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology Significantly				 Circumstances" prese			
Are Vegetation , Soil , or Hydrology naturally pro		, ,		plain any answers in	<u> </u>		
		,	,	,	,		
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point	location	s, transects, im	nportant featur	es, etc.	
Hydrophytic Vegetation Present? Yes <u>✓</u> No							
Hydric Soil Present? Yes <u>✓</u> No		Is the Sa a Wetlan	ampled Area id?	within	Yes	✓ No	
Wetland Hydrology Present? Yes No							
Remarks: (Explain alternative procedures here or in a separate report wet meadow component of a wetland complex located in a basin. A conditions on-site at the time of survey. VEGETATION - Use scientific names of plants.	nalysis of a	antecedent p	precipitation	conditions indicates v	wetter than normal p	orecipitation	
•		Dominant					
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Species?	Status	Dominance Test W	/orksheet		
1 2.			-	Number of Domina Are OBL, FACW, o		1 (A)	
3.					_	(, ,	
4.				Total Number of De Across All Strata:	ommant Species	<u>1</u> (B)	
5.				Percent of Domina	ant Species That		
	0%	= Total Co	ver	Are OBL, FACW, o	or FAC:	100% (A/B)	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)				Prevalence Index v	worksheet:		
1				Total % Cov	ver of: Mu	ultiply by:	
2					10 x1 =		
3				'	45 x1 =		
5.				FAC species	<u>5</u> x1 =		
J	0%	= Total Co	ver	FACU species	<u> </u>		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-				UPL species	0 x1 =	0	
Phalaris arundinacea, Reed Canary Grass	40%	yes	FACW	Column Totals:	<u>60</u> x1 =	<u>115</u> (B)	
2. <i>Typha X glauca</i> , hybrid cattail	10%	no	OBL	Prevale	ence Index = B/A =	1.917	
3. Urtica dioica, Stinging Nettle	5%	no	FACW	Hydrophytic Vegeta	ation Indicators:		
4. <u>Sambucus nigra</u> , Black Elder	5%	no	FAC		st for Hydrophytic Ve	agetation	
5				✓ 2 - Dominanc		getation	
6					the Index is $\leq 3.0^1$		
7				·	gical Adaptations ¹ (F	No. and all a	
8				supporting da	gicai Adaptations" (F ata in Remarks or or	rovide i a separate	
9			-	sheet)		4	
10.	60%	= Total Co	ver	PROBLEMAT	TC Hydrophytic Vege	etation ¹ (Explain)	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			VCI		hydric soil and wetla sent, unless disturbe		
1	-			Hydrophytic			
	0%	= Total Co	ver	Vegetation Present?	Ye	s _ 🗸 No	
Remarks: (Include photo numbers here or on a separate sheet,)				1			

Depth (inches) Color (moist)	% Colo	or (moist) %	Type ¹	Loc ² Tex	cture	Remarks
Turas Co-Cananahustian DoDaylatia	- DM-Dadua	ad Matrix MC-May	Lead Count Conin	21	De Des lising MeMakin	
Type: C=Concentration, D=Depletion	on, RM=Reduce	ed Matrix, MS=Mask	ked Sand Grain	s. Location	on: PL=Pore Lining, M=Matrix.	
ydric Soil Indicators: Histosol (or Histel) (A1) undefired Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)		Sandy Gleyed Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat Redox Dark S Depleted Dari Redox Depres	(S5) rix (S6) r/ Mineral (F1) d Matrix (F2) rix (F3) Surface (F6) k Surface (F7)		Indicators for Problemat Coast Prairie Redo Dark Surface (S7) Iron-Manganese M. Very Shallow Dark ✓ Other (Explain in R ³Indicators of hydro hydrology must be problematic.	x (A16) asses (F12) Surface (TF12)
estrictive Layer (if observed): Type: Depth (inches): remarks: It dig utilities. Soils are assumed to	o be hydric bas	sed on landscape po	osition and pres	Hydric Soi sence of hydrop		Yes <u> </u>
Type: Depth (inches): Depth (inches):	o be hydric bas	sed on landscape po	osition and pres			Yes <u> </u>
Type: Depth (inches): demarks: do dig utilities. Soils are assumed to	o be hydric bas	sed on landscape po	osition and pres		hytic vegetation. Secondary Indicators (min	nimum of two required)
Type: Depth (inches): lemarks: o dig utilities. Soils are assumed to //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one		ck all that apply)			hytic vegetation. Secondary Indicators (min	nimum of two required)
Type: Depth (inches): lemarks: o dig utilities. Soils are assumed to //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one Surface water (A1)		ck all that apply) <u>✓</u> Water-stained	leaves (B9)		hytic vegetation. Secondary Indicators (ming Surface soil cracks (Drainage patterns (B	nimum of two required) B6) 10)
Type: Depth (inches): lemarks: In dig utilities. Soils are assumed to the second of		ck all that apply) ✓ Water-stained Aquatic fauna	leaves (B9) (B13)		hytic vegetation. Secondary Indicators (minuments) Surface soil cracks (Drainage patterns (B Dry-season water tal	nimum of two required) B6) 10) ble (C2)
Type: Depth (inches): lemarks: o dig utilities. Soils are assumed to IDROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one Surface water (A1) High water table (A2) Saturation (A3)		ck all that apply) Water-stained Aquatic fauna True aquatic p	leaves (B9) (B13) olants (B14)		Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (C8	nimum of two required) B6) 10) ble (C2)
Type: Depth (inches): lemarks: In dig utilities. Soils are assumed to the second of		ck all that apply) V Water-stained Aquatic fauna True aquatic p Hydrogen sulfi	leaves (B9) (B13) olants (B14)	ence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on	nimum of two required) B6) 10) ole (C2) s) aerial imagery (C9)
Type: Depth (inches): Demarks: O dig utilities. Soils are assumed to TDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo	leaves (B9) (B13) olants (B14) ide odor (C1)	ence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on	nimum of two required) B6) 10) ble (C2) c) aerial imagery (C9) blants (D1)
Type: Depth (inches): Demarks: o dig utilities. Soils are assumed to dig utilities. Soils are assumed to digutilities.		ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re	leaves (B9) (B13) slants (B14) ide odor (C1) spheres along I	eence of hydrop	Secondary Indicators (ming Surface soil cracks (Drainage patterns (Bernald Dry-season water tale Crayfish burrows (Caesturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): Demarks: o dig utilities. Soils are assumed to dig utilities. Soils are assumed to digutilities.		ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re	leaves (B9) (B13) blants (B14) ide odor (C1) spheres along I educed iron (C4 duction in tilled	eence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): lemarks: lo dig utilities. Soils are assumed to dig utilities. Soils are assumed to digustilities. In digustilities. Soils are assumed to digustilities. Soils are assumed	required; chec	Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur	leaves (B9) (B13) Idants (B14) Ide odor (C1) Ispheres along I Ideduced iron (C4) Iduction in tilled Iface (C7) Idata (D9)	eence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): lemarks: o dig utilities. Soils are assumed to dig utilities. Soils are assumed to digustilities. S	required; chec	ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re	leaves (B9) (B13) Idants (B14) Ide odor (C1) Ispheres along I Ideduced iron (C4) Iduction in tilled Iface (C7) Idata (D9)	eence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): Demarks: O dig utilities. Soils are assumed to dig utilities. Suitant Indicators: TOROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imates. Sparsely vegetated concave suitable dig utilities.	required; chec	Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur	leaves (B9) (B13) Idants (B14) Ide odor (C1) Ispheres along I Ideduced iron (C4) Iduction in tilled Iface (C7) Idata (D9)	eence of hydrop	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): Demarks: O dig utilities. Soils are assumed to dig utilities. Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imates. Sparsely vegetated concave surface Water Present?	required; chec gery (B7) urface (B8)	ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur Gauge or well Other (Explain	leaves (B9) (B13) blants (B14) ide odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks)	iving roots (C3)) soils (C6)	Secondary Indicators (ming Surface soil cracks (Drainage patterns (BDry-season water tald Saturation visible on Stunted or stressed Geomorphic position FAC-neutral test (D5)	nimum of two required) B6) 10) Dle (C2) Dlaerial imagery (C9) Dlants (D1) (D2)
Type: Depth (inches): Demarks: o dig utilities. Soils are assumed to dig utilities. Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imates. Sparsely vegetated concave surface Water Present? Vater Table Present? Vater Table Present? aturation Present?	required; checongress (B7) urface (B8) Yes Yes	ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur Gauge or well Other (Explain	leaves (B9) (B13) blants (B14) ide odor (C1) spheres along I educed iron (C4 duction in tilled face (C7) data (D9) in Remarks)	iving roots (C3)) soils (C6)	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed	nimum of two required) B6) 10) ble (C2) s) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): lemarks: lo dig utilities. Soils are assumed to dig utilities. Soils are assumed to digustilities. In digustilities. Soils are assumed to digustilities. Soils are assumed	required; checo	ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur Gauge or well Other (Explain No Depth (i	leaves (B9) (B13) slants (B14) ide odor (C1) spheres along leduced iron (C4) duction in tilled face (C7) data (D9) in Remarks) inches): inches): inches):	iving roots (C3)) soils (C6) Wetland H	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position FAC-neutral test (D5 ydrology Present?	nimum of two required) B6) 10) ble (C2) aerial imagery (C9) blants (D1) (D2)
Type: Depth (inches): Demarks: O dig utilities. Soils are assumed to dig utilities. Soils are assumed to digutilities. Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imated Sparsely vegetated concave surface Water Present? Vater Table Present? Vater Table Present? Includes capillary fringe)	required; checo	ck all that apply) Water-stained Aquatic fauna True aquatic p Hydrogen sulfi Oxidized rhizo Presence of re Recent iron re Thin muck sur Gauge or well Other (Explain No Depth (i	leaves (B9) (B13) slants (B14) ide odor (C1) spheres along leduced iron (C4) duction in tilled face (C7) data (D9) in Remarks) inches): inches): inches):	iving roots (C3)) soils (C6) Wetland H	Secondary Indicators (min Surface soil cracks (Drainage patterns (B Dry-season water tal Crayfish burrows (CE Saturation visible on Stunted or stressed Geomorphic position FAC-neutral test (D5 ydrology Present?	nimum of two required) B6) 10) ble (C2) aerial imagery (C9) blants (D1) (D2)

Project/Site: Lemon Hill 2025	City/Co	ounty: <u>Little Chute/Olmst</u>	ed County Sampling Date: 2025-05-02		
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: dp07		
Investigator(s): Andy Kranz	Sect	ion, Township, Range: <u>S</u>	S11 T107N R013W		
Lanform(hillslope, terrace, etc): <u>Swale</u>		Local reli	ef (concave, convex, none): concave		
Slope(%): <u>0-2</u> Lat: <u>44.08968</u>		Long: -92.34022 Datum: WGS 84			
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes		NWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes N	o 🔪 (If no, explain in Remarks.)		
Are Vegetation 🧳 , Soil , or Hydrology Significantly	/ disturbed?	Are "Normal (Circumstances" present? Yes No		
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?	(If needed, ex	xplain any answers in Remarks.)		
					
SUMMARY OF FINDINGS - Attach site map showii	ng sampli	ing point location	s, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes <u>✓</u> No		Is the Sampled Area	within		
Hydric Soil Present? Yes ✓ No		a Wetland?	Yes _ ✓ No		
Wetland Hydrology Present? Yes ✓ No Remarks: (Explain alternative procedures here or in a separate rep					
Crop field wetland within a swale. Analysis of antecedent precipitat survey. VEGETATION - Use scientific names of plants.	ion condition	s indicates wetter than i	normal precipitation conditions on-site at the time of		
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet		
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
3			Total Number of Dominant Species Across All Strata: 0 (B)		
5.		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/I		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		1000	Prevalence Index worksheet:		
1.			Total % Cover of: Multiply by:		
2			OBL species0 x1 =0		
4			FACW species0 x1 =0		
5			FAC species0 x1 =0		
	0%	= Total Cover	FACU species0 x1 =0		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1	-m²) quadrat)	UPL species0 x1 =0		
1.			Column Totals: $0 \times 1 = 0$ (I		
2			Prevalence Index = B/A = NaN		
3			Hydrophytic Vegetation Indicators:		
4	· 		1 - Rapid Test for Hydrophytic Vegetation		
5	·		2 - Dominance Test is > 50%		
6.			3 - Prevalence Index is <= 3.0 ¹		
7			4 - Morphological Adaptations ¹ (Provide		
9.			supporting data in Remarks or on a separate		
10.			sheet)		
	0%	= Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explair		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problemati		
2			Hydrophytic		
	0%	= Total Cover	Vegetation Present? Yes ✓ No		
Remarks: (Include photo numbers here or on a separate sheet.) If 2024 crop are consistent in density with the surrounding upland. of wetland hydrology and hydric soil.	0%		Present? Yes <u>✓</u> No		



Profile Des	cription: (Describe Matrix	to the dep		ı ment the edox Feat		r confirn	n the absend	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
0-6	10YR - 2/1	100	/	70	Туре		SiCL	
6-14	10YR - 4/2	90	10YR-5/6	10	С	M	SiCL	-
0-14	101R - 4/2	90	101K-5/0	10		IVI	SICL	_ ====
							=	
							=	
					· ——		<u> </u>	-
					· ——		<u> </u>	-
¹ Type: C=Co	oncentration, D=Dep	 letion, RM=	Reduced Matrix, M	S=Masked	 d Sand Grain	ns.	² Location: PI	
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	(or Histel) (A1) und	lefined	Sandy	Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)
Histic E	pipedon (A2) undefi	ned	Sandy	/ Redox (S	S5)			Dark Surface (S7)
	isti (A3) undefined			ed Matrix	` '			Iron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5) uck (A10)			y Gleyed i ted Matrix	Matrix (F2)			Other (Explain in Remarks)
	d Below Dark Surfa	ce (A11)		CDark Su				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
	ark Surface (A12)	()			Surface (F7)			problematic.
Sandy I	Mucky Mineral (S1)		Redox	c Depress	ions (F8)			
5 cm M	ucky Peat or Peat (S3)						
Restrictive L	ayer (if observed):							
Туре:	<u></u>					Ну	dric Soil Pres	sent? Yes <u>✓</u> No
Depth ((inches): <u></u>					_		
HYDROLO	GY							
_	Irology Indicators:						<u> </u>	Secondary Indicators (minimum of two required)
	cators (minimum of water (A1)	one require	'	ply) stained le:	avec (B0)		 -	Surface soil cracks (B6) Drainage patterns (B10)
	ater table (A2)			stamed le: c fauna (B	` '		=	Dry-season water table (C2)
Saturati	` ,			quatic plai	,		-	Crayfish burrows (C8)
l —	narks (B1)				odor (C1)		_	✓ Saturation visible on aerial imagery (C9)
Sedime	nt deposits (B2)		Oxidize	ed rhizosp	heres along	living roo	ots (C3)	Stunted or stressed plants (D1)
	posits (B3)				uced iron (C		_	✓ Geomorphic position (D2)
— -	at or crust (B4)				iction in tilled	l soils (C	·6)	FAC-neutral test (D5)
	oosits (B5) ion visible on aerial	imaneny (R		uck surfa or well da				
	y vegetated concave				Remarks)			
			<u> </u>					
Field Observ Surface Wat		V	es No _ -/	Denth (inc	hes):			
Water Table			es No			 We	etland Hydrol	ogy Present? Yes <u>✓</u> No
Saturation P			es No _ 🗸			_		
	pillary fringe)		anitarina	l nh-+-	arandana in	no ati = :: - `	if overlight.	
Describe Re	corded Data (strean	i gauge, m	onitoring well, aeria	ı pnotos, p	orevious insp	ections),	ii available:	
Remarks:								

Slope(%): 8-15 Lat: 44.08958 Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes Are climatic / hydrologic conditions on the site typical for this time of Are Vegetation Are Vegetation Soil Or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	ion, Township, Range: State Local reliction Local reliction Long: -92.34033 Yes Name Name	e: MN Sampling Point: dp08 S11 T107N R013W ef (concave, convex, none): concave
Lanform(hillslope, terrace, etc): Footslope Slope(%): 8-15 Lat: 44.08958 Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes Are climatic / hydrologic conditions on the site typical for this time of the Vegetation , Soil , or Hydrology Significant Are Vegetation , Soil , or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	Long: -92.34033 Yes N Are "Normal ((If needed, e)	ef (concave, convex, none): concave Datum: WGS 84 NWI classification: O (If no, explain in Remarks.) Circumstances" present? Yes No
Lanform(hillslope, terrace, etc): Footslope Slope(%): 8-15 Lat: 44.08958 Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes Are climatic / hydrologic conditions on the site typical for this time of the Vegetation , Soil , or Hydrology Significant Are Vegetation , Soil , or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	Long: -92.34033 Yes N Are "Normal ((If needed, e)	ef (concave, convex, none): concave Datum: WGS 84 NWI classification: O (If no, explain in Remarks.) Circumstances" present? Yes No
Soil Map Unit Name: 203: Joy silt loam, 1 to 4 percent slopes Are climatic / hydrologic conditions on the site typical for this time of Are Vegetation Are Vegetation , Soil , or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	YesN Are "Normal ((If needed, ex	NWI classification: o (If no, explain in Remarks.) Circumstances" present? Yes No
Are climatic / hydrologic conditions on the site typical for this time of Are Vegetation, Soil, or Hydrology Significant Are Vegetation, Soil, or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	Yes N Are "Normal ((If needed, ex	o (If no, explain in Remarks.) Circumstances" present? Yes No
Are climatic / hydrologic conditions on the site typical for this time of Are Vegetation, Soil, or Hydrology Significant Are Vegetation, Soil, or Hydrology naturally p	year? y disturbed? roblematic? ng sampli	Yes N Are "Normal ((If needed, ex	Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally p	roblematic?	(If needed, ex	
<u> </u>	ng sampli	(If needed, ex	
	<u> </u>	ing point locatior	
	<u> </u>	ing point locatior	
SUMMARY OF FINDINGS - Attach site map showi	o 🗸	T .	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N		Is the Sampled Area	within
Hydric Soil Present? Yes N		a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes N Remarks: (Explain alternative procedures here or in a separate re			
Upland crop field sampled on a slope. Analysis of antecedent pred survey. VEGETATION - Use scientific names of plants.	ipitation conc	mions mulcales weller i	nan normal precipitation conditions on-site at the time of
Tree Stratum (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3.			Total Number of Dominant Species Across All Strata: 0 (B)
4.			Percent of Dominant Species That
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	Are OBL, FACW, or FAC: 0% (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species 0 x1 = 0
5			FAC species $0 \text{ x1} = 0$
	0%	= Total Cover	FACU species 0 x1 = 0 UPL species
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	8-ft square (1	m²) quadrat)	
1			Column Totals: $0 \times 1 = 0$ (B) Prevalence Index = B/A = NaN
2.			
3. 4.			Hydrophytic Vegetation Indicators:
5			1 - Rapid Test for Hydrophytic Vegetation
6.			2 - Dominance Test is > 50%
7.			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10			 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	0%	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			
2.	0%	= Total Cover	Hydrophytic Vegetation Present? Yes No✓
Remarks: (Include photo numbers here or on a separate sheet.) If 2024 crop are consistent in density with the surrounding upland absence of wetland hydrology and hydric soil.	Potential veç	getation is assumed not	to be hydrophytic based on landscape position and



Depth (inches)	Color (moist)	<u></u> %	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-18	10YR - 2/1	100	/				SiCL	
18-24	10YR - 4/3	100	/				SiCL	
			<u> </u>					
			_					
,								
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, M	1S=Masked	d Sand Grain	ıs. ²	Location: PL	=Pore Lining, M=Matrix.
ydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histoso	l (or Histel) (A1) und	efined		y Gleyed N				Coast Prairie Redox (A16)
	pipedon (A2) undefi	ned		y Redox (S	-			Dark Surface (S7)
	listi (A3) undefined			ed Matrix	. ,			Iron-Manganese Masses (F12)
′ ັ	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				Other (Explain in Remarks)
	uck (A10)	oo (A11)		eted Matrix	• •			³ Indicators of hydrophytic vegetation and wetla
	d Below Dark Surfac	æ (AII)		x Dark Sur				hydrology must be present, unless disturbed problematic.
	vark Surface (A12)				Surface (F7)			p. car.c.
	Mucky Mineral (S1) lucky Peat or Peat (S	23)	Redox	x Depressi	ons (F8)			
	· ·							
	.ayer (if observed):					Hud	ric Soil Pres	ont? You No w
Type:						nyu	IIC SUII FIES	ent? Yes No•
Depth demarks:	(inches): <u></u>					_		
	(inches): <u></u>					_		
emarks:	БGY							
emarks: 'DROLO /etland Hyd	GY drology Indicators:			orks)			<u>s</u>	econdary Indicators (minimum of two required)
remarks: 'DROLO 'etland Hydrimary Indi	PGY drology Indicators: cators (minimum of o	one required			ayes (RO)	_	<u>s</u>	Surface soil cracks (B6)
remarks: 'DROLO Vetland Hydrimary Indi Surface	drology Indicators: cators (minimum of o	one required	Water-	stained lea	` '		<u>s</u>	Surface soil cracks (B6) Drainage patterns (B10)
remarks: rDROLO Vetland Hydrimary Indi Surface High wa	drology Indicators: cators (minimum of e water (A1) ater table (A2)	one required	Water-	stained lea c fauna (B	13)	_	S	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
POROLO Vetland Hydrimary Indi Surface High wa	drology Indicators: cators (minimum of elements) water (A1) ater table (A2) ion (A3)	one required	Water- Aquati True a	stained lea c fauna (B quatic plar	13) nts (B14)		<u>S</u> 	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
POROLO Vetland Hydrimary Indi Surface High wa Saturati Water r	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)	one required	Water- Aquati True a Hydroç	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14) odor (C1)	livina roo	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
TOROLO Vetland Hydrimary Indi Surface High wa Saturati Water r Sedime	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2)	one required	Water- Aquati True a Hydroç Oxidiz	estained lea c fauna (B quatic plar gen sulfide ed rhizosp	13) hts (B14) hodor (C1) heres along	•	 - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
TOROLO Vetland Hydrimary Indi Surface High wa Saturati Water r Sedime Drift de	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1)	one required	Water- Aquati True a Hydroo Oxidize Preser	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu	13) hts (B14) hodor (C1) heres along uced iron (C4)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Property of the property of th	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3)	one required	Water- Aquati True a Hydrog Oxidize Preser Recen	estained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Property of the control of the contr	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4)		Water- Aquati True a Hydro Oxidize Preser Recen Thin m	estained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac	nts (B14) codor (C1) heres along uced iron (C4 ction in tilled	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
POROLO Vetland Hydrimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat	drology Indicators: cators (minimum of or water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5)	imagery (B7	Water- Aquati True a Hydro Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da	nts (B14) codor (C1) heres along uced iron (C4 ction in tilled	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	imagery (B7	Water- Aquati True a Hydro Oxidize Preser Recen Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da	nts (B14) nodor (C1) heres along uced iron (C4 ction in tilled the (C7) ata (D9)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave	imagery (B7 e surface (B8	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge B) Other	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) nodor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks)	1)	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) marks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present?	imagery (B7 e surface (B8 Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge Other	estained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) rodor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes):	4) I soils (C6	======================================	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
rimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidiz Preser Recen Thin m Gauge Other	estained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc	nts (B14) redor (C1) heres along uced iron (C4 ction in tilled ce (C7) ata (D9) Remarks) hes):	4) I soils (C6	- -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present? Present? Present? present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hordor (C1) heres along uced iron (C2 ction in tilled ce (C7) hata (D9) hemarks) hes): hes):	1) I soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present? Present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hordor (C1) heres along uced iron (C2 ction in tilled ce (C7) hata (D9) hemarks) hes): hes):	1) I soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
/DROLO /etland Hydrimary Indi Surface High wa Saturati Water r Sedime Drift de Algal m Iron dej Inundat Sparsel ield Observ urface Wat /ater Table aturation P ncludes ca	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present? Present? Present? present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hordor (C1) heres along uced iron (C2 ction in tilled ce (C7) hata (D9) hemarks) hes): hes):	1) I soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
Property of the control of the contr	drology Indicators: cators (minimum of of water (A1) ater table (A2) ion (A3) narks (B1) nt deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial y vegetated concave vations: ier Present? Present? Present? present?	imagery (B7) e surface (B8 Yes Yes	Water- Aquati True a Hydrog Oxidize Preser Recen Thin m Gauge S	stained lea c fauna (B quatic plar gen sulfide ed rhizosp nce of redu t iron redu nuck surfac e or well da (Explain in Depth (inc Depth (inc	13) hts (B14) hordor (C1) heres along uced iron (C2 ction in tilled ce (C7) hata (D9) hemarks) hes): hes):	1) I soils (C6	is (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)

Project/Site: Lemon Hill 2025	City/Co	unty: Olmsted County	Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power		State	e: MN Sampling Point: dp09
Investigator(s): Andy Kranz	Secti		
Lanform(hillslope, terrace, etc): Backslope		Local relie	ef (concave, convex, none): none
Slope(%): <u>35+</u> Lat: <u>44.08549</u>		Long: <u>-92.33905</u>	Datum: WGS 84
Soil Map Unit Name: 468: Otter silt loam, channeled			NWI classification: PEM1D
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes No	o 🗸 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	/ disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally pr	oblematic?		plain any answers in Remarks.)
 			
SUMMARY OF FINDINGS - Attach site map showing	ng sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled Area	within
Hydric Soil Present? Yes No		a Wetland?	Yes No _ 🗸
Wetland Hydrology Present? Yes No			
Remarks: (Explain alternative procedures here or in a separate rep Upland roadside slope. Analysis of antecedent precipitation condition		wetter than normal pred	cipitation conditions on-site at the time of survey.
Communication of the state of t		Trottor triotir from pro-	
VEGETATION - Use scientific names of plants.			
Teelinine teelestenene mannes en plantes	Absolute	Dominant Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Dominance Test Worksheet
1			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3. 4.			Total Number of Dominant Species Across All Strata:1 (B)
5.	<u> </u>		Percent of Dominant Species That
	0%	= Total Cover	Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4.			FACW species0 x1 =0
5	<u> </u>		FAC species $0 \times 1 = 0$
	0%	= Total Cover	FACU species85 x1 =340
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	3-ft square (1-	-m²) quadrat)	UPL species $0 \times 1 = 0$
Bromus inermis, Smooth Brome	85%	yes FACU	Column Totals: $85 \times 1 = 340 \times 10^{-10}$ (B)
2			Prevalence Index = B/A = 4.000
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5. 6.			2 - Dominance Test is > 50%
6. 7.			$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9.			supporting data in Remarks or on a separate sheet)
10	<u> </u>		PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	85%	= Total Cover	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	·		Hydrophytic
2			Vegetation
	0%	= Total Cover	Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)			

Depth (inches) Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
	·							
Type: C=Concentration, D=De		educed Matrix, M	S=Masked	Sand Grair		ocation: PL=	Pore Lining, M=Matrix.	
lydric Soil Indicators: Histosol (or Histel) (A1) u Histic Epipedon (A2) undefined Black Histi (A3) undefined Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Sur Thick Dark Surface (A12) Sandy Mucky Mineral (S1 5 cm Mucky Peat or Peat	ndefined I face (A11)) (S3)	Sandy Sandy Strippo Loamy Loamy Peplet Redox	/ Gleyed M / Redox (Si ed Matrix (y Mucky Mi y Gleyed M ted Matrix (x Dark Surf ted Dark Si x Depression	atrix (S4) 5) S6) ineral (F1) fatrix (F2) (F3) face (F6) urface (F7)			ndicators for Problematic Hydric S Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F1: Very Shallow Dark Surface (Tother (Explain in Remarks) 3Indicators of hydrophytic very hydrology must be present, problematic.	2) TF12) getation and we
testrictive Layer (if observed)								Voc. No.
Type: <u></u> Depth (inches): <u></u> demarks: Io dig roadside potential utiliti	es				Hydri	c Soil Prese	nt?	Yes No _
Depth (inches):	es				Hydri 	c Soil Prese	nt?	TesNO _
Depth (inches): temarks: lo dig roadside potential utiliti /DROLOGY /vetland Hydrology Indicators:					Hydri		econdary Indicators (minimum of t	
Depth (inches): temarks: lo dig roadside potential utiliti /DROLOGY /etland Hydrology Indicators: rrimary Indicators (minimum of		•			Hydri		econdary Indicators (minimum of t Surface soil cracks (B6)	
Depth (inches): temarks: lo dig roadside potential utiliti /DROLOGY Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1)		Water-	stained lea	, ,	Hydri		econdary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10)	
Depth (inches): temarks: lo dig roadside potential utiliti /DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of Surface water (A1) High water table (A2)		Water-s	stained lea c fauna (B1	L3)	Hydri		econdary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	
Depth (inches): temarks: lo dig roadside potential utiliti /DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3)		Water- Aquatio True ao	stained lea c fauna (B1 quatic plan	l3) ts (B14)	Hydri		condary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti **TDROLOGY** Vetland Hydrology Indicators: rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)		Water- Aquatic True ac Hydrog	stained lea c fauna (B1 quatic plan gen sulfide	ts (B14) odor (C1)		<u>Se</u>	condary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima	two required)
Depth (inches): demarks: Io dig roadside potential utiliti DROLOGY Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)		Water- Aquatio True ao Hydrog Oxidize	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph	ts (B14) odor (C1) neres along	living roots	<u>Se</u>	econdary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
Depth (inches): demarks: Io dig roadside potential utiliti **TOROLOGY** Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)		Water-t Aquatio True ao Hydrog Oxidize Presen	stained lea c fauna (B1 quatic plan gen sulfide ed rhizosph nce of reduc	ts (B14) odor (C1) neres along ced iron (C4	living roots	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY //etland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4)		Water-s Aquatio True ao Hydrog Oxidize Presen Recent	stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nce of reduct t iron reduct	ts (B14) odor (C1) heres along ced iron (C4) ction in tilled	living roots	<u>Se</u>	econdary Indicators (minimum of t Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5)	f one required;	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m	stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nice of reduc t iron reduc nuck surface	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled	living roots	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of the color	f one required;	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nce of reduct t iron reduc	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	living roots	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY //etland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concar	f one required;	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge	stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nice of reduct t iron reduct or well dat	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9)	living roots	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concalield Observations:	one required; al imagery (B7) ve surface (B8)	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nice of reduct t iron reduct t iron reduct or well dat (Explain in	ts (B14) odor (C1) neres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	living roots	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1 Geomorphic position (D2)	two required)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of the color	one required; al imagery (B7) ve surface (B8)	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nice of reduct t iron reduct nuck surfact or well dat (Explain in	ts (B14) odor (C1) heres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks)	living roots 1) I soils (C6)	(C3)	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	two required) agery (C9)
Depth (inches): temarks: lo dig roadside potential utiliti //DROLOGY Vetland Hydrology Indicators: rrimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concalield Observations:	one required; al imagery (B7) ve surface (B8) Yes Yes	Water-s Aquatio True ac Hydrog Oxidize Presen Recent Thin m Gauge Other (stained lead c fauna (B1 quatic plant gen sulfide ed rhizosph nice of reduct t iron reduct or well dat (Explain in Depth (inch	ts (B14) odor (C1) weres along ced iron (C4 ction in tilled e (C7) ta (D9) Remarks) mes): mes):	living roots 1) I soils (C6)	<u>Se</u>	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	two required)
Depth (inches): lemarks: lo dig roadside potential utiliti //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of the color	one required; al imagery (B7) ve surface (B8) Yes Yes Yes	Water	stained lear c fauna (B1 quatic plant gen sulfide ed rhizosph nce of reduct t iron reduct or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) heres along ced iron (C4) ction in tilled e (C7) ta (D9) Remarks) hes): hes):	living roots i) soils (C6)	(C3)	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	two required) agery (C9)
Depth (inches): emarks: o dig roadside potential utiliti "DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aeria Sparsely vegetated concative (A1) ield Observations: urface Water Present? /ater Table Present? aturation Present? includes capillary fringe)	one required; al imagery (B7) ve surface (B8) Yes Yes Yes	Water	stained lear c fauna (B1 quatic plant gen sulfide ed rhizosph nce of reduct t iron reduct or well dat (Explain in Depth (inch Depth (inch	ts (B14) odor (C1) heres along ced iron (C4) ction in tilled e (C7) ta (D9) Remarks) hes): hes):	living roots i) soils (C6)	(C3)	econdary Indicators (minimum of to Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial ima Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)	two required) agery (C9)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmsted County	Sampling Date: 2025-05-02		
Applicant/Owner: Ranger Power			e: MN Sampling Point: dp10		
Investigator(s): Andy Kranz					
		Local relief (concave, convex, none): concave			
Slope(%): <u>3-7</u> Lat: <u>44.06038</u>		Long: <u>-92.3409</u>	Datum: WGS 84		
Soil Map Unit Name: 23: Skyberg silt loam, 0 to 3 percent slopes			NWI classification:		
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes N	o 🔪 (If no, explain in Remarks.)		
Are Vegetation , Soil , or Hydrology Significantly	disturbed?	Are "Normal (Circumstances" present? Yes , No		
Are Vegetation , Soil , or Hydrology naturally pro	oblematic?		plain any answers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map showin	ıg sampli	ing point location	s, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No		Is the Sampled Area a Wetland?	within Yes No <u>✓</u>		
Wetland Hydrology Present? Yes No					
Remarks: (Explain alternative procedures here or in a separate republic Upland crop field sampled in a broad, shallow swale. Data point is wetter than normal precipitation conditions on-site at the time of sur	representativ	ve of much of the field.	Analysis of antecedent precipitation conditions indicates		
VEGETATION - Use scientific names of plants.					
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet		
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
3.			Total Number of Dominant Species Across All Strata: 1 (B)		
5.			Percent of Dominant Species That		
	0%	= Total Cover	Are OBL, FACW, or FAC:		
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)			Prevalence Index worksheet:		
1			Total % Cover of: Multiply by:		
2			OBL species0 x1 =0		
3			FACW species 0 x1 = 0		
5.			FAC species0 x1 =0		
	0%	= Total Cover	FACU species 2 x1 = 8		
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28	-ft square (1	m²) quadrat)	UPL species0 x1 =0		
1. <u>Taraxacum officinale</u> , Common Dandelion	2%	yesFACU_	Column Totals: $\underline{}$ $\underline{}$ $\underline{}$ $\underline{}$ $\underline{}$ $\underline{}$ (B)		
2			Prevalence Index = B/A = 4.000		
3			Hydrophytic Vegetation Indicators:		
4			1 - Rapid Test for Hydrophytic Vegetation		
5 6.			2 - Dominance Test is > 50%		
6			$\underline{}$ 3 - Prevalence Index is $\leq 3.0^1$		
8			4 - Morphological Adaptations ¹ (Provide		
9.			supporting data in Remarks or on a separate sheet)		
10			PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)		
	2%	= Total Cover			
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius) 1			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
2.			Hydrophytic Vegetation		
	0%	= Total Cover	Present? Yes No 🗸		
Remarks: (Include photo numbers here or on a separate sheet.) Alfalfa crop is healthy. Taraxacum officinale present throughout the	field.				

Profile Description: (Describe to the depth r	needed to document the indicator or o Redox Features	onfirm the abser	nce of indicators.)
Depth (inches) Color (moist) % C	Color (moist) % Type ¹	Loc ² Texture	Remarks
			<u> </u>
			- -
			-
¹ Type: C=Concentration, D=Depletion, RM=Rec	duced Matrix, MS=Masked Sand Grains.	. ² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ³ :
Histosol (or Histel) (A1) undefined	Sandy Gleyed Matrix (S4)		Coast Prairie Redox (A16)
Histic Epipedon (A2) undefined	Sandy Redox (S5)		Dark Surface (S7)
Black Histi (A3) undefined Hydrogen Sulfide (A4)	Stripped Matrix (S6) Loamy Mucky Mineral (F1)		Iron-Manganese Masses (F12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (TF12)
2 cm Muck (A10)	Depleted Matrix (F3)		Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or
Thick Dark Surface (A12)	Depleted Dark Surface (F7)		problematic.
Sandy Mucky Mineral (S1)	Redox Depressions (F8)		
5 cm Mucky Peat or Peat (S3)			
Restrictive Layer (if observed):			
Type: <u></u>		Hydric Soil Pre	esent? Yes No
Depth (inches):		.	
HYDROLOGY			
Wetland Hydrology Indicators:	beet and the second of		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; c Surface water (A1)	Water-stained leaves (B9)		Surface soil cracks (B6) Drainage patterns (B10)
High water table (A2)	Aquatic fauna (B13)		Dry-season water table (C2)
Saturation (A3)	True aquatic plants (B14)		Crayfish burrows (C8)
Water marks (B1)	Hydrogen sulfide odor (C1)		Saturation visible on aerial imagery (C9)
Sediment deposits (B2)	Oxidized rhizospheres along liv	ring roots (C3)	Stunted or stressed plants (D1)
Drift deposits (B3)	Presence of reduced iron (C4)		Geomorphic position (D2)
Algal mat or crust (B4)			
	Recent iron reduction in tilled s	oils (C6)	FAC-neutral test (D5)
Iron deposits (B5)	Thin muck surface (C7)	oils (C6)	
Inundation visible on aerial imagery (B7)	Thin muck surface (C7) Gauge or well data (D9)	oils (C6)	
	Thin muck surface (C7)	soils (C6)	
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations:	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks)	coils (C6)	
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Yes_	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches):		FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes _	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes _	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches):		FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? Yes _	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)
Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	. Wetland Hydro	FAC-neutral test (D5)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmst	ed County	s	Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power			State	e: MN Sa	ampling Point: dp11
Investigator(s): Andy Kranz	Sect				
Lanform(hillslope, terrace, etc): Depression				ief (concave, convex, non-	e): concave
Slope(%): 0-2 Lat: 44.04077		_ Long: <u>-92</u>	.28405		Datum: WGS 84
Soil Map Unit Name: N501B2: Downs silt loam, 2 to 6 percent slope	es, moderately	/ eroded		NWI classification	n: PFO1D
Are climatic / hydrologic conditions on the site typical for this time of	f year?	Y	es N	o 🗸 (If no, explain in	Remarks.)
Are Vegetation , Soil , or Hydrology Significant	ly disturbed?	А	re "Normal (Circumstances" present?	Yes , No
Are Vegetation , Soil , or Hydrology naturally p	roblematic?			kplain any answers in Rer	<u> </u>
					
SUMMARY OF FINDINGS - Attach site map showi	ng sampli	ing point	t location	ıs, transects, impo	rtant features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> N		Ic the Sc	ampled Area	within	
Hydric Soil Present? Yes N N N N N N N N N N N N N		a Wetlan		WILLIIII	Yes <u> </u>
Wetland Hydrology Present? Yes Ves N					
Remarks: (Explain alternative procedures here or in a separate re Forested wetland in a depression. Analysis of antecedent precipita		s indicates	wetter than	normal precipitation cond	litions on-site at the time of
survey.					
VEGETATION - Use scientific names of plants.					
	Absolute	Dominant	Indicator		
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover	Species?	Status	Dominance Test Works	sheet
1. Quercus macrocarpa, Burr Oak	60%	yes	FAC	Number of Dominant S	
2. Acer negundo , Ash-Leaf Maple			<u>FAC</u>	Are OBL, FACW, or FA	AC: <u>5</u> (A)
3				Total Number of Domir Across All Strata:	nant Species <u>5</u> (B)
4					
5	90%	= Total Co		Percent of Dominant S Are OBL, FACW, or FA	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	90%	= Total Co	vei	Duranda and Index words	
1. Sambucus nigra, Black Elder	30%	yes	FAC	Prevalence Index work	.sneet:
Ribes missouriense, Missouri Gooseberry			UPL	Total % Cover of	
3					<u>0</u> x1 = <u>0</u>
4.				FACW species	45 x1 = 90
5				•	125 x1 = 375
	NaN%	= Total Co	ver	· ·	9 x1 = 36
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.2	8-ft square (1	m²) quadra	at)	UPL species	NaN x1 = NaN
1. Phalaris arundinacea, Reed Canary Grass	25%	yes	FACW	Column Totals:	<u>NaN</u> x1 = <u>NaN</u> (B) Index = B/A = NaN
2. <u>Urtica dioica</u> , Stinging Nettle	20%	yes	FACW	Prevalence	Index = B/A = NaN
3. <u>Viola pubescens, Downy Yellow Violet</u>	5%	no	<u>FACU</u>	Hydrophytic Vegetation	ı Indicators:
4. Geum canadense, White Avens	5%	no	FAC	1 - Rapid Test for	Hydrophytic Vegetation
5. Allium tricoccum, Ramp		<u>no</u>	<u>FACU</u>	✓ 2 - Dominance Te	est is > 50%
6. Geranium maculatum, Spotted Crane's-Bill	2%	no	FACU	3 - Prevalence Inc	dex is $<= 3.0^1$
7				4 - Morphological	Adaptations ¹ (Provide
8				supporting data in sheet)	n Remarks or on a separate
9				•	Hydrophytic Vegetation ¹ (Explain)
10.	59%	= Total Co	ver		
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)		rotal Co		Indicators of hydr must be present,	ric soil and wetland hydrology , unless disturbed or problematic.
1.				Hydrophytic	
2				Vegetation	Voc. 🗸 No.
	0%	= Total Co	ver	Present?	Yes No
Remarks: (Include photo numbers here or on a separate sheet.)					
I and the second					

Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
0-14	10YR - 2/1	100	/				SiCL		
14-20	7.5YR - 3/1	100	/				SiCL		
20-26	7.5YR - 4/2	90	5YR-4/6	10		М	SiCL		
20 20	7.011		0110 110				- 0.02		
							-		
							-		
								_	
Type: C=C	oncentration, D=Dep	letion, RM=I	Reduced Matrix, M	S=Masked	d Sand Grair	ns.	Location: Pl	L=Pore Lining, M=Matrix.	
lydric Soil I	ndicators:							Indicators for Problematic Hyd	ric Soils ³ :
	l (or Histel) (A1) und			y Gleyed M	, ,			Coast Prairie Redox (A16)
	pipedon (A2) undefi	ned		y Redox (S	-			Dark Surface (S7)	
	listi (A3) undefined			ed Matrix				Iron-Manganese Masses	(F12)
<u> </u>	en Sulfide (A4)				Mineral (F1)			Very Shallow Dark Surface	, ,
	d Layers (A5) luck (A10)			y Gleyed N ted Matrix	` '			Other (Explain in Remark	,
	ed Below Dark Surfa	ce (A11)		x Dark Sur				³ Indicators of hydrophytic hydrology must be prese	
	ark Surface (A12)	(- !==)			Surface (F7)			problematic.	one, anness aistarbea
	Mucky Mineral (S1)			x Depressi	` '				
5 cm M	lucky Peat or Peat (S3)							
estrictive L	ayer (if observed):								
Type:	<u></u>					Hyd	dric Soil Pres	sent?	Yes 🔽 No
						_ , .			
Depth Remarks:	(inches): <u></u>					_			
emarks:									
emarks:	o G Y								
Remarks: 'DROLO Vetland Hyd	OGY drology Indicators:	one require	l: check all that an	nlvl			<u> </u>	Secondary Indicators (minimum Surface soil cracks (B6)	of two required)
Remarks: /DROLO Vetland Hyderimary India	PGY drology Indicators: cators (minimum of	one required			aves (B9)		<u> </u>	Secondary Indicators (minimum Surface soil cracks (B6) Drainage patterns (B10)	of two required)
Pemarks: /DROLO Vetland Hyderimary Indi Surface	OGY drology Indicators:	one required	Water-	pply) stained lea c fauna (B	` '		<u> </u>	Surface soil cracks (B6)	
Pemarks: /DROLO Vetland Hyderimary Indi Surface	drology Indicators: cators (minimum of water (A1) ater table (A2)	one required	Water-	stained lea	13)		<u>S</u>	Surface soil cracks (B6) Drainage patterns (B10)	
Pemarks: Primary Indi Surface High wa Saturat	drology Indicators: cators (minimum of water (A1) ater table (A2)	one required	Water- Aquatio True a	stained lea c fauna (B	13) nts (B14)		<u>S</u> -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)	2)
Processing Control of the Control of	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3)	one required	Water Aquatio True ao Hydrog	stained lea c fauna (B quatic plar gen sulfide	13) nts (B14)	living roc		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8)	imagery (C9)
YDROLO Vetland Hyd rimary Indi Surface High wa Saturat Water r Sedime Drift de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ent deposits (B2) posits (B3)	one required	Water Aquatic True ac Hydrog Oxidize	estained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu	13) hts (B14) hodor (C1) heres along uced iron (C4)	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
Verland Hydrimary Indi Surface High water r Sedime Drift de Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3) at or crust (B4)	one required	Water Aquatic True ac Hydrog Oxidize Presen Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu	13) nts (B14) odor (C1) heres along uced iron (C4 ction in tilled	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants	imagery (C9)
Verland Hydrimary Indi Surface High water r Sedime Drift de Algal m	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5)	·	Water Aquation True and Hydrog Oxidize Present Recent	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac	13) hts (B14) codor (C1) heres along uced iron (C4 ction in tilled	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
Vetland Hydrimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of ewater (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5) ion visible on aerial	imagery (B7	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	nts (B14) redoor (C1) heres along uced iron (C4 ction in tilled te (C7) ata (D9)	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
Vetland Hydrimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ant deposits (B2) posits (B3) at or crust (B4) posits (B5)	imagery (B7	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m	stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da	13) hts (B14) codor (C1) heres along uced iron (C4 ction in tilled	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
Verland Hydrimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concaver vations:	imagery (B7 e surface (B	Water Aquatio True an Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu nuck surfac e or well da (Explain in	nts (B14) dodor (C1) heres along uced iron (Coction in tilled ce (C7) ata (D9)	4)	- - - - ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
Verland Hydrimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) ont deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present?	imagery (B7 e surface (Bi	Water Aquation True and Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lea c fauna (B quatic plar gen sulfide ed rhizospl nce of redu t iron redu- nuck surfac or well da (Explain in	nts (B14) rodor (C1) heres along uced iron (C- ction in tillect ce (C7) ata (D9) Remarks) hes):	4) I soils (C	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
Verland Hydrimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) and deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present? Present?	imagery (B7 e surface (Bi Ye Ye	Water	stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of reduct iron redunuck surface or well da (Explain in Depth (incl Depth (incl	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tillect ce (C7) ata (D9) hess): hes):	4) I soils (C	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2)	imagery (C9)
VDROLO Vetland Hydrimary Indi Surface High water r Sedime Drift de Algal m Iron de Inundat Sparsel ield Observariace Water Table iaturation F	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) and deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present? Present?	imagery (B7 e surface (Bi Ye Ye	Water Aquation True and Hydrog Oxidize Presen Recent Thin m Gauge 8) Other (stained lead of fauna (B quatic plan gen sulfide ed rhizosplance of reduct iron redunuck surface or well da (Explain in Depth (incl Depth (incl	13) hts (B14) hodor (C1) heres along uced iron (C- ction in tillect ce (C7) ata (D9) hess): hes):	4) I soils (C	ts (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
Verland Hydrimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of water (A1) ater table (A2) ion (A3) marks (B1) and deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial by vegetated concave vations: ter Present? Present?	imagery (B7 e surface (B Ye Ye Ye	Water	stained leace fauna (Baquatic plaringer sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incle Depth (incle plate))	13) Ints (B14) Indoor (C1) Interes along Intere	4) I soils (Cr	ts (C3) - - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
rimary Indi Surface High wa Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave vations: ter Present? Present? Present? Present?	imagery (B7 e surface (B Ye Ye Ye	Water	stained leace fauna (Baquatic plaringer sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incle Depth (incle plate))	13) Ints (B14) Indoor (C1) Interes along Intere	4) I soils (Cr	ts (C3) - - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
emarks: (DROLO /etland Hydrimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel ield Observurface Water Table aturation F nocludes ca	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave vations: ter Present? Present? Present? Present?	imagery (B7 e surface (B Ye Ye Ye	Water	stained leace fauna (Baquatic plaringer sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incle Depth (incle plate))	13) Ints (B14) Indoor (C1) Interes along Intere	4) I soils (Cr	ts (C3) - - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)
emarks: (DROLO (etland Hydrimary Indi Surface High was Saturat Water r Sedime Drift de Algal m Iron de Inundat Sparsel eld Observurface Water Table atturation Fincludes ca	drology Indicators: cators (minimum of e water (A1) ater table (A2) ion (A3) marks (B1) int deposits (B2) posits (B3) iat or crust (B4) posits (B5) ion visible on aerial ly vegetated concave vations: ter Present? Present? Present? Present?	imagery (B7 e surface (B Ye Ye Ye	Water	stained leace fauna (Baquatic plaringer sulfide ed rhizosplance of redut iron redunuck surface or well da (Explain in Depth (incle Depth (incle plate))	13) Ints (B14) Indoor (C1) Interes along Intere	4) I soils (Cr	ts (C3) - - - - - - - - - - - - - - -	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2 Crayfish burrows (C8) Saturation visible on aerial Stunted or stressed plants Geomorphic position (D2) FAC-neutral test (D5)	imagery (C9) (D1)

Project/Site: Lemon Hill 2025	City/Co	ounty: Olmst	ed County	Sampling Date: 2025-05-02
Applicant/Owner: Ranger Power		e: MN Sampling Point: dp12		
Investigator(s): Andy Kranz	Sect	tion, Townsh	nip, Range: S	S29 T107N R012W
				ef (concave, convex, none): none
Slope(%): 3-7 Lat: 44.04066		Long: <u>-92</u>	.28394	Datum: WGS 84
Soil Map Unit Name: N501B2: Downs silt loam, 2 to 6 percent slopes	, moderately	y eroded		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	year?	Y	es N	o 🗸 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology Significantly	disturbed?			Circumstances" present? Yes , No
Are Vegetation , Soil , or Hydrology naturally pro	blematic?			xplain any answers in Remarks.)
_				
SUMMARY OF FINDINGS - Attach site map showin	g sampl	ing point	location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		lo the Co	ampled Area	within
Hydric Soil Present? Yes No		a Wetlan		Yes No _ 🗸
Wetland Hydrology Present? Yes No				
Remarks: (Explain alternative procedures here or in a separate report Upland forest samples on a gentle slope. Analysis of antecedent procedures are considered to the control of the cont		onditions in	dicates wette	er than normal precipitation conditions on-site at the time
of survey.		31141113113		The state of the s
VEGETATION - Use scientific names of plants.				
·	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:30-ft (9.1-m) radius)	% Cover		Status	Dominance Test Worksheet
1. Acer negundo , Ash-Leaf Maple	30%	yes	FAC	Number of Dominant Species That
2. Quercus macrocarpa, Burr Oak	20%	yes	FAC	Are OBL, FACW, or FAC:4 (A)
3. Prunus serotina, Black Cherry	10%	no	<u>FACU</u>	Total Number of Dominant Species Across All Strata: 6 (B)
4				, 、 ,
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 66.667% (A/B)
Conline (Charle Stratum (Diet eine 115 ft (4 6 m) radius)	60%	= Total Co	ver	
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius) 1. Acer negundo , Ash-Leaf Maple	10%	yes	FAC	Prevalence Index worksheet:
Prunus serotina, Black Cherry	5%	yes	FACU	Total % Cover of: Multiply by:
3.				OBL species0 x1 =0
4.				FACW species 10 x1 = 20
5				FAC species 65 x1 = 195
	15%	= Total Co	ver	FACU species 36
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28-	-ft square (1	L-m²) quadra	at)	UPL species
Ribes americanum, Wild Black Currant	10%	yes	FACW	Column Totals: $111 \times 1 = 359 \times 10^{-1}$ (B) Prevalence Index = B/A = 3.234×10^{-1}
2. <u>Viola pubescens</u> , Downy Yellow Violet	10%	yes	<u>FACU</u>	Prevalence index – B/A – <u>5.254</u>
3. Polemonium reptans, Greek-Valerian	5%	no	<u>FAC</u>	Hydrophytic Vegetation Indicators:
4. Lonicera X bella, _?_		no	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Galium aparine, Sticky-Willy	2%	no	FACU	✓ 2 - Dominance Test is > 50%
6. Bromus inermis, Smooth Brome	2%	no	FACU	$\underline{}$ 3 - Prevalence Index is \leq 3.0 ¹
7. Arctium minus, Lesser Burrdock	2%	no	FACU	4 - Morphological Adaptations ¹ (Provide
8 9				supporting data in Remarks or on a separate sheet)
10.				PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
	36%	= Total Co	ver	
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
	0%	= Total Co	ver	Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)				

	cription: (Describe Matrix	to the dep		ment the edox Feat		or confirm	the absen	ice of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR - 2/1	100	/				SiCL	<u></u>
20-24	7.5R - 3/2	100	/				SiCL	
24-30	7.5R - 4/3	100	/				SiCL	
1								
	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	l Sand Grai	ns. ²	Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil I		Nofinad	Sand	Clayed N	Antriy (CA)			Indicators for Problematic Hydric Soils ³ :
	or Histel) (A1) und pipedon (A2) undefi			/ Gleyed M / Redox (S				Coast Prairie Redox (A16) Dark Surface (S7)
	isti (A3) undefined			ed Matrix	-			Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loam	y Mucky V	lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	y Gleyed N	Matrix (F2)			Other (Explain in Remarks)
	uck (A10)			ted Matrix				³ Indicators of hydrophytic vegetation and wetland
	d Below Dark Surfa ark Surface (A12)	ce (A11)		Dark Sur	tace (F6) Surface (F7)			hydrology must be present, unless disturbed or problematic.
	Mucky Mineral (S1)			Depressi				·
	ucky Peat or Peat (S3)	<u>—</u>		()			
Restrictive L	ayer (if observed):							
Type:						Hyd	lric Soil Pre	sent? Yes No
Depth (inches): <u></u>							
Remarks:								
HYDROLO	GY							
•	Irology Indicators:							Secondary Indicators (minimum of two required)
	cators (minimum of	one require			, (B0)			Surface soil cracks (B6)
	water (A1) iter table (A2)			stained lea c fauna (B	` '			Drainage patterns (B10) Dry-season water table (C2)
Saturati	` '			quatic plar	•			Crayfish burrows (C8)
	narks (B1)				odor (C1)			Saturation visible on aerial imagery (C9)
Sedime	nt deposits (B2)		Oxidize	ed rhizospl	heres along	living root	ts (C3)	Stunted or stressed plants (D1)
	oosits (B3)				iced iron (C			Geomorphic position (D2)
	at or crust (B4)				ction in tille	d soils (C6	6)	FAC-neutral test (D5)
	oosits (B5) on visible on aerial	imagan, (P		uck surfact or well da				
	y vegetated concav				Remarks)			
				(
Field Observ Surface Wat		Ye	es No 🗸 I	Denth (incl	hes):			
Water Table			es No 🗸 I			 Wet	land Hydro	logy Present? Yes No <u>✓</u>
Saturation P		Ye	es No 🔽 I	Depth (incl	hes): <u></u>	_	-	-
(includes cap	oillary fringe)							
Describe Re	corded Data (strean	n gauge, m	onitoring well, aeria	l photos, p	revious ins	pections),	if available:	
Remarks:								

Project/Site: Lemon Hill 2025	Citv/Co	ounty: Olmsted County	Sampling Date: <u>2025-05-02</u>
Applicant/Owner: Ranger Power			e: MN Sampling Point: dp13
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): <u>0-2</u> Lat: <u>44.04242</u>		Long: <u>-92.28678</u>	Datum: WGS 84
Soil Map Unit Name: 19: Chaseburg silt loam, moderately well draine	ed, 0 to 2 per	rcent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	year?	Yes No	o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Significantly	y disturbed?	Are "Normal (Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic?	(If needed, ex	xplain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ng sampli	ing point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No		la tha Carrantad Arra	and the fire
Hydric Soil Present? Yes ✓ No.		Is the Sampled Area a Wetland?	Yes _ ✓ No
Wetland Hydrology Present? Yes ✓ No			
Remarks: (Explain alternative procedures here or in a separate rep Crop field wetland in an excavated swale. Analysis of antecedent p of survey.		conditions indicates wett	er than normal precipitation conditions on-site at the time
VEGETATION - Use scientific names of plants.			Т
<u>Tree Stratum</u> (Plot size:30-ft (9.1-m) radius)		Dominant Indicator Species? Status	Dominance Test Worksheet
1.			Number of Dominant Species That
2			Are OBL, FACW, or FAC:0 (A)
3	- ——		Total Number of Dominant Species
4			Across All Strata: 0 (B)
5		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)		Total Cover	Prevalence Index worksheet:
1.			Total % Cover of: Multiply by:
2			OBL species 0 x1 = 0
3.			FACW species0 x1 =0
45.			FAC species0 x1 =0
5	0%	= Total Cover	FACU species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by 3.28			UPL species0 x1 =0
1			Column Totals: $0 \times 1 = 0$ (B)
2			Prevalence Index = B/A = NaN
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
56.			2 - Dominance Test is > 50%
6			3 - Prevalence Index is <= 3.0 ¹
8.			4 - Morphological Adaptations ¹ (Provide
9			supporting data in Remarks or on a separate sheet)
10	- ——		 ✓ PROBLEMATIC Hydrophytic Vegetation¹ (Explain)
	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)			must be present, unless disturbed or problematic.
1.			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes <u>✓</u> No
Remarks: (Include photo numbers here or on a separate sheet.)			
Feature is freshly excavated.			

Profile Desc	cription: (Describe Matrix	to the dept		ment the		confirm	the absend	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
			· · · · · · · · · · · · · · · · · · ·		Туре	LUC		Nemans
0-44	10YR - 2/1	100	/				SiCL	
								-
								<u> </u>
1Type: C=Co	oncentration, D=Dep	letion RM=	Reduced Matrix M	 S=Masker	Sand Grain	s 2		
	<u> </u>				- Courter Cream			
Hydric Soil I	ทนเวลเอาร: l (or Histel) (A1) und	lefined	Sandy	Gleyed N	Aatriv (SA)			Indicators for Problematic Hydric Soils ³ :
	pipedon (A2) undefi			Redox (S	` ,			Coast Prairie Redox (A16) Dark Surface (S7)
	listi (A3) undefined			ed Matrix	•			Iron-Manganese Masses (F12)
	en Sulfide (A4)				lineral (F1)			Very Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		Loamy	Gleyed N	Matrix (F2)			✓ Other (Explain in Remarks)
2 cm M	luck (A10)		Deple	ted Matrix	(F3)			³ Indicators of hydrophytic vegetation and wetland
Deplete	ed Below Dark Surfa	ce (A11)	Redox	Dark Sur	face (F6)			hydrology must be present, unless disturbed or
Thick D	ark Surface (A12)		Deple	ted Dark S	Surface (F7)			problematic.
	Mucky Mineral (S1)		Redox	Depressi	ons (F8)			
5 cm M	lucky Peat or Peat (S3)						
Restrictive L	ayer (if observed):							
Туре:						_ Hyd	ric Soil Pres	sent? Yes <u>✓</u> No
Depth ((inches): <u></u>					_		
HYDROLO	GY							
Wetland Hyd	drology Indicators:						9	Secondary Indicators (minimum of two required)
	cators (minimum of	one required			(50)			Surface soil cracks (B6)
	water (A1)			stained lea	` '		=	Drainage patterns (B10)
Saturati	ater table (A2)			c fauna (B	•		-	Dry-season water table (C2) Crayfish burrows (C8)
	narks (B1)			quatic plar ıen sulfide	odor (C1)		=	✓ Saturation visible on aerial imagery (C9)
	nt deposits (B2)				heres along	livina root	_	Stunted or stressed plants (D1)
	posits (B3)			•	iced iron (C4	•	` ′ -	✓ Geomorphic position (D2)
	at or crust (B4)				ction in tilled	-	_	FAC-neutral test (D5)
Iron de	posits (B5)		Thin m	uck surfac	e (C7)			
Inundat	ion visible on aerial	imagery (B7	') Gauge	or well da	ata (D9)			
Sparsel	y vegetated concave	e surface (B	8) Other (Explain in	Remarks)			
Field Observ	vations:							
Surface Wat	ter Present?		es No 🔽 [_		
Water Table			es No 🔽 [_ Wet	land Hydrol	ogy Present? Yes <u>✓</u> No
Saturation P (includes ca	Present? pillary fringe)	Ye	es No <u> </u>	Depth (inc	hes): <u></u>	_		
	ecorded Data (strean	n gauge, mo	onitoring well. aeria	l photos, r	revious insn	ections) i	f available	
	(99-,		. p, p		,,		
Remarks:								
LIVERHOUND.								
rtemarks.								
itemarks.								
ixemains.								

Project/Site: Lemon Hill 2025	City/Co	unty: Olmsted County	Sampling Date: <u>2025-05-02</u>
Applicant/Owner: Ranger Power			e: MN Sampling Point: dp14
Investigator(s): Andy Kranz			
			ef (concave, convex, none): concave
Slope(%): <u>8-15</u> Lat: <u>44.04234</u>		Long: <u>-92.28688</u>	Datum: WGS 84
Soil Map Unit Name: 19 : Chaseburg silt loam, moderately well dr	ained, 0 to 2 per	cent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	e of year?	Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology Signification	antly disturbed?	Are "Normal C	Circumstances" present? Yes No 🗸
Are Vegetation , Soil , or Hydrology naturally	y problematic?	(If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampli	ng point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled Area	within
Hydric Soil Present? Yes		a Wetland?	Yes No
Wetland Hydrology Present? Yes			
Remarks: (Explain alternative procedures here or in a separate Upland crop field sampled on a slope. Analysis of antecedent p survey.	report.) precipitation cond	itions indicates wetter th	nan normal precipitation conditions on-site at the time of
VEGETATION - Use scientific names of plants.			
Tree Stratum (Plot size:30-ft (9.1-m) radius)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Worksheet
1			Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3 4			Total Number of Dominant Species Across All Strata: 0 (B)
5.			Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:15-ft (4.6-m) radius)	0%	= Total Cover	
1			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species0 x1 =0
4			FACW species0 x1 =0
5			FAC species0 x1 =0 FACU species0 x1 =0
		= Total Cover	FACU species 0 x1 = 0 UPL species 0 x1 = 0
Herbaceous Stratum (Plot size:5-ft (1.5-m) radius OR 3.28- by	• •	-m²) quadrat)	Column Totals: $0 \times 1 = 0$ (B)
1			Prevalence Index = B/A = NaN
2. 3.			
4.			Hydrophytic Vegetation Indicators:
5.			1 - Rapid Test for Hydrophytic Vegetation
6			2 - Dominance Test is > 50%
7			3 - Prevalence Index is <= 3.0 ¹
8			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate
9			sheet)
10		- Total Cover	PROBLEMATIC Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:30-ft (9.1-m) radius)	0%	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.			Hydrophytic
2	0%	= Total Cover	Vegetation Present? Yes No _ Vegetation
Remarks: (Include photo numbers here or on a separate sheet. Residues of 2024 soybean crop are consistent in density with t		pland.	

Profile Description: (Describe to the depth nee	eded to document the indicator or c Redox Features	onfirm the absen	ce of indicators.)
Depth		Loc ² Texture	Remarks
			Remarks
0-12 10YR - 3/3 100	 	SiCL	_ =====================================
			<u> </u>
¹ Type: C=Concentration, D=Depletion, RM=Reduc	ced Matrix, MS=Masked Sand Grains	2l ocation: P	
Hydric Soil Indicators:			
Histosol (or Histel) (A1) undefined	Sandy Gleyed Matrix (S4)		Indicators for Problematic Hydric Soils ³ :
Histic Epipedon (A2) undefined	Sandy Redox (S5)		Coast Prairie Redox (A16) Dark Surface (S7)
Black Histi (A3) undefined	Stripped Matrix (S6)		Iron-Manganese Masses (F12)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)		Very Shallow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
2 cm Muck (A10)	Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)		hydrology must be present, unless disturbed or
Thick Dark Surface (A12)	Depleted Dark Surface (F7)		problematic.
Sandy Mucky Mineral (S1)	Redox Depressions (F8)		
5 cm Mucky Peat or Peat (S3)			
Restrictive Layer (if observed):			
Type: <u></u>		Hydric Soil Pre	sent? Yes No _ 🗸
Depth (inches):			
HYDROLOGY			
HYDROLOGY Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che	11.77		Surface soil cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1)	Water-stained leaves (B9)		Surface soil cracks (B6) Drainage patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2)	Water-stained leaves (B9) Aquatic fauna (B13)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2) Saturation (A3)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1)		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi		Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3)	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi Presence of reduced iron (C4)	ng roots (C3)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; che Surface water (A1) High water table (A2) Saturation (A3) Water marks (B1) Sediment deposits (B2) Drift deposits (B3) Algal mat or crust (B4) Iron deposits (B5) Inundation visible on aerial imagery (B7) Sparsely vegetated concave surface (B8) Field Observations: Surface Water Present? Yes Water Table Present?	Water-stained leaves (B9) Aquatic fauna (B13) True aquatic plants (B14) Hydrogen sulfide odor (C1) Oxidized rhizospheres along livi Presence of reduced iron (C4) Recent iron reduction in tilled so Thin muck surface (C7) Gauge or well data (D9) Other (Explain in Remarks)	ng roots (C3) Dils (C6)	Surface soil cracks (B6) Drainage patterns (B10) Dry-season water table (C2) Crayfish burrows (C8) Saturation visible on aerial imagery (C9) Stunted or stressed plants (D1) Geomorphic position (D2) FAC-neutral test (D5)
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Appendix B Rapid OWHM Field Identification Data Sheets

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-OHWM, is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of

information. Send comments regarding the burden easily Services, at whs.mc-alex.esd.mbx.dd-dod-informatio person shall be subject to any penalty for failing to	n-collections@mail.mil. Respo	ondents should be aware	e that notwithstanding any other provision of law, no
, , , , ,	Name: Lemon Hill		Date and Time: 2024-06-05 15:32
Location: 44.091871499999996°, -92.334974916666		estigator(s): Maddie Hum	
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data IDAR Satellite imagery aerial photos topographic maps	rces	Describe land use a Were there any recer Stream is surrounde	and flow conditions from online resources. Int extreme events (floods or drought)? It extreme events (floods or drought)?
bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal for this time of y	i. Make note of natural or mar	n-made disturbances tha	d erosional features, and changes in vegetation and at would affect flow and channel form, such as
	ne indicators that are used to ect the appropriate location of	determine location may the indicator by selectin	be just below and above the OHWM. From the ag either just below 'b', at 'x', or just above 'a' the s, and to attach a photo log.
Geomorphic indicators			
A Break in slope:	X Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
a on the bank:	shelving (berms) on	bar:	Secondary channels:
a undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation transition:		Secondary channels:
	sediment transition:		Changes in character of soil:
A Shelving:	upper limit of deposi	tion on the bar:	Mudcracks:
a shelf at top of bank: natural levee: man-made berms or levees: other berms: Vegetation Indicators Change in vegetation type and/or density:		ndicators: (e.g.,	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits: exposed roots below intact soil layer:
Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. X vegetation absent to: forbs moss to:	forbs to: graminoids to: woody shrubs to: deciduous trees to: - coniferous trees to: -	·	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: asp01
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attack a photo law of the site. Lies the table helps, as attack apparently.
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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, ,, ,	Name: Lemon Hill		Date and Time: 2024-05-29 09:24
Location: 44.086918645839404°, -92.336287798316		nvestigator(s): Maddie Hum	
Step 1 Site overview from remote and online resource Check boxes for online resources used to gage data LiDAR Climatic data satellite imagery aerial photos topographic maps	ces	Describe land use a Were there any recer	nd flow conditions from online resources. In extreme events (floods or drought)? In the description of the
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are considered normal at the time of the site visit.			
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.			
Geomorphic indicators			
X Break in slope:	Channel bar:	on har:	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms)	on par.	X Secondary channels:
x undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation transiti	ion:	Secondary channels:
other:	sediment transition	n:	Changes in character of soil:
Shelving:	upper limit of dep	osition on the bar:	Mudcracks:
shelf at top of bank: natural levee: man-made berms or levees: other berms:			Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:
Vegetation Indicators			
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: deciduous trees to coniferous trees to Vegetation matted d	o: o:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Step 5 Describe rationale for location of OHWM OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

AGENCY DISCLOSURE NOTICE

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information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil . Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.			
Project ID#: asp03 Site	Name: Lemon Hill	Date and Time: 2024-06-17 09:37	
Location: 44.08681760691161°, -92.3318830161949	o Investigator(s): Mad	ddie Humphrey	
Step 1 Site overview from remote and online resour Check boxes for online resources used to		nd use and flow conditions from online resources. any recent extreme events (floods or drought)?	
gage data ☐ LiDAR ☐ climatic data ☐ satellite imagery ☐ aerial photos ☐ topographic maps	located to t	rounded by meadow and floodplain forest. Agriculture fields he east, south, and west. Water flows from the east south of the stream, northwest to the larger channel.	
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions were normal.			
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.			
Geomorphic indicators			
A Break in slope:	Channel bar:	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
x on the bank:	shelving (berms) on bar:	X Secondary channels:	
x undercut bank:	b unvegetated:	Sediment indicators	
b valley bottom:	x vegetation transition:	Secondary channels:	
other:	sediment transition:	Changes in character of soil:	
X Shelving:	upper limit of deposition on the bar	Mudcracks:	
shelf at top of bank:	Instream bedforms and other bedloa transport evidence:	Changes in particle-sized distribution:	
natural levee:	deposition bedload indicators: (e.g.		
man-made berms or levees:	imbricated clasts, gravel sheets, etc	upper limit of sand-sized particles	
other berms:	bedforms: (e.g., pools, riffles, steps	silt deposits:	
Vegetation Indicators		exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the	forbs to:	Ancillary indicators	
general vegetation change (e.g., graminoids to woody shrubs).	graminoids to:	Wracking/presence of organic litter:	
Describe the vegetation transition looking from the middle of the channel, up th	woody shrubs to:	Presence of large wood:	
banks, and into the floodplain.	deciduous trees to:	Leaf litter disturbed or washed away:	
vegetation absent to:	coniferous trees to:	Water staining:	
moss to:	Vegetation matted down and/or bent	t: Weathered clasts or bedrock:	
Other observed indicators? Describe:			

Project ID#: a	sp03
Step 4 Is ad	ditional information needed to support this determination?
	ibe rationale for location of OHWM
OHWM is ind	icated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Of IVVIVI 13 IIIu	icated by abitupit change from level bottom to banks, and by a change from sparse to dense lobbs.
Additional of	oservations or notes
	o log of the site. Use the table below, or attach separately. sched? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025 Expires: 01-31-2025

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information. Send comments regarding the burden e Services, at <u>whs.mc-alex.esd.mbx.dd-dod-informatio</u> person shall be subject to any penalty for failing to	<u>n-collections@mail.mil</u> . I	Respondents should be awar	e that notwithstanding any other provision of law, no
Project ID#: asp04 Site	Name: Lemon Hill		Date and Time: 2024-05-29 09:51
Location: 44.082842695269775°, -92.337048950102	75°	Investigator(s): Maddie Hun	nphrey
Step 1 Site overview from remote and online resour Check boxes for online resources used to	o evaluate site:	Were there any recei	and flow conditions from online resources. nt extreme events (floods or drought)? by pasture. Agriculture fields located to the east
gage data LiDAR climatic data satellite imagery aerial photos topographic maps	geologic maps land use maps Other:	and west. Water flow	vs north to larger channel.
Step 2 Site conditions during field assessment. Firs sediment type, size, density, and distribution bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal.			d erosional features, and changes in vegetation and at would affect flow and channel form, such as
	ne indicators that are us ect the appropriate locati	ed to determine location may on of the indicator by selecti	be just below and above the OHWM. From the ng either just below 'b', at 'x', or just above 'a' the us, and to attach a photo log.
Geomorphic indicators			
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berm	s) on bar:	X Secondary channels:
x undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation tran	sition:	Secondary channels:
other:	sediment trans	ition:	Changes in character of soil:
Shelving:	upper limit of d	leposition on the bar:	Mudcracks:
shelf at top of bank:	Instream bedform transport evidence	ns and other bedload ce:	Changes in particle-sized distribution:
natural levee:		load indicators: (e.g.,	transition from to
man-made berms or levees:		ts, gravel sheets, etc.): , pools, riffles, steps, etc.):	upper limit of sand-sized particles
other berms:	bedioinis. (e.g.	, pools, fillies, steps, etc.).	silt deposits:
Vegetation Indicators		_	exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs i deciduous tree. coniferous tree	to: s to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining:
moss to:	Vegetation matter	d down and/or bent:	Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: a	sp04
Step 4 Is ad	ditional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:
Stan E Descri	be rationale for location of OHWM
	DE TALIONALE IOI IOCALION DI OTIVIVI
OHWM is	s indicated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Additional ob	eservations or notes
Attach a photo	o log of the site. Use the table below, or attach separately.
Photo log atta	ched? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

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information. Send comments regarding the burden e Services, at whs.mc-alex.esd.mbx.dd-dod-informatio	estimate or burden reduction suggestions n-collections@mail.mil. Respondents sho	to the Department of Defense, Washington Headquarters buld be aware that notwithstanding any other provision of law, no it does not display a currently valid OMB control number.
Project ID#: asp05 Site	Name: Lemon Hill	Date and Time: 2024-05-29 09:56
Location: 44.08367985049776°, -92.3371766533086	6° Investigator(s):	Maddie Humphrey
Step 1 Site overview from remote and online resou Check boxes for online resources used to		e land use and flow conditions from online resources. ere any recent extreme events (floods or drought)?
gage data LiDAR	geologic maps Pasture	land, stream flows northwest to larger channel.
climatic data satellite imagery	land use maps	
aerial photos topographic maps	Other:	
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the		
OHWM. Go to page 2 to describe overall rationale for		or by selecting either just below 'b', at 'x', or just above 'a' the l observations, and to attach a photo log.
Geomorphic indicators		
A Break in slope:	Channel bar:	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms) on bar:	X Secondary channels:
x undercut bank:	b unvegetated:	Sediment indicators
b valley bottom:	x vegetation transition:	Secondary channels:
other:	sediment transition:	Changes in character of soil:
Shelving:	upper limit of deposition on the	bar: Mudcracks:
shelf at top of bank:	Instream bedforms and other bed transport evidence:	dload Changes in particle-sized distribution:
natural levee:	deposition bedload indicators: (
man-made berms or levees:	imbricated clasts, gravel sheets	upper limit of sand-sized particles
other berms:	bedforms: (e.g., pools, riffles, st	eps, etc.): silt deposits:
Vegetation Indicators		exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the	forbs to:	Ancillary indicators
general vegetation change (e.g., graminoids to woody shrubs).	graminoids to:	Wracking/presence of organic litter:
Describe the vegetation transition looking from the middle of the channel, up th	woody shrubs to:	Presence of large wood:
banks, and into the floodplain.	deciduous trees to:	Leaf litter disturbed or washed away:
vegetation absent to:	coniferous trees to:	Water staining:
moss to:	Vegetation matted down and/or b	pent: Weathered clasts or bedrock:
Other observed indicators? Describe:		

Project ID#: a	sp05
Step 4 Is ad	ditional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:
Step 5 Descr	ibe rationale for location of OHWM
OHWM is	indicated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Additional ol	oservations or notes
Attach a phot	o log of the site. Use the table below, or attach separately.
Photo log atta	ched? Yes No If no, explain why not: Found in Wetland Delineation Report
РНОТО	PHOTOGRAPH DESCRIPTION
NUMBER	

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

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information. Send comments regarding the burden e Services, at <u>whs.mc-alex.esd.mbx.dd-dod-informatio</u> person shall be subject to any penalty for failing to	<u>n-collections@mail.mil</u> . F	Respondents should be awar	e that notwithstanding any other provision of law, no
Project ID#: asp06 Site	Name: Lemon Hill		Date and Time: 2024-05-29 10:15
Location: 44.078256165354695°, -92.328053264718	12°	Investigator(s): Maddie Hun	nphrey
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR Climatic data Satellite imagery aerial photos Topographic maps			and flow conditions from online resources. Int extreme events (floods or drought)? Iplain forest.
bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal. Step 3 Check the boxes next to the indicators us OHWM is at a transition point, therefore son	. Make note of natural o	ntion of the OHWM. ed to determine location may	d erosional features, and changes in vegetation and at would affect flow and channel form, such as to be just below and above the OHWM. From the ang either just below 'b', at 'x', or just above 'a' the
OHWM. Go to page 2 to describe overall rationale fo		•	
Geomorphic indicators			
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms	s) on bar:	X Secondary channels:
x undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation trans	sition:	Secondary channels:
other:	sediment transi	ition:	Changes in character of soil:
Shelving:	upper limit of d	leposition on the bar:	Mudcracks:
shelf at top of bank: natural levee:	transport evidence	ns and other bedload ce: load indicators: (e.g., ts, gravel sheets, etc.):	Changes in particle-sized distribution: transition from
man-made berms or levees: other berms:		, pools, riffles, steps, etc.):	upper limit of sand-sized particles silt deposits:
Vegetation Indicators			exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: - woody shrubs to deciduous trees coniferous trees Vegetation matter	to: s to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: asp06
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER
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U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

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Services, at <u>whs.mc-alex.esd.mbx.dd-dod-information</u> person shall be subject to any penalty for failing to	n-collections@mail.mil. F	Respondents should be awar	e that notwithstanding any other provision of law, no
Project ID#: asp07 Site	Name: Lemon Hill		Date and Time: 2024-06-03 16:04
Location: 44.06910808333334°, -92.2971341333333	3°	Investigator(s): Maddie Hum	nphrey
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data	o evaluate site: geologic maps land use maps Other:	Were there any recei	and flow conditions from online resources. Int extreme events (floods or drought)? Ing southwest toward larger channel. Ind erosional features, and changes in vegetation and
sediment type, size, density, and distribution bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal.	i. Make note of natural o	r man-made disturbances tha	at would affect flow and channel form, such as
	ne indicators that are use ect the appropriate location	ed to determine location may on of the indicator by selectin	be just below and above the OHWM. From the ng either just below `b', at `x', or just above `a' the ns, and to attach a photo log.
Geomorphic indicators			
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms	s) on bar:	Secondary channels:
x undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation trans	sition:	Secondary channels:
other:	sediment transi	tion:	Changes in character of soil:
Shelving:	upper limit of d	eposition on the bar:	Mudcracks:
shelf at top of bank: natural levee: man-made berms or levees: other berms:	transport evidence deposition bedle imbricated class	se and other bedload se: oad indicators: (e.g., ts, gravel sheets, etc.): , pools, riffles, steps, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:
Vegetation Indicators			exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: - woody shrubs t deciduous trees coniferous trees Vegetation matter	:0: :s to:	Ancillary indicators B Wracking/presence of organic litter: Presence of large wood: B Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: asp07
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

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information. Send comments regarding the burden e Services, at <u>whs.mc-alex.esd.mbx.dd-dod-informatio</u> person shall be subject to any penalty for failing to o	<u>n-collections@mail.mil</u> . Resp	ondents should be awar	e that notwithstanding any other provision of law, no
Project ID#: asp08 Site	Name: Lemon Hill		Date and Time: 2024-06-05 09:06
Location: 44.056753833333333°, -92.3008154666666	6° Inv	vestigator(s): Maddie Hun	nphrey
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR Climatic data Satellite imagery aerial photos Topographic maps			and flow conditions from online resources. nt extreme events (floods or drought)?
Step 3 Check the boxes next to the indicators us OHWM is at a transition point, therefore son drop-down menu next to each indicator, sele	. Make note of natural or ma	an-made disturbances the of the OHWM. To determine location may	d erosional features, and changes in vegetation and at would affect flow and channel form, such as y be just below and above the OHWM. From the ng either just below 'b', at 'x', or just above 'a' the
OHWM. Go to page 2 to describe overall rationale fo	r location of OHWM, write a	ny additional observation	ns, and to attach a photo log.
Geomorphic indicators			
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms) or	n bar:	Secondary channels:
x undercut bank:	b unvegetated:		Sediment indicators
b valley bottom:	x vegetation transition	n:	Secondary channels:
other:	sediment transition:	:	Changes in character of soil:
Shelving:	upper limit of depos	sition on the bar:	Mudcracks:
shelf at top of bank: natural levee: man-made berms or levees: other berms:	Instream bedforms at transport evidence: deposition bedload imbricated clasts, g bedforms: (e.g., por	indicators: (e.g.,	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:
Vegetation Indicators			exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: - deciduous trees to: coniferous trees to: Vegetation matted do		Ancillary indicators B Wracking/presence of organic litter: Presence of large wood: B Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: asp08
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
 OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
OTTVINITS indicated by abrapt change from level bottom to very steep banks, and by a change from sparse to dense folias.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

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information. Send comments regarding the burden e Services, at <u>whs.mc-alex.esd.mbx.dd-dod-informatio</u> person shall be subject to any penalty for failing to o	<u>n-collections@mail.mil</u> . F	Responde	ents should be aware	e that notwithstanding any other provision of law, no
Project ID#: asp09 Site	Name: Lemon Hill			Date and Time: 2024-06-05 13:03
Location: 44.04982565°, -92.27944879999998°		Investig	ator(s): Maddie Hum	phrey
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR Climatic data Satellite imagery aerial photos Stopographic maps		٧		nd flow conditions from online resources. It extreme events (floods or drought)? plain forest.
bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal. Step 3 Check the boxes next to the indicators us OHWM is at a transition point, therefore son	. Make note of natural o	r man-m tion of t	he OHWM. ermine location may	derosional features, and changes in vegetation and at would affect flow and channel form, such as be just below and above the OHWM. From the great either just below 'b', at 'x', or just above 'a' the
OHWM. Go to page 2 to describe overall rationale fo			•	
Geomorphic indicators				
A Break in slope:	Channel bar:			erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
a on the bank:	shelving (berms	s) on bar	:	Secondary channels:
a undercut bank:	b unvegetated:			Sediment indicators
b valley bottom:	x vegetation trans	sition:		Secondary channels:
other:	sediment transi	tion:		Changes in character of soil:
Shelving:	upper limit of de	eposition	on the bar:	Mudcracks:
shelf at top of bank: natural levee: man-made berms or levees:	Instream bedform transport evidence deposition bedle imbricated class	e: oad indid	cators: (e.g.,	Changes in particle-sized distribution: transition from
other berms:	bedforms: (e.g.,	pools, ı	iffles, steps, etc.):	silt deposits:
Vegetation Indicators				exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: - woody shrubs t deciduous trees coniferous trees Vegetation matted	o: s to: s to:		Ancillary indicators B Wracking/presence of organic litter: Presence of large wood: B Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:				

Project ID#: asp09
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Critinia in indicated by abitapt change from lovel bettern to very decop same, and by a change from sparce to defice losse.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

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Services, at whs.mc-alex.esd.mbx.dd-dod-informa person shall be subject to any penalty for failing t	<u>tion-collections@mail.mil</u> . F	Respondents should be aware	e that notwithstanding any other provision of law, no		
Project ID#: asp10 S	ite Name: Lemon Hill		Date and Time: 2024-06-05 10:28		
Location: 44.04947795898256°, -92.28227927502	22°	Investigator(s): Maddie Hum	ıphrey		
	d to evaluate site: geologic maps land use maps Other:	Were there any recer Surrounded by flood annel shape, depositional and	d erosional features, and changes in vegetation and		
sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal.					
	some indicators that are use elect the appropriate location	ed to determine location may on of the indicator by selectin	be just below and above the OHWM. From the ng either just below `b', at `x', or just above `a' the s, and to attach a photo log.		
Geomorphic indicators					
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):		
x on the bank:	shelving (berms	s) on bar:	Secondary channels:		
x undercut bank:	b unvegetated:		Sediment indicators		
b valley bottom:	x vegetation trans	sition:	Secondary channels:		
other:	sediment transi	tion:	Changes in character of soil:		
Shelving:	upper limit of de	eposition on the bar:	Mudcracks:		
shelf at top of bank: natural levee: man-made berms or levees: other berms:	transport evidenc	s and other bedload e: pad indicators: (e.g., s, gravel sheets, etc.): pools, riffles, steps, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:		
Vegetation Indicators			exposed roots below intact soil layer:		
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to: moss to:	graminoids to: - woody shrubs to deciduous trees coniferous trees	o: s to:	Ancillary indicators B Wracking/presence of organic litter: Presence of large wood: B Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:		
Other observed indicators? Describe:					

Project ID#: a	sp10
Step 4 Is ad	ditional information needed to support this determination?
	ibe rationale for location of OHWM
OHWM is in	dicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
OTTWWW 13 III	dicated by abrupt change normever bottom to very steep banks, and by a change norm sparse to dense forbs.
Additional ol	pservations or notes
Attach a phot	a log of the city. Use the table below or attach congretaly
	o log of the site. Use the table below, or attach separately. ached? No If no, explain why not: Found in Wetland Delineation Report
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

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nformation. Send comments regarding the burd Services, at whs.mc-alex.esd.mbx.dd-dod-inform person shall be subject to any penalty for failing	nation-collections@mail.mil. F	Respondents should be awar	e that notwithstanding any other provision of law, no
Project ID#: asp11	Site Name: Lemon Hill		Date and Time: 2024-06-04 10:19
Location: 44.04608865°, -92.28240106666667°		Investigator(s): Maddie Hum	ıphrey
	geologic maps land use maps Other: First look for changes in cha	Were there any recer Valley between mea to wetland. annel shape, depositional and	and flow conditions from online resources. It extreme events (floods or drought)? It downslope and agricultural field. Water flows north It derosional features, and changes in vegetation and at would affect flow and channel form, such as
drop-down menu next to each indicator, OHWM. Go to page 2 to describe overall rational	some indicators that are use select the appropriate location	ed to determine location may on of the indicator by selectin	be just below and above the OHWM. From the ng either just below 'b', at 'x', or just above 'a' the as, and to attach a photo log.
Geomorphic indicators	<u>_</u>		
x on the bank: x undercut bank: b valley bottom: other: Shelving: shelf at top of bank: natural levee:	Instream bedform transport evidence	sition: tion: eposition on the bar: s and other bedload	Secondary channels: Sediment indicators Secondary channels: Changes in character of soil: Mudcracks: Changes in particle-sized distribution: transition from to
man-made berms or levees: other berms: Vegetation Indicators	bedforms: (e.g.,	pools, riffles, steps, etc.):	upper limit of sand-sized particles silt deposits: exposed roots below intact soil layer:
Change in vegetation type and/or density Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition lookin from the middle of the channel, up th banks, and into the floodplain. vegetation absent to: moss to:	graminoids to: - graminoids to: - deciduous trees coniferous trees	o: s to:	Ancillary indicators X Wracking/presence of organic litter: Presence of large wood: B Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Step 4 Is additional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
Photo log attached: Yes No in ho, explain why hot. Pound in Welland Delineation Report
PHOTO NUMBER PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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Project ID#: asp12 Location: 44.08434123915041°, -92.33694464255646° Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR geologic maps climatic data satellite imagery land use maps aerial photos Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetatic sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal.	n and		
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR geologic maps Climatic data Satellite imagery land use maps Aerial photos Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetatic sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.	n and		
Check boxes for online resources used to evaluate site: gage data	n and		
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.	n and		
aerial photos topographic maps Other: Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.	ne		
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetatic sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.	ne		
sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.	ne		
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.			
Geomorphic indicators			
A Break in slope: Channel bar: erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, et	c.):		
x on the bank: x Secondary channels:	,		
x undercut bank: b unvegetated: Sediment indicators			
b valley bottom: x vegetation transition: Secondary channels:			
other: Changes in character of soil:			
Shelving: upper limit of deposition on the bar: Mudcracks:			
shelf at top of bank: Instream bedforms and other bedload transport evidence: Changes in particle-sized distribution	:		
natural levee: deposition bedload indicators: (e.g., imbricated clasts, gravel sheets, etc.): transition fromto			
man-made berms or levees: upper limit of sand-sized particles			
other berms: bedforms: (e.g., pools, riffles, steps, etc.): silt deposits:			
Vegetation Indicators exposed roots below intact soil layer			
Change in vegetation type and/or density: Check the appropriate boxes and select the			
general vegetation change graminoids to: Wracking/presence of organic litter: (e.g., graminoids to woody shrubs).			
Describe the vegetation transition looking from the middle of the channel, up th woody shrubs to: Presence of large wood:			
banks, and into the floodplain. deciduous trees to: Leaf litter disturbed or washed away:			
vegetation absent to: Coniferous trees to: Water staining:			
moss to:			
Other observed indicators? Describe:			

Project ID#: asp12
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a whate law of the site. Lies the table helps, or attach consistely.
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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information. Send comments regarding the burden e Services, at whs.mc-alex.esd.mbx.dd-dod-informatio	n-collections@mail.mil. R	espondents should be awar	e that notwithstanding any other provision of law, no	
person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Project ID#: asp13 Site Name: Lemon Hill Date and Time: 2024-05-29 09:44				
Location: 44.08631561974129°, -92.33563095604012°				
			· ·	
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR geologic maps Climatic data Satellite imagery aerial photos topographic maps Other: Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)? Stream surrounded by meadow and pasture. Water flows northeast to larger stream. Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal.				
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.				
Geomorphic indicators				
A Break in slope: x on the bank:	Channel bar: shelving (berms)) on har	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
		on bar.	X Secondary channels:	
x undercut bank:	b unvegetated:		Sediment indicators	
b valley bottom:	x vegetation trans	ition:	Secondary channels:	
other:	sediment transiti	ion:	Changes in character of soil:	
Shelving:	upper limit of de	eposition on the bar:	Mudcracks:	
shelf at top of bank: natural levee: man-made berms or levees: other berms:	transport evidence	s and other bedload e: pad indicators: (e.g., s, gravel sheets, etc.): pools, riffles, steps, etc.):	Changes in particle-sized distribution: transition from	
Vegetation Indicators			evnosed roots helow intact soil laver:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: - woody shrubs to deciduous trees coniferous trees Vegetation matted	o: to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Project ID#: asp13
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately. Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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Services, at whs.mc-alex.esd.mbx.dd-dod-informatio	<u>n-collections@mail.mil</u> . F	Respondents should	to the Department of Defense, Washington Headquarters ald be aware that notwithstanding any other provision of law, no does not display a currently valid OMB control number.	
Project ID#: asp14 Site	Name: Lemon Hill		Date and Time: 2024-06-03 16:47	
Location: 44.06856465000001°, -92.29720575°		Investigator(s): Ma	Maddie Humphrey	
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR Climatic data Satellite imagery aerial photos Topographic maps		Were there	land use and flow conditions from online resources. e any recent extreme events (floods or drought)? depression surrounded by pasture.	
 Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Precipitation conditions are normal. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the 				
OHWM. Go to page 2 to describe overall rationale fo			r by selecting either just below `b', at `x', or just above `a' the observations, and to attach a photo log.	
Geomorphic indicators				
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
x on the bank:	shelving (berms	s) on bar:	Secondary channels:	
x undercut bank:	b unvegetated:		Sediment indicators	
b valley bottom:	x vegetation trans	sition:	Secondary channels:	
other:	sediment transi	tion:	Changes in character of soil:	
Shelving:	upper limit of d	eposition on the ba	par: Mudcracks:	
shelf at top of bank: natural levee:		e: pad indicators: (e.g	g., transition fromto	
man-made berms or levees: other berms:		s, gravel sheets, e pools, riffles, step	upper limit of sand-sized particles	
Vegetation Indicators			exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: - graminoids to: - woody shrubs t deciduous trees coniferous trees Vegetation matter	o: s to: s to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Step 4 Is additional information needed to support this determination?
Step 4 Is additional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for location of OHWM
OHWM is indicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional observations or notes
Attach a photo log of the site. Use the table below, or attach separately.
Photo log attached?
PHOTO PHOTOGRAPH DESCRIPTION
NUMBER

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

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Project ID#: bdp03 Site	Name: Lemon Hill		Date and Time: 2024-05-31 13:43
Location: 44.07624526666667°, -92.32553945°		Investigator(s): Andy Kranz	
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR X climatic data X satellite imagery X aerial photos X topographic maps	geologic maps land use maps Other:	Were there any rece Ephemeral waterwa overland flow from o	and flow conditions from online resources. Intextreme events (floods or drought)? In the bottom of a forested ravine. Receives crop field to the southwest.
 Step 2 Site conditions during field assessment. Firs sediment type, size, density, and distribution bridges, riprap, landslides, rockfalls etc. Steep-sided ravine, high gradient. 			d erosional reatures, and changes in vegetation and at would affect flow and channel form, such as
	ne indicators that are us ect the appropriate locati	ed to determine location may on of the indicator by selecti	be just below and above the OHWM. From the ng either just below `b', at `x', or just above `a' the ns, and to attach a photo log.
Geomorphic indicators			
X Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms	s) on bar:	Secondary channels:
undercut bank:	unvegetated:		Sediment indicators
valley bottom:	vegetation trans	sition:	Secondary channels:
other:	sediment transi	ition:	Changes in character of soil:
Shelving:	upper limit of d	eposition on the bar:	Mudcracks:
shelf at top of bank:	Instream bedform transport evidence	ns and other bedload ee:	Changes in particle-sized distribution:
natural levee:		oad indicators: (e.g., ts, gravel sheets, etc.):	transition from to
man-made berms or levees:		, pools, riffles, steps, etc.):	upper limit of sand-sized particles
other berms:		, pools, rimes, stops, etc.y.	silt deposits:
Vegetation Indicators			exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th	forbs to: graminoids to: - woody shrubs t		Ancillary indicators Wracking/presence of organic litter: Presence of large wood:
banks, and into the floodplain.	deciduous trees	s to:	Leaf litter disturbed or washed away:
vegetation absent to:	coniferous tree	s to:	Water staining:
moss to:	Vegetation matter	d down and/or bent:	Weathered clasts or bedrock:
Other observed indicators? Describe: Vegetation changes from sparse to dense forbs.			

Project ID#: bd	p03
Step 4 Is add	itional information needed to support this determination?
Step 5 Describ	pe rationale for location of OHWM
OHWM is indic	ated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs,
	servations or notes
Attach a photo Photo log attac	log of the site. Use the table below, or attach separately. ched?
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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information. Send comments regarding the burden e Services, at <u>whs.mc-alex.esd.mbx.dd-dod-informatio</u> person shall be subject to any penalty for failing to o	n-collections@mail.mil. Respo	ndents should be awar	e that notwithstanding any other provision of law, no
Project ID#: bsp01 Site	Name: Lemon Hill		Date and Time: 2024-05-29 15:24
Location: 44.0755477°, -92.33950886666668°	Inve	stigator(s): Andy Kranz	
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR X climatic data X satellite imagery X aerial photos X topographic maps	ded to evaluate site: Geologic maps Geologi		
bridges, riprap, landslides, rockfalls etc. N/A Step 3 Check the boxes next to the indicators us	. Make note of natural or man	n-made disturbances the	at would affect flow and channel form, such as
	ect the appropriate location of	the indicator by selecting	be just below and above the OHWM. From the ng either just below 'b', at 'x', or just above 'a' the ns, and to attach a photo log.
Geomorphic indicators			
X Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):
x on the bank:	shelving (berms) on	bar:	Secondary channels:
undercut bank:	unvegetated:		Sediment indicators
valley bottom:	vegetation transition:		Secondary channels:
other:	sediment transition:		Changes in character of soil:
Shelving:	upper limit of deposit	tion on the bar:	Mudcracks:
shelf at top of bank: natural levee: man-made berms or levees: other berms:	Instream bedforms and transport evidence: deposition bedload in imbricated clasts, gra bedforms: (e.g., pool	ndicators: (e.g., avel sheets, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:
Vegetation Indicators			exposed roots below intact soil layer:
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: deciduous trees to: - coniferous trees to: - Vegetation matted dow		Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:
Other observed indicators? Describe:			

Project ID#: bs	p01
Step 4 Is add	itional information needed to support this determination?
Step 5 Describ	pe rationale for location of OHWM
OHWM is loca	ted where the vertical banks transition to gently sloped ground above the banks.
Additional ob	servations or notes
	Servations of notes
Attach a photo Photo log attac	log of the site. Use the table below, or attach separately. thed?
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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information. Send comments regarding the burden eservices, at whs.mc-alex.esd.mbx.dd-dod-informatio person shall be subject to any penalty for failing to	n-collections@mail.mil. Res	spondents should be aware	e that notwithstanding any other provision of law, no	
Project ID#: bsp02 Site Name: Lemon Hill Date and Time: 2024-05-31 11:17				
Location: 44.0706551°, -92.32396633333335° Investigator(s): Andy Kranz				
Step 1 Site overview from remote and online resou Check boxes for online resources used to			nd flow conditions from online resources. nt extreme events (floods or drought)?	
gage data LiDAR X climatic data X satellite imagery X aerial photos X topographic maps	geologic maps land use maps Other:	Stream is located in separates crop fields	a steep-sided ravine that is vegetated and	
 Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Stream passes beneath two crossings via culverts, and is widened for a short distance downstream of each culvert. Rip rap has been added to the banks on the downstream side of one of the culverts. 				
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.				
Geomorphic indicators				
X Break in slope:	Channel bar:	_	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
x on the bank:	shelving (berms) o	on bar:	Secondary channels:	
undercut bank:	unvegetated:		Sediment indicators	
valley bottom:	vegetation transition	on:	Secondary channels:	
other:	sediment transition		Changes in character of soil:	
Shelving:	upper limit of depo		Mudcracks:	
shelf at top of bank:	Instream bedforms a transport evidence:	and other bedioad	Changes in particle-sized distribution:	
natural levee:	deposition bedload	d indicators: (e.g., gravel sheets, etc.):	transition from to	
man-made berms or levees:		ools, riffles, steps, etc.):	upper limit of sand-sized particles	
other berms:			silt deposits:	
Vegetation Indicators			exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th	graminoids to: woody shrubs to: -		Ancillary indicators Wracking/presence of organic litter: Presence of large wood:	
banks, and into the floodplain.	deciduous trees to):	Leaf litter disturbed or washed away:	
vegetation absent to:	coniferous trees to	0:	Water staining:	
moss to:	Vegetation matted d	own and/or bent:	Weathered clasts or bedrock:	
Other observed indicators? Describe: OHWM coincides with transition from sparse to	dense herbs.			

Project ID#: bsp02	
Step 4 Is additional information	n needed to support this determination? No If yes, describe and attach information to datasheet:
Step 5 Describe rationale for lo	cation of OHWM
OHWM is indicated by a change	e in slope from gentle to steep-sided banks, and by a change from sparse to dense herbs.
A LPS	
Additional observations or no	tes
Attach a photo log of the site. Uphoto log attached? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Use the table below, or attach separately. No If no, explain why not: Found in Wetland Delineation Report
PHOTO PHOTOGRAPH NUMBER	DESCRIPTION
l l	

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

Form Approved -OMB No. 0710-0025

Expires: 01-31-2025

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Information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil . Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
Project ID#: csp01	ite Name: Lemon Hill		Date and Time: 2024-05-29 12:21		
Location: 44.073159199130174°, -92.3072563216	64197°	Investigator(s): Jared Boom	s		
Step 1 Site overview from remote and online res Check boxes for online resources used gage data LiDAR X climatic data X satellite imagery X aerial photos X topographic maps	d to evaluate site: geologic maps in land use maps Other:	Were there any recei The stream is locate hold agricultural field The stream held flow others.	and flow conditions from online resources. Intextreme events (floods or drought)? Intextreme events (floods or drought)? Interest in a hilly agricultural landscape. The side-slopes and wille the tops and bottomlands are left natural. Interest in some locations and was stagnant in the decrease of the control of the contr		
sediment type, size, density, and distribut bridges, riprap, landslides, rockfalls etc. The ohwm was determined to be 4 ft wide by 4ft	ion. Make note of natural or	r man-made disturbances tha	at would affect flow and channel form, such as		
OHWM is at a transition point, therefore s drop-down menu next to each indicator, s OHWM.	Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.				
Geomorphic indicators					
X Break in slope:	Channel bar:		b erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):		
x on the bank:	shelving (berms	s) on bar:	Secondary channels:		
b undercut bank:	unvegetated:		Sediment indicators		
b valley bottom:	x vegetation trans	sition:	Secondary channels:		
other:	sediment transi	tion:	Changes in character of soil:		
Shelving:	upper limit of de	eposition on the bar:	Mudcracks:		
shelf at top of bank: natural levee: man-made berms or levees: other berms:	b deposition bedle imbricated clast	s and other bedload e: pad indicators: (e.g., is, gravel sheets, etc.): pools, riffles, steps, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:		
Vegetation Indicators		_	exposed roots below intact soil layer:		
Change in vegetation type and/or density Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	graminoids to: - woody shrubs to deciduous trees coniferous trees	o: s to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:		
Other observed indicators? Describe:					

Project ID#: 0	esp01
Step 4 Is ac	dditional information needed to support this determination? No If yes, describe and attach information to datasheet:
Step 5 Desc	ribe rationale for location of OHWM
Additional o	bservations or notes
	to log of the site. Use the table below, or attach separately. ached?
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

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Project ID#: csp02 Site Name: Lemon Hill		Date and Time: 2024-05-30 12:34		
Location: 44.08000008333334°, -92.3146840666666	7°	Investigator(s): Jared Boom	S	
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR geologic maps climatic data X satellite imagery X land use maps X aerial photos X topographic maps Other:		Were there any recer	and flow conditions from online resources. In extreme events (floods or drought)? It is agriculture and pasture lands. Water is present way.	
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Stream is located I. A steeper ditch. It meanders between toe slopes. Bank width varies from 7 feet to 25 feet. OHWM is 7 foot wide and 4 feet deep. Substrate is of silt clay mud with occasional cobble.				
Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.				
Geomorphic indicators				
X Break in slope:	Channel bar:		b erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
a on the bank:	shelving (berms)	on bar:	Secondary channels:	
x undercut bank:	unvegetated:		Sediment indicators	
b valley bottom:	vegetation transit	tion:	Secondary channels:	
other:	sediment transition	on:	Changes in character of soil:	
Shelving:	upper limit of dep	position on the bar:	Mudcracks:	
shelf at top of bank: natural levee: man-made berms or levees: other berms:	transport evidence deposition bedloa imbricated clasts	and other bedload: ad indicators: (e.g., , gravel sheets, etc.): pools, riffles, steps, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:	
Vegetation Indicators			exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to: moss to:	forbs to: graminoids to: woody shrubs to: deciduous trees coniferous trees Vegetation matted	: to: to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Project ID#: c	sp02
Step 4 Is ad	ditional information needed to support this determination?
Sten 5 Descr	ibe rationale for location of OHWM
	is rational to boats of critish
Additional of	oservations or notes
Attach a nhot	o log of the site. Use the table below, or attach separately.
Photo log atta	iched? Yes No If no, explain why not: Found in Wetland Delineation Report
РНОТО	PHOTOGRAPH DESCRIPTION
NUMBER	

U.S. Army Corps of Engineers (USACE)

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The public reporting burden for this collection of information, 0710-OHWM, is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Project ID#: csp03 Site Name: Lemon Hill Date and Time: 2024-05-30 17:18 Location: 44.07919226666667°, -92.32294608333336° Investigator(s): Jared Booms Describe land use and flow conditions from online resources. Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: Were there any recent extreme events (floods or drought)? Rolling hill agricultural pasture setting with agricultural fields in the side gage data LiDAR geologic maps hill woods up top woods down in the bottom. climatic data land use maps satellite imagery x aerial photos X topographic maps Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Broad flood plain holding a meandering perennial stream. Flows west to east picking up two additional tributaries in the process. Stream runs through an open wetland and a thick woods. In the meadow the stream is subject to beaver ponding with multiple beaver dams observed. The ohwm is averages 9 feet wide and 4 feet deep. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', at 'x', or just above 'a' the OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log. Geomorphic indicators erosional bedload indicators: (e.g., X Break in slope: Channel bar: obstacle marks, scour, smoothing, etc.): on the bank: shelving (berms) on bar: Secondary channels: a undercut bank: unvegetated: Sediment indicators b valley bottom: vegetation transition: Secondary channels: other: - - sediment transition: Changes in character of soil: X Shelving: upper limit of deposition on the bar: Mudcracks: Instream bedforms and other bedload a shelf at top of bank: Changes in particle-sized distribution: transport evidence: natural levee: transition from - - deposition bedload indicators: (e.g., imbricated clasts, gravel sheets, etc.): man-made berms or levees: upper limit of sand-sized particles b | bedforms: (e.g., pools, riffles, steps, etc.): other berms: - - silt deposits: **Vegetation Indicators** exposed roots below intact soil layer: Change in vegetation type and/or density: forbs to: - - -**Ancillary indicators** Check the appropriate boxes and select the general vegetation change graminoids to: - - -Wracking/presence of organic litter: (e.g., graminoids to woody shrubs). Describe the vegetation transition looking woodv shrubs to: - - -Presence of large wood: from the middle of the channel, up th banks, and into the floodplain. deciduous trees to: - - -Leaf litter disturbed or washed away: vegetation absent to: - - coniferous trees to: - - -Water staining: moss to: - - -Vegetation matted down and/or bent: Weathered clasts or bedrock: Other observed indicators? Describe:

Project ID#: c	sp03
Step 4 Is ad	ditional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:
Step 5 Descr	be rationale for location of OHWM
	servations or notes
Attach a phot Photo log atta	o log of the site. Use the table below, or attach separately. ched? No If no, explain why not: Found in Wetland Delineation Report
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

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, ,, ,	Name: Lemon Hill		Date and Time: 2024-06-24 09:16	
Location: 44.084876°, -92.320799°		tigator(s): Maddie Hun		
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: Describe Were the Water ac		Describe land use a Were there any recei	and flow conditions from online resources. Int extreme events (floods or drought)? Interpretation of the control of the cont	
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Overcast and precipitation conditions are wetter than normal				
	ne indicators that are used to dect the appropriate location of the	letermine location may he indicator by selectir	be just below and above the OHWM. From the ng either just below 'b', at 'x', or just above 'a' the s, and to attach a photo log.	
Geomorphic indicators				
A Break in slope:	Channel bar:		erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
x on the bank:	shelving (berms) on b	ar:	Secondary channels:	
x undercut bank:	b unvegetated:		Sediment indicators	
b valley bottom:	x vegetation transition:		Secondary channels:	
other:	sediment transition:		Changes in character of soil:	
Shelving:	upper limit of depositi	on on the bar:	Mudcracks:	
shelf at top of bank: natural levee: man-made berms or levees: other berms:	Instream bedforms and transport evidence: deposition bedload intimbricated clasts, grave bedforms: (e.g., pools	dicators: (e.g., vel sheets, etc.):	Changes in particle-sized distribution: transition from to upper limit of sand-sized particles silt deposits:	
Vegetation Indicators			exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted down	· -	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Project ID#: dsp01			
Step 4 Is additional information needed to support this determination? \square Yes \square No If yes, describe and attach information to datasheet:			
Step 5 Describe rationale for location of OHWM			
OHWM is indicated by abrupt change from level bottom to steep banks, and by a change from sparse to dense forbs.			
Onvivi is indicated by abrupt change from level bottom to steep banks, and by a change from sparse to dense forbs.			
Additional observations or notes			
Attach a photo log of the site. Use the table below, or attach separately.			
Photo log attached? Yes No If no, explain why not: Found in Wetland Delineation Report			
PHOTO PHOTOGRAPH DESCRIPTION			
NUMBER			

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW_CO_R

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Services, at

Project ID#: d	sp02
Step 4 Is ad	ditional information needed to support this determination?
	ibe rationale for location of OHWM
OHWM is inc	dicated by abrupt change from level bottom to very steep banks, and by a change from sparse to dense forbs.
Additional of	oservations or notes
	iservations of notes
	o log of the site. Use the table below, or attach separately. ached?
PHOTO NUMBER	PHOTOGRAPH DESCRIPTION

Page 2 of 2

U.S. Army Corps of Engineers (USACE)

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person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.				
Project ID#: dsp03 Site Name: Lemon Hill			Date and Time: 2024-06-19 09:20	
Location: 44.064507, -92.319085	Inv	vestigator(s): Maddie Hum	iphrey	
•	to evaluate site: geologic maps land use maps Other: rst look for changes in channe	Were there any recer Water accumulates f	and flow conditions from online resources. In extreme events (floods or drought)? If from surrounding forest and flows north. If erosional features, and changes in vegetation and at would affect flow and channel form, such as	
bridges, riprap, landslides, rockfalls etc. Overcast and precipitation conditions were normal			it would affect flow and chairler form, such as	
	ome indicators that are used to elect the appropriate location o	o determine location may of the indicator by selectin	be just below and above the OHWM. From the ag either just below 'b', at 'x', or just above 'a' the s, and to attach a photo log.	
Geomorphic indicators				
A Break in slope: x on the bank:	Channel bar: shelving (berms) or	n har:	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
		r bar.	Secondary channels:	
x undercut bank:	unvegetated:		Sediment indicators	
b valley bottom:	vegetation transition:	:	Secondary channels:	
other:	sediment transition:	:	Changes in character of soil:	
Shelving:	upper limit of depos	sition on the bar:	Mudcracks:	
shelf at top of bank: natural levee: man-made berms or levees: other berms:	Instream bedforms at transport evidence: deposition bedload imbricated clasts, g bedforms: (e.g., poor	indicators: (e.g.,	Changes in particle-sized distribution: transition from	
Vegetation Indicators				
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: - deciduous trees to: coniferous trees to: Vegetation matted do		exposed roots below intact soil layer: Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Project ID#: dsp03	
Step 4 Is additional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:	
Step 5 Describe rationale for location of OHWM	
OHWM is indicated by abrupt change from level bottom to steep banks.	
Or IVVIVI 13 indicated by abrupt change from level bottom to steep banks.	
Additional observations or notes	
Attach a photo log of the site. Use the table below, or attach separately.	
Photo log attached? No If no, explain why not: <u>Found in Wetland Delineation Report</u>	_
PHOTO PHOTOGRAPH DESCRIPTION	
NUMBER	

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Project ID#: dsp04 Site Name: Lemon Hill			Date and Time: 2024-06-19 09:20	
Location: 44.064608, -92.303551		Investigator(s): Maddie Hum	phrey	
Step 1 Site overview from remote and online resour Check boxes for online resources used to gage data LiDAR Climatic data Satellite imagery aerial photos topographic maps			nd flow conditions from online resources. It extreme events (floods or drought)? Irom pastureland.	
Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Overcast and precipitation conditions were normal.				
	ne indicators that are used ect the appropriate location	d to determine location may n of the indicator by selectin	be just below and above the OHWM. From the g either just below `b', at `x', or just above `a' the s, and to attach a photo log.	
Geomorphic indicators				
A Break in slope:	Channel bar:	_	erosional bedload indicators: (e.g., obstacle marks, scour, smoothing, etc.):	
x on the bank:	shelving (berms)	on bar:	Secondary channels:	
x undercut bank:	unvegetated:		Sediment indicators	
b valley bottom:	vegetation transition	on:	Secondary channels:	
other:	sediment transition	on:	Changes in character of soil:	
Shelving:	upper limit of dep	position on the bar:	Mudcracks:	
shelf at top of bank: natural levee: man-made berms or levees: other berms:	transport evidence deposition bedloc imbricated clasts	and other bedload and indicators: (e.g., and other bedload Changes in particle-sized distribution: transition from		
Vegetation Indicators			exposed roots below intact soil layer:	
Change in vegetation type and/or density: Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up th banks, and into the floodplain. vegetation absent to:	forbs to: graminoids to: woody shrubs to: deciduous trees coniferous trees Vegetation matted	: to:	Ancillary indicators Wracking/presence of organic litter: Presence of large wood: Leaf litter disturbed or washed away: Water staining: Weathered clasts or bedrock:	
Other observed indicators? Describe:				

Project ID#: dsp04	
Step 4 Is additional information needed to support this determination? Yes No If yes, describe and attach information to datasheet:	
Step 5 Describe rationale for location of OHWM	
OHWM is indicated by abrupt change from level bottom to banks.	
Additional observations or notes	
Attach a photo log of the site. Use the table below, or attach separately.	
Photo log attached? No If no, explain why not: Found in Wetland Delineation Report	
РНОТО	PHOTOGRAPH DESCRIPTION
NUMBER	

Appendix C
Survey Photographs



Photograph pp001 view East



Photograph pp001 view North



Photograph pp001 view South



Photograph pp001 view West



Photograph pp002 view East



Photograph pp002 view North



Photograph pp002 view South



Photograph pp002 view West



Photograph pp003 view East



Photograph pp003 view North