

Minnesota Wetland Conservation Act

Notice of Application

Local Government Unit (LGU) City of Minnetonka	Address 11522 Minnetonka Boulevard Minnetonka, MN 55305
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1. PROJECT INFORMATION

Applicant Name City of Minnetonka	Project Name Lone Lake Park MT Bike Trail	Date of Application October 23, 2019	Application Number Lone Lake Park MT Bike Trail 2019
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Type of Application (check all that apply):

<input checked="" type="checkbox"/> Wetland Boundary or Type	<input type="checkbox"/> No-Loss	<input type="checkbox"/> Exemption	<input type="checkbox"/> Sequencing
<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Banking Plan		

Summary and description of proposed project (attach additional sheets as necessary):

The City received a wetland delineation report on October 23, 2019 for Lone Lake Park to determine the presence and extent of wetland within two areas that contain proposed single track mountain bike trails (as described in the attached report). A field site visit was conducted on October 8, 2019. Three wetland areas were identified, staked, and surveyed in the field. Findings include the presence of three wetland areas and a tributary to Nine Mile Creek within the study area. These wetlands include:

Wetland 1 (W1): Type 2/3 (PEM1A/PEM1C) fresh meadow and shallow marsh wetland associated with Nine Mile Creek.

Wetland 2 (W2): Type 2 wet meadow fringe along the west side of Nine Mile Creek.

Wetland 3 (W3): Type 2/3 (PEM1A) wet meadow/shallow marsh area on the south side of Lone Lake, south of the paved trail.

Nine Mile Creek (OHWM-1) with perennial flow and a defined streambank and bed. The Ordinary High Water level was delineated as the elevation where consistent water leaves evidence on the landscape.

One terraced area adjacent to and south of Wetland 1 near Rowland Road was examined for presence of wetland (sample point SP-1). Vegetation is considered hydric, but no hydrologic indicators were present. Therefore, the area was considered upland.

2. APPLICATION REVIEW AND DECISION

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 3 provides notice that an application was made to the LGU under the Wetland Conservation Act as specified above. A copy of the application is attached. Comments can be submitted to:

Name and Title of LGU Contact Person Leslie Yetka Natural Resources Manager	Comments must be received by (minimum 15 business-day comment period): November 14, 2019
Address (if different than LGU) Same as above	Date, time, and location of decision: Approximately 4pm, November 15, 2019 11522 Minnetonka Blvd Minnetonka, MN 55305
Phone Number and E-mail Address 952-988-8415 lyetka@eminnetonka.com	Decision-maker for this application: <input checked="" type="checkbox"/> Staff <input type="checkbox"/> Governing Board or Council

Signature: *Leslie Yetka* Date: 10-24-19

3. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski; stacey.lijewski@hennepin.us
<input checked="" type="checkbox"/> BWSR TEP member: Ben Carlson; ben.carlson@state.mn.us
<input checked="" type="checkbox"/> LGU TEP member (if different than LGU Contact): Aaron Schwartz; aschwartz@eminnetonka.com
<input checked="" type="checkbox"/> DNR TEP member: leslie.parris@state.mn.us
<input type="checkbox"/> DNR Regional Office (if different than DNR TEP member)
<input checked="" type="checkbox"/> WD or WMO (if applicable): ranhorn@ninemilecreek.org
<input checked="" type="checkbox"/> Applicant (notice only) and Landowner (if different)
<input checked="" type="checkbox"/> Members of the public who requested notice (notice only): Located on Lone Lake Park MT Bike Trail Website
<input checked="" type="checkbox"/> Corps of Engineers Project Manager (notice only)
<input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan applications only)

4. MAILING INFORMATION

- For a list of BWSR TEP representatives: www.bwsr.state.mn.us/contact/WCA_areas.pdf
- For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
- Department of Natural Resources Regional Offices:

NW Region: Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	NE Region: Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Central Region: Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Southern Region: Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073
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For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

➤
US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:

5. ATTACHMENTS

In addition to the application, list any other attachments:

Wetland delineation report with Joint Application

-
-
-
-



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Type and Boundary Application

Lone Lake Mt. Bike Trail

Minnetonka, Minnesota

October 17, 2019

Submitted by:

Bolton & Menk, Inc.
12224 Nicollet Avenue
Burnsville, MN 55337
P: 952-890-0509

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WETLAND DELINEATION REPORT

PART ONE: Applicant Information

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

Applicant/Landowner Name:	City Engineer Phil Olson
Mailing Address:	14600 Minnetonka Blvd Minnetonka, MN 55345
Phone:	952-939-8239
E-mail Address:	

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

Agent Name:	Bolton & Menk, Inc. Brandon Bohks
Mailing Address:	12224 Nicollet Ave Burnsville, MN 55337
Phone:	952-890-0509 ext 3244
E-mail Address:	brandonbo@bolton-menk.com

PART TWO: Site Location Information

County:	Hennepin	City/Township:	Minnetonka
Parcel ID and/or Address:	Lone Lake Park		
Legal Description (Section, Township, Range):	35, 117, 22		
Lat/Long (decimal degree)			
Attach a map showing the location of the site in relation to local streets, roads, highways.			
Approximate size of site (acres) or if a linear project, length (feet):	12.97		

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

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

PART THREE: General Project/Site Information

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

N/A

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

PART FOUR: Aquatic Resource Impact¹ Summary

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

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

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

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

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

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

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

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

N/A

PART FIVE: Applicant Signature

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

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

Signature: _____

Date: 10.21.19

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

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

Attachment A

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

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

Wetland Type Confirmation

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

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

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

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

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

Appendix



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Wetland Delineation Report

Lone Lake Mt. Bike Trail

Minnetonka, Minnesota

October 17, 2019

Submitted by:

Bolton & Menk, Inc.
12224 Nicollet Avenue
Burnsville, MN 55337
P: 952-890-0509

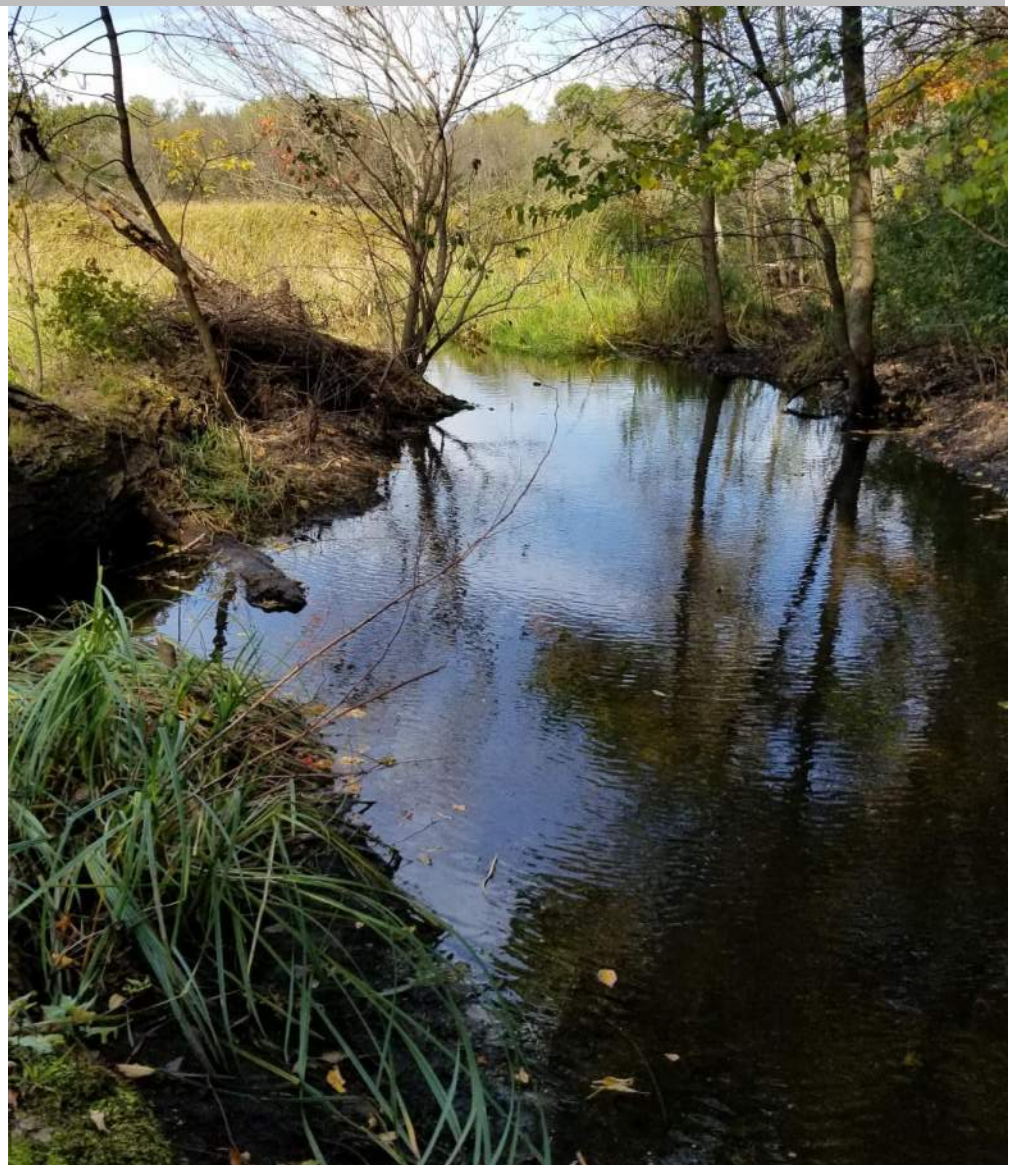


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- Exhibit A: Site Location Map
- Exhibit B: Site Topography – 2 Foot LiDAR Contours
- Exhibit C: National Wetlands Inventory
- Exhibit D: Public Waters Inventory
- Exhibit E: Hennepin County Soil Survey
- Exhibit F: Delineated Aquatic Resources
- Exhibit G: Delineation Data Sheets

I. INTRODUCTION

The City of Minnetonka is proposing to add a single track mountain bike trail within Lone Lake Park. The city requested a wetland delineation at two of the proposed trail locations to ensure the proposed trail avoids all wetlands.

The study area is located in the southeastern corner of the Minnetonka City limits. This surrounding area is highly urbanized, consisting primarily of high-density residential homes. Many of the natural resources within Lone Lake Park have been preserved and have limited residential encroachment.

The project is found in Section 35 in Township 117 North of Range 22 West.

II. WETLAND DELINEATION METHODOLOGY

The wetland boundaries were delineated and staked in the field on October 8, 2019, using methods described in the “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)”. Wetlands identified were classified using “Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)”, “Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)” and “Wetland Plants and Plant Communities of Minnesota and Wisconsin” (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

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

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

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

III. BACKGROUND INFORMATION

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

Exhibit A is a location map of the study area.

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

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

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

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

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

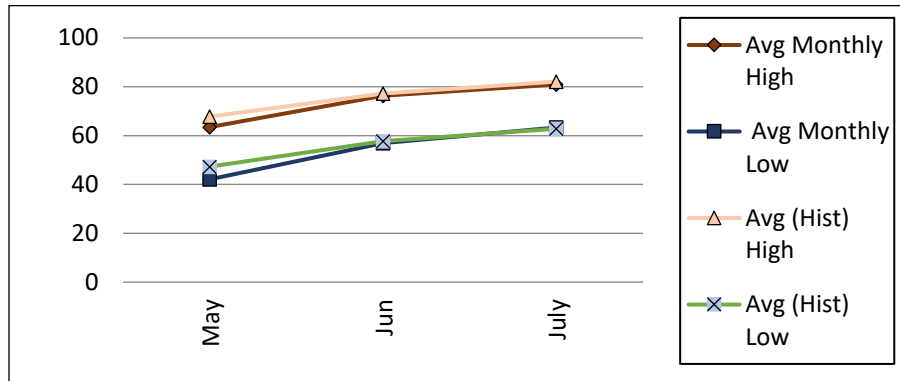
Exhibit G includes the wetland delineation data sheets.

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

IV. CLIMATE DATA

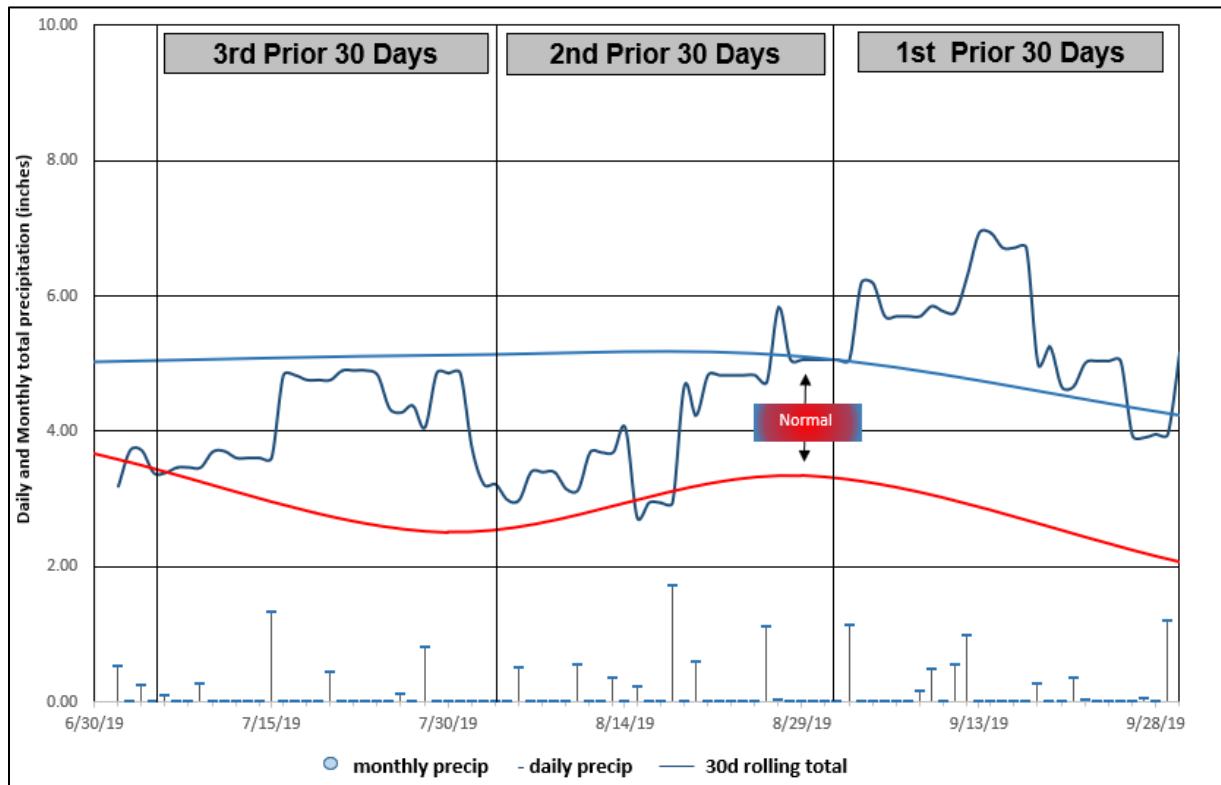
The monthly temperature table below shows the average high and low temperatures for the three months prior to the field delineation, along with the historical averages for these months. The average monthly highs and lows were below normal for the month of May but within the normal range for the months of June and July.

MONTHLY TEMPERATURE RANGE



Antecedent precipitation was evaluated using a combination of the NRCS Method and the Rolling Totals Method. The analysis found that precipitation totals have been above normal at the time of the delineation.

ANTECEDENT PRECIPITATION CONDITIONS



This climatic data was gathered using the Climatology Working Group Website, <http://climate.umn.edu/> and the National Weather Service Forecast Office, <http://w2.weather.gov/climate/>. The information for the investigation was retrieved from the WETS Station: Hennepin–Minnetonka (County–City).

V. FINDINGS

On October 8, 2019, a field investigation was performed to evaluate and verify the existence and boundary of any aquatic resources located within the proposed study corridor. The field investigation found that three wetlands and a tributary were found to exist within the study corridor. The following describes the aquatic resources identified, together with a brief description of wetland types and observations made during the field investigation.

Only the wetlands along the western side of Nine Mile Creek were delineated for this study. Based on the location of the proposed Mt. Bike Trail, wetlands along the eastern side of Nine Mile Creek did not require field review.

Wetland 1 (W1):

NWI Cowardin: PEM1A/PEM1C

PWI (Hydro) ID: None

Field Observation Circular 39: Type 2/3

Field Observation Eggers and Reed: Fresh (wet) Meadow/Shallow Marsh

Soil Mapping Unit(s): Muskego and Houghton, complex/Kingsley-Gotham complex

Wetland 1 is a large wetland complex that's associated with a much larger wetland chain connected hydrologically by Nine Mile Creek. Wetland 1 is composed of both shallow and deep water habitat and should be considered a flow through wetland.

The field investigation found that wetland (W1) has met all three wetland indicators and should be considered a palustrine emergent persistent saturated (PEM1B) wetland and a palustrine emergent seasonally flooded (PEM1C) wetland. Two transects and several sample points were taken to determine the wetland boundary. Soils, hydrology and topography aided in determining the wetland boundary.

At the wetland pit locations, the plant communities are dominated by reed canary grass, lake sedge, and green ash. At the upland pit locations, the plant communities are dominated by common buckthorn, prickly ash, and white snakeroot. Both the wetland plant communities and upland plant community (W1-D) are considered hydrophytic.



Wetland 1



Wetland 1

Soils at both wetland pit locations were dug approximately to a depth of 15 inches and met hydric soil indicator A3 – Black Histic. Soils at upland pit location (W1-B) were dug to a depth of 32 inches and failed to meet any of the hydric soil indicators. Soils at upland pit location (W1-D) were dug to a depth of 35 inches and met hydric soil indicator A12 – Thick Dark Surface.

Soils at both wetland pit locations were saturated at the surface, with the water table present within 5 inches of the soil surface. Soils at the wetland pit location also met secondary hydrology indicators D2 – Geomorphic Position and D5 – FAC Neutral Test. Soils at both upland pit locations failed to meet any wetland hydrology indicators.

The determining factor for this delineation was the lack of wetland hydrology at the upland pit locations. The boundary was determined by following the topographic breaks and reed canary grass boundaries.

Wetland 2 (W2):

NWI Cowardin: None

PWI (Hydro) ID: None

Field Observation Circular 39: Type 2

Field Observation Eggers and Reed: Fresh (wet) Meadow

Soil Mapping Unit(s): Muskego and Houghton, complex/Kingsley-Gotham complex

Wetland 2 is a small fringe wetland located along the west of Nine Mile Creek at the southern extent of the study area. There is no defined bank at this location along Nine Mile Creek, although other Ordinary High Water Mark (OHWM) indicators are present.

The field investigation found that wetland (W2) has met all three wetland indicators and should be considered a PEM1B wetland. One transect and several sample points were taken to determine the wetland boundary. Soils, hydrology and topography aided in determining the wetland boundary.

At the wetland pit location, the plant community is dominated by reed canary grass, American elm, and common buckthorn. At the upland pit location, the plant community is dominated by box elder, black cherry, common buckthorn, clear weed, and white snakeroot. Only the wetland plant community is considered hydrophytic.

Soils at the wetland pit location were dug to a depth of 22 inches and met hydric soil indicator A12. Soils at the upland pit location were dug to a depth of 31 inches and also met hydric soil indicator A12.

Soils at the wetland pit location were saturated at the surface, with the water table present within 4 inches of the soil surface. Soils at the wetland pit location also met secondary hydrology indicators D2 and D5. Soils at both upland pit location failed to meet any wetland hydrology indicators.

The determining factor for this delineation was the lack of hydrophytic vegetation and wetland hydrology at the upland pit location. The boundary was determined by following the topographic breaks and reed canary grass boundaries.

Wetland 3 (W3):

NWI Cowardin: PEM1A

PWI (Hydro) ID: None

Field Observation Circular 39: Type 2/3

Field Observation Eggers and Reed: Fresh (wet) Meadow/Shallow Marsh

Soil Mapping Unit(s): Lundalake loam, depressional/Kingsley-Gotham complex

Wetland 3 is a small wetland complex that extends off the south side of Lone Lake. Wetland 3 is connected to another small basin to the north by sub surface flow.

The field investigation found that wetland (W3) has met all three wetland indicators and should be considered a PEM1B and PEM1C wetland. Two transects and several sample points were taken to determine the wetland boundary. Soils, hydrology and topography aided in determining the wetland boundary.

At the wetland pit locations, the plant communities are dominated by reed canary grass, American elm, and common buckthorn. At the upland pit locations, the plant communities are dominated by common buckthorn, box elder, choke cherry, black cherry, red raspberry, and white snakeroot. Both the wetland plant communities and upland plant community (W3-D) are considered hydrophytic.



Wetland 2



Wetland 3

Soils at both wetland pit locations were dug approximately to a depth of 15 inches and met hydric soil indicator A11 – Depleted Below Dark Surface. Soils at upland pit location (W3-B) were dug to a depth of 19 inches and met hydric soil indicator A11. Soils at upland pit location (W3-D) were dug to a depth of 32 inches and met hydric soil indicator A12.

Soils at both wetland pit locations were saturated at the surface, with the water table present within 4 inches of the soil surface. Soils at the wetland pit location also met secondary hydrology indicators D2 and D5. Soils at both upland pit locations failed to meet any wetland hydrology indicators.

The determining factor for this delineation was the lack of wetland hydrology at the upland pit locations. The boundary was determined by following the topographic breaks and reed canary grass boundaries.

Nine Mile Creek (OHWM-1):

NWI Cowardin: None

PWI (Hydro) ID: 105599

Field Observation Circular 39: None

Field Observation Eggers and Reed: None

Soil Mapping Unit(s): Forestcity-Lundlake, depressionanl

The investigation found that Nine Mile Creek is not a wetland due to the presence of perennial flow and a defined bed and bank. The OHWM was delineated using indicators such as Natural lines impressed on banks and water staining

Within the study corridor, Nine Mile Creek is approximately 15-feet wide at water surface, with an OHWM width of approximately 17-feet wide. Bank heights of the stream are greater than 4-feet on the west side and approximately 2-feet on the east side.



OHWM-1

Sample Point (SP-1):

NWI Cowardin: PEM1A

PWI (Hydro) ID: None

Field Observation Circular 39: Upland

Field Observation Eggers and Reed: Upland

Soil Mapping Unit(s): Muskego and Houghton complex

Sample point 1 (SP-1) was taken to determine the status of a terrace that exhibited wetland characteristics. Vegetation at the sample pit location is dominated by box elder, eastern cottonwood, green ash, clear weed, burdock, and white snakeroot. Therefore, hydrophytic vegetation is considered present. Soils at (SP-1) were dug to a depth of 32-inches and met hydric soil indicator A12. Soils at (SP-1) failed to meet any wetland hydrology indicators. The determining factor for this investigation was the lack of wetland hydrology at the sample pit location, therefore this area should be considered upland.

VI. CONCLUSION

This delineation was performed on October 8, 2019. The boundaries of the wetlands were staked in the field with three foot “Wetland Delineation” pin flags. The location of the pin flags were surveyed by Bolton & Menk, Inc. using a Trimble Geo-XH GPS Data Collector and tied to the Hennepin County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required wetland criteria were present.

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

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

WETLAND SUMMARY

Id #	Wetland Type[^]	Size*
W1	Type 2/3	2.06 ac
W2	Type 2	0.02 ac
W3	Type 2/3	1.06 ac

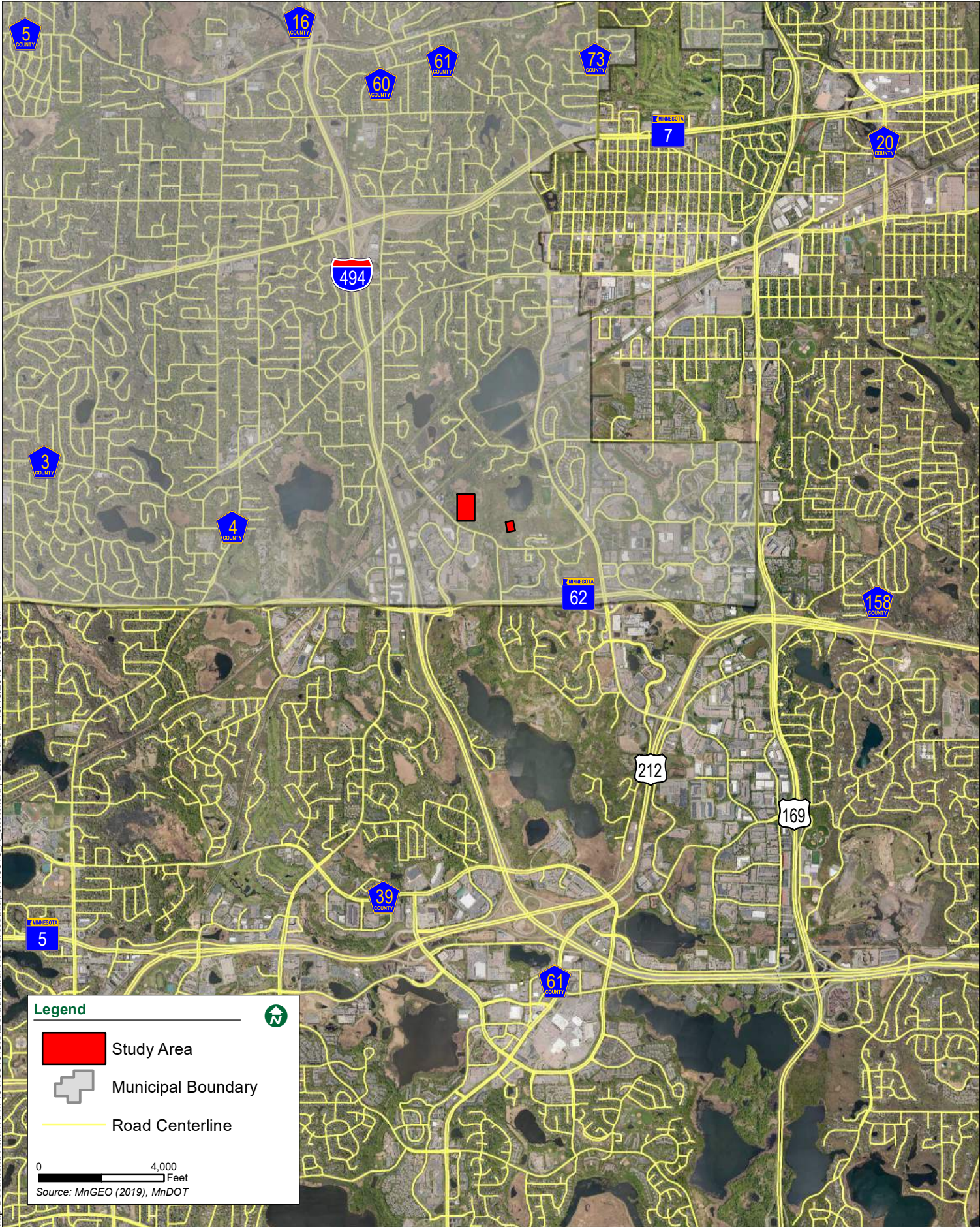
**size measured within study area.*

[^]wetland type within study area

Sincerely,
BOLTON & MENK, INC.




Brandon Bohks
Certified Wetland Delineator, No. 5231

APPENDIX




Map Document: H:\M\TKAT\19119918\GIS\ESRI\Natural Resources\Maps\119918_A_8x11.mxd | Date Saved: 10/15/2019 1:06:36 PM

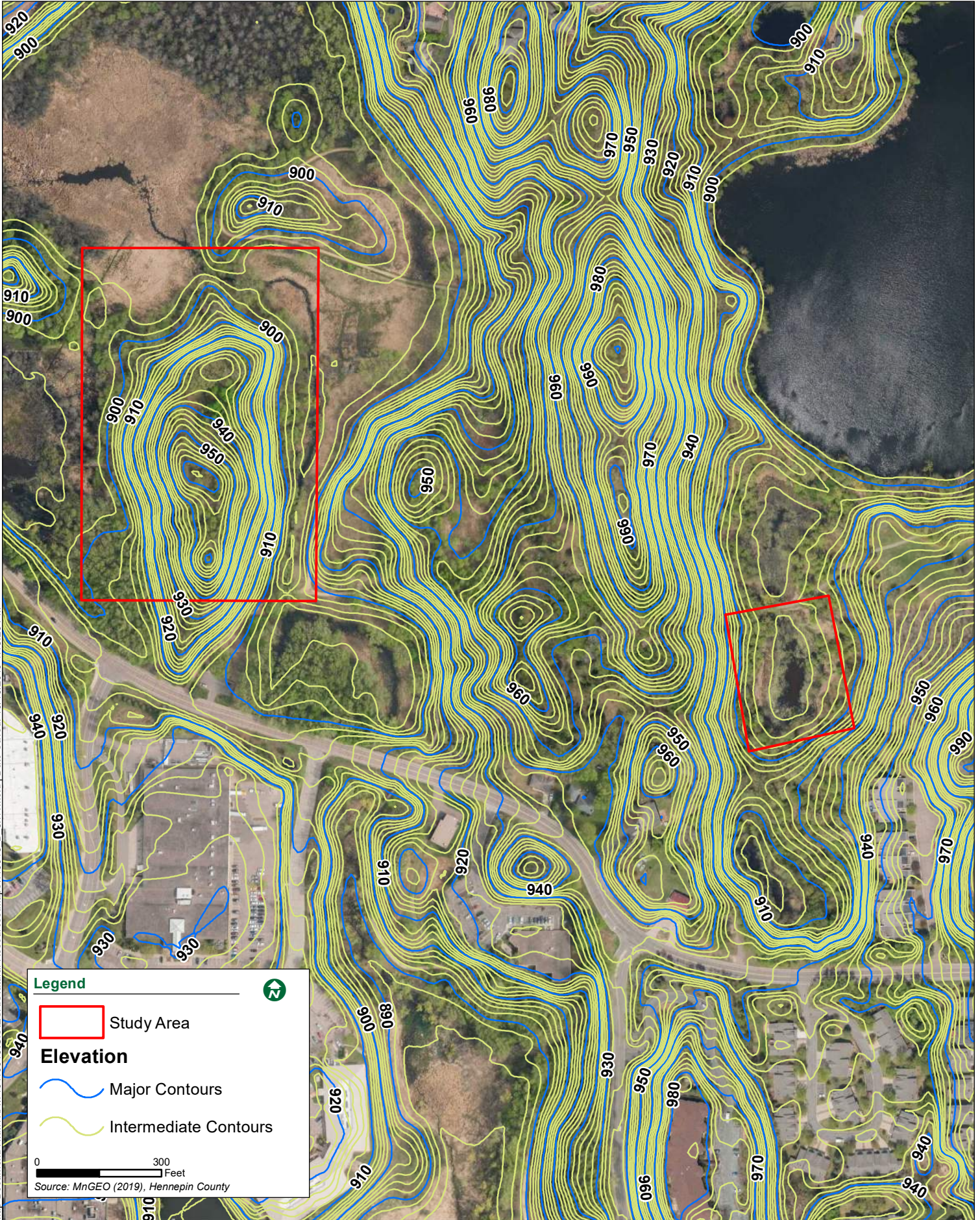
Legend

-  Study Area
-  Municipal Boundary
-  Road Centerline

0 4,000 Feet

Source: MnGEO (2019), MnDOT






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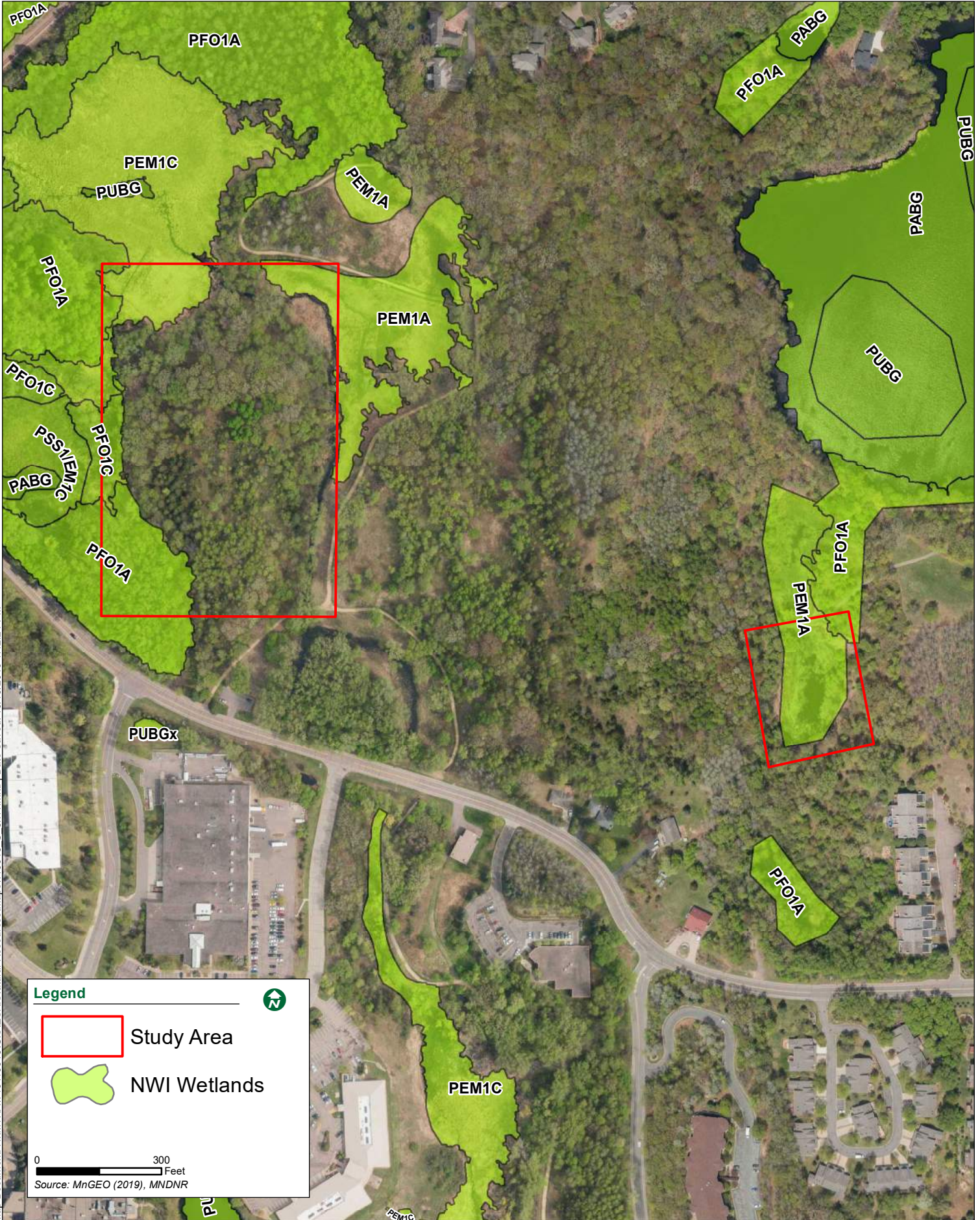
Legend

- Study Area
- ~ Major Contours
- ~ Intermediate Contours

0 300
 Feet



Source: MnGEO (2019), Hennepin County






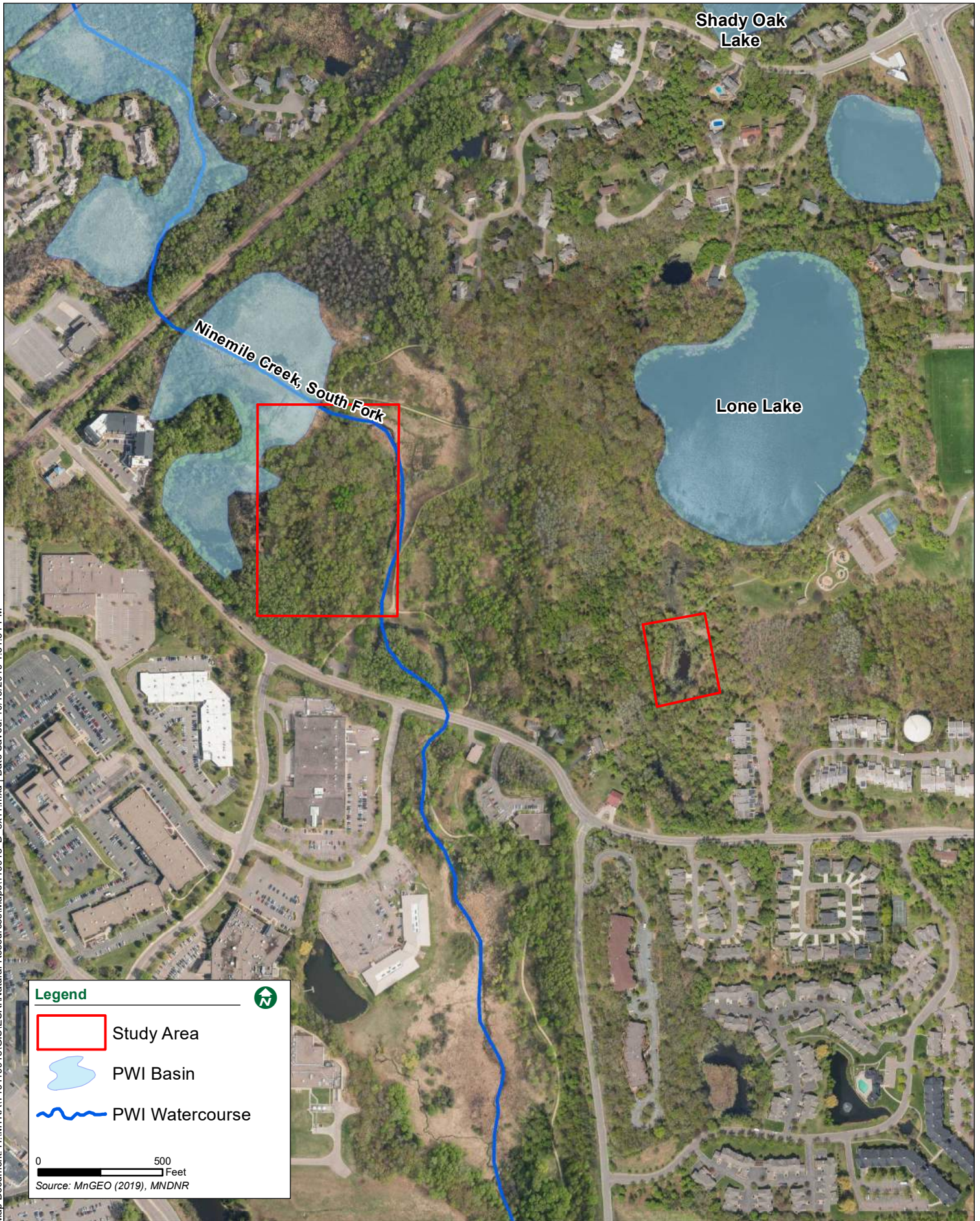
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Legend

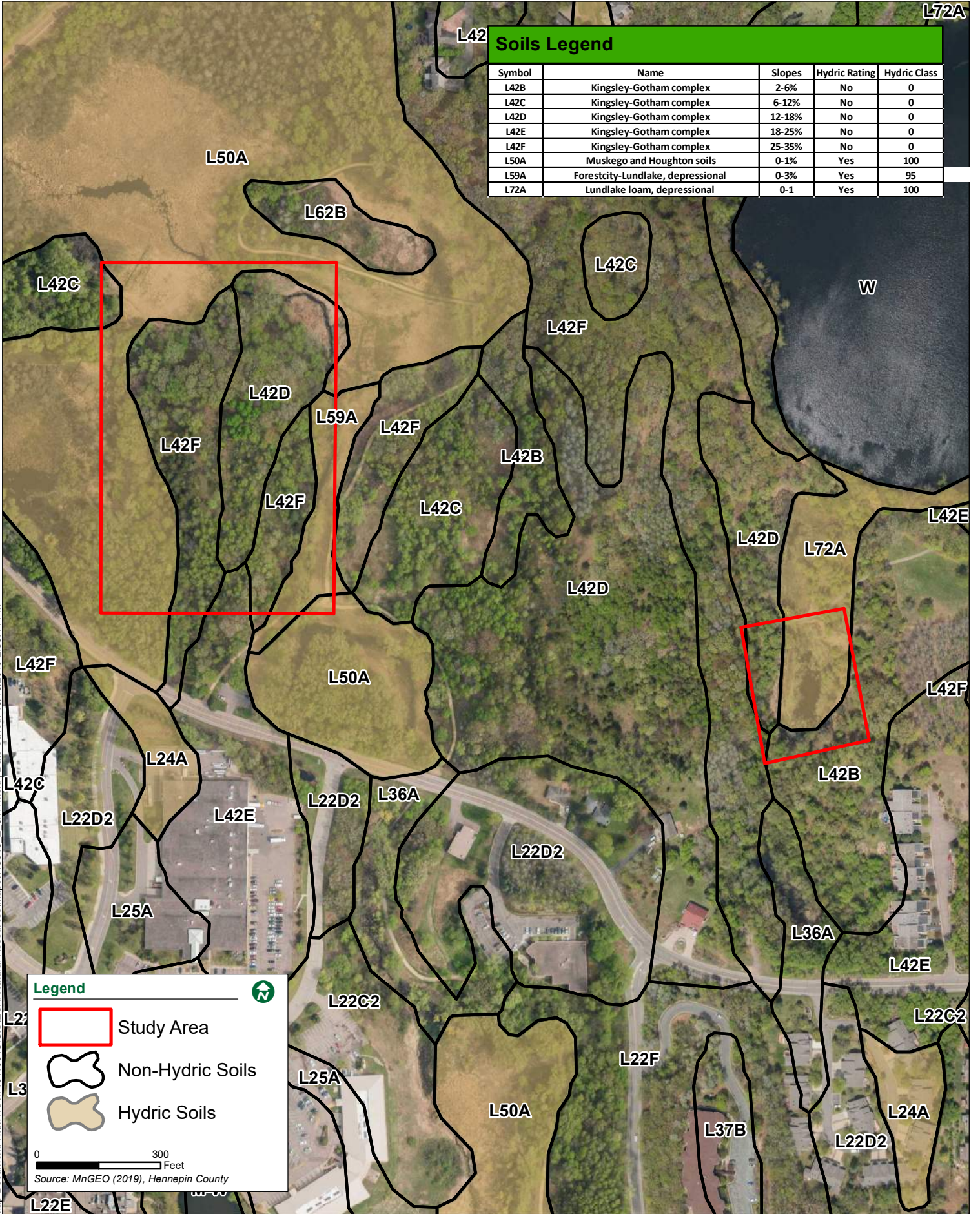
-  Study Area
-  NWI Wetlands

0 300 Feet
Source: MnGEO (2019), MNDNR





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Soils Legend

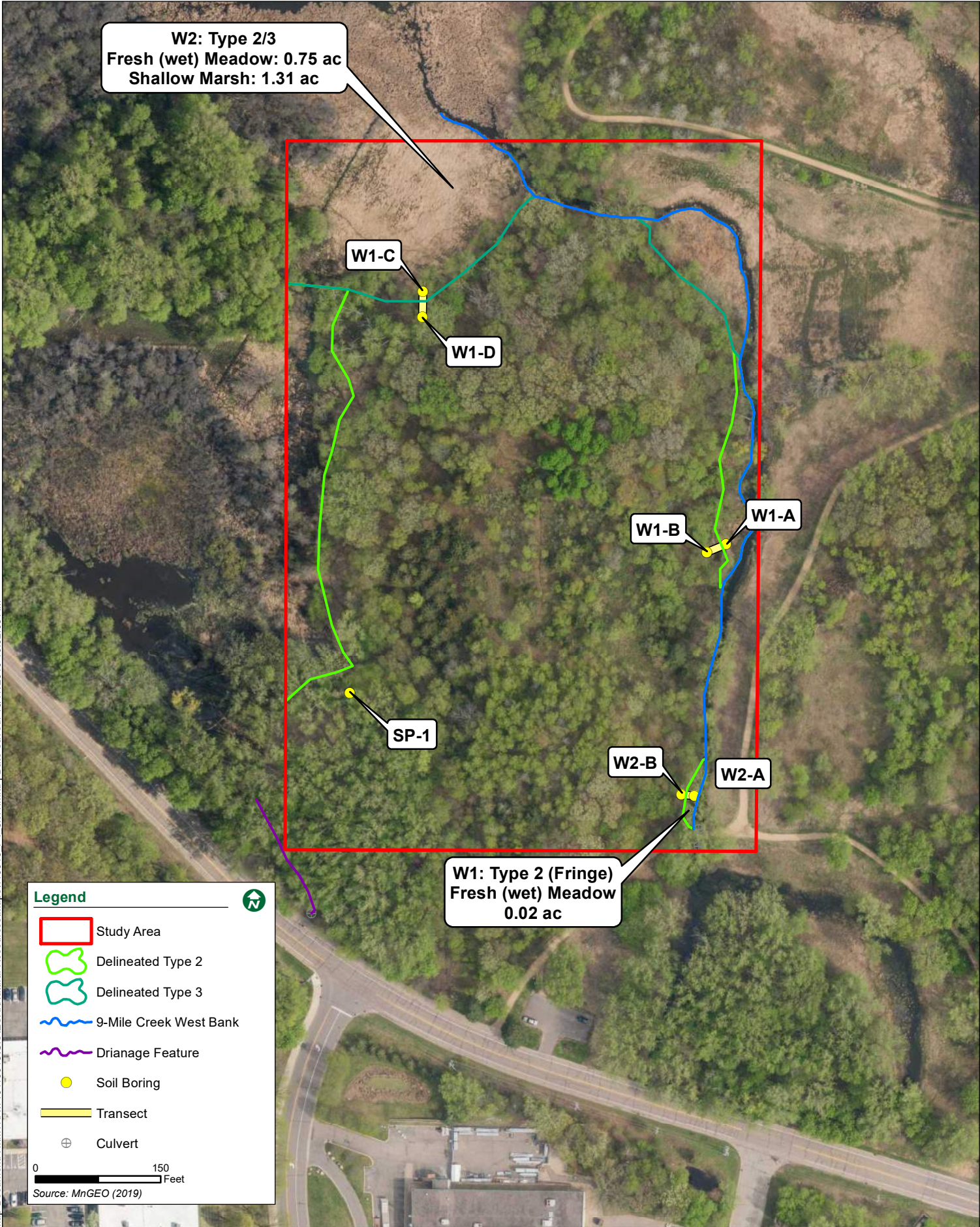
Symbol	Name	Slopes	Hydric Rating	Hydric Class
L42B	Kingsley-Gotham complex	2-6%	No	0
L42C	Kingsley-Gotham complex	6-12%	No	0
L42D	Kingsley-Gotham complex	12-18%	No	0
L42E	Kingsley-Gotham complex	18-25%	No	0
L42F	Kingsley-Gotham complex	25-35%	No	0
L50A	Muskego and Houghton soils	0-1%	Yes	100
L59A	Forestcity-Lundlake, depressional	0-3%	Yes	95
L72A	Lundlake loam, depressional	0-1	Yes	100

Legend

- Study Area
- Non-Hydric Soils
- Hydric Soils

0 300 Feet
Source: MnGEO (2019), Hennepin County

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W2: Type 2/3
Fresh (wet) Meadow: 0.75 ac
Shallow Marsh: 1.31 ac

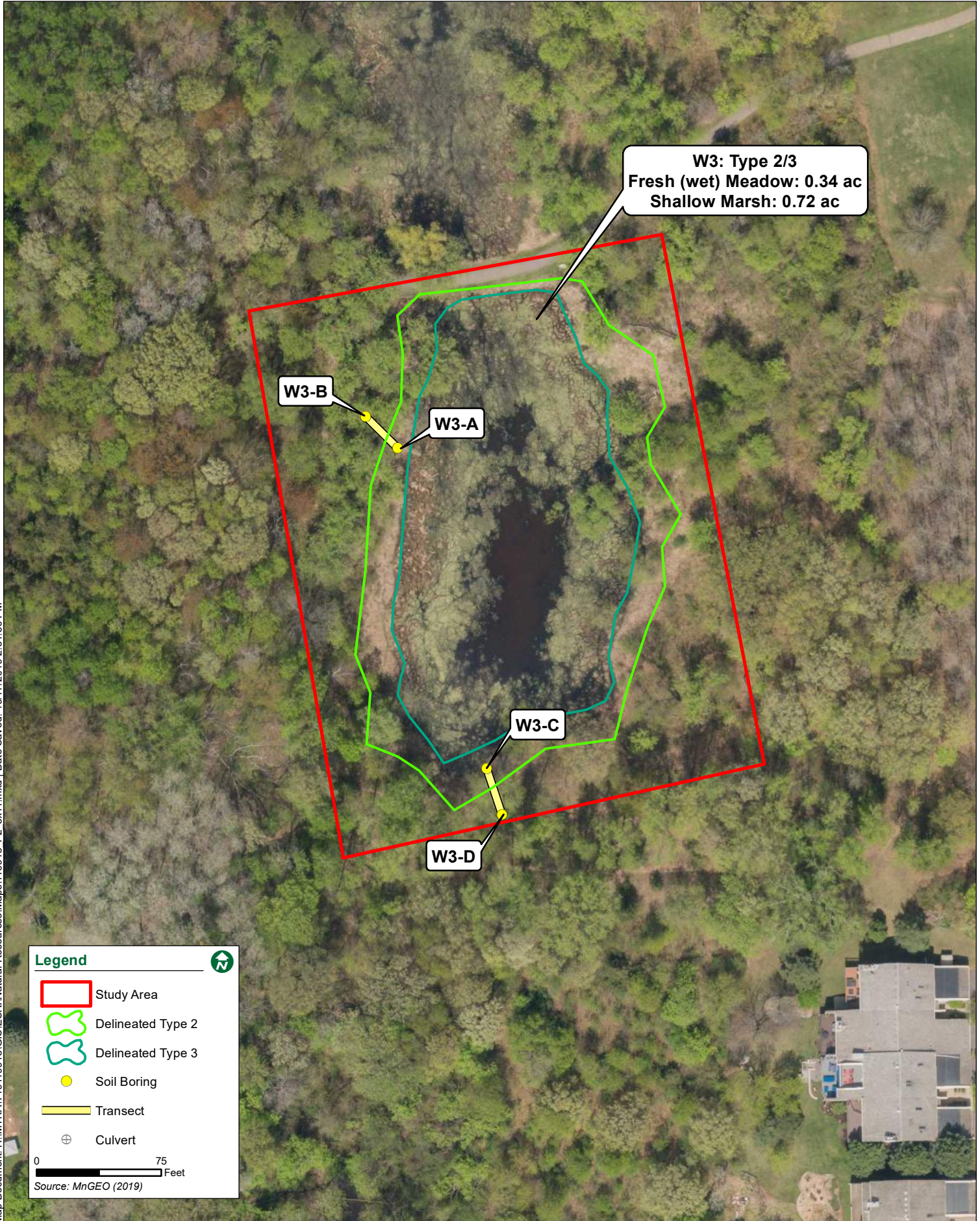
W1: Type 2 (Fringe)
Fresh (wet) Meadow
0.02 ac

Legend

- Study Area
- Delineated Type 2
- Delineated Type 3
- 9-Mile Creek West Bank
- Drainage Feature
- Soil Boring
- Transect
- Culvert

0 150 Feet
Source: MnGEO (2019)

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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
 Applicant/Owner: City of Minnetonka State: MN Sample Point: W1-A
 Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
 Landforms (hillside, terrace, etc.): Basin Local Relief (concave, convex, none): Concave
 Slope (%): 0-2 Latitude: _____ Longitude: _____ Datum: _____
 Soil Map Unit Name: Muskego and Houghton soils NWI Classification: PEM1A
 Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
 Are vegetation _____, soils _____, or hydrology _____ significantly disturbed? Are normal circumstances present? Yes
 Are vegetation _____, soils _____, or hydrology _____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>Yes</u>	Is the sampled area within a wetland?	<u>Yes</u>
Hydric soils present?	<u>Yes</u>		
Wetland hydrology present?	<u>Yes</u>		

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum	(Plot size: <u>30 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	_____	_____	_____	_____	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A) Total number of dominant species across all strata: <u>2</u> (B) Percent of dominant species that are OBL, FACW or FAC: <u>100%</u> (A/B)
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>0</u>	=Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15 feet</u>)				
1	_____	_____	_____	_____	Prevalence Index Worksheet Total % cover of: OBL Species: <u>53</u> x 1 = <u>53</u> FACW Species: <u>47</u> x 2 = <u>94</u> FAC Species: <u>0</u> x 3 = <u>0</u> FACU species: <u>0</u> x 4 = <u>0</u> UPL Species: <u>0</u> x 5 = <u>0</u> Totals: <u>100</u> (A) <u>147</u> (B) Prevalence Index (B/A): <u>1.47</u>
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>0</u>	=Total Cover		
Herb stratum:	(Plot size: <u>5 feet</u>)				
1	<u>Phalaris arundinacea</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators <input checked="" type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (Provide supporting data in remarks) Problematic hydrophytic vegetation* (Explain in remarks) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<u>Carex lacustris</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	
3	<u>Scirpus atrovirens</u>	<u>12</u>	<u>No</u>	<u>OBL</u>	
4	<u>Eupatorium perfoliatum</u>	<u>6</u>	<u>No</u>	<u>OBL</u>	
5	<u>Solidago gigantea</u>	<u>2</u>	<u>No</u>	<u>FACW</u>	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
		<u>100</u>	=Total Cover		
Woody vine stratum:	(Plot size: <u>15 feet</u>)				
1	_____	_____	_____	_____	Hydrophytic vegetation present? <u>Yes</u>
2	_____	_____	_____	_____	
		<u>0</u>	=Total Cover		

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: W1-A

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Row 1: 0-15, 10YR 2/1, Muck.

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
[X] High Water Table (A2)
[X] Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present? Yes
Saturation Present? Yes
Depth (inches): 2
Depth (inches): Surface

Indicators of Wetland Hydrology Present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W1-B
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Backslope Local Relief (concave, convex, none): Convex
Slope (%): 8-12 Latitude: Longitude: Datum:
Soil Map Unit Name: Kingsley-Gotham complex NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Questions include 'Hydrophytic vegetation present?' (No), 'Hydric soils present?' (No), 'Wetland hydrology present?' (No), and 'Is the sampled area within a wetland?' (No).

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Vegetation data table with columns: Tree Stratum, Sapling/Shrub stratum, Herb stratum, Woody vine stratum, Absolute % Cover, Dominant Species, Indicator Status. Includes Dominance Test Worksheet, Prevalence Index Worksheet, and Hydrophytic Vegetation Indicators.

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: W1-B

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include 0-15, 15-24+, and 24-32+ inch depths.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soils Present? No

Remarks: Soil pit was dug to 32 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? _____ Depth (inches): _____
Water Table Present? _____ Depth (inches): _____
Saturation Present? _____ Depth (inches): _____

Indicators of Wetland Hydrology Present? No

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W1-C
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Basin Local Relief (concave, convex, none): Concave
Slope (%): 0-2 Latitude: Longitude: Datum:
Soil Map Unit Name: Muskego and Houghton soils NWI Classification: PEM1A
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Rows include: Hydrophytic vegetation present? Yes; Hydric soils present? Yes; Wetland hydrology present? Yes; Is the sampled area within a wetland? Yes

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Vegetation data table with columns: Tree Stratum, Sapling/Shrub stratum, Herb stratum, Woody vine stratum, Absolute % Cover, Dominant Species, Indicator Status. Includes Dominance Test Worksheet, Prevalence Index Worksheet, and Hydrophytic Vegetation Indicators.

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W1-C

(Midwest Region)

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Row 1: 0-15+ 10YR 2/1 Muck

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
X Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present? Yes
Saturation Present? Yes
Depth (inches): 5
Depth (inches): Surface

Indicators of Wetland Hydrology Present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W1-D

Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22

Landforms (hillside, terrace, etc.): Backslope Local Relief (concave, convex, none): Convex

Slope (%): 9-13 Latitude: _____ Longitude: _____ Datum: _____

Soil Map Unit Name: Kingsley-Gotham complex NWI Classification: None

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

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

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

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>Yes</u>	Is the sampled area within a wetland?	<u>No</u>
Hydric soils present?	<u>Yes</u>		
Wetland hydrology present?	<u>No</u>		

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum	(Plot size: <u>30 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A) Total number of dominant species across all strata: <u>3</u> (B) Percent of dominant species that are OBL, FACW or FAC: <u>67%</u> (A/B)
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	Prevalence Index Worksheet Total % cover of: OBL Species: <u>0</u> x 1 = <u>0</u> FACW Species: <u>8</u> x 2 = <u>16</u> FAC Species: <u>82</u> x 3 = <u>246</u> FACU species: <u>24</u> x 4 = <u>96</u> UPL Species: <u>0</u> x 5 = <u>0</u> Totals: <u>114</u> (A) <u>358</u> (B) Prevalence Index (B/A): <u>3.14</u>
		<u>0</u>	=Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	<u>Rhamnus cathartica</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	Hydrophytic Vegetation Indicators Rapid test for hydrophytic vegetation <u>X</u> Dominance test >50% Prevalence index is ≤3.0* Morphological adaptations* (Provide supporting data in remarks) Problematic hydrophytic vegetation* (Explain in remarks) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
		<u>70</u>	=Total Cover		
Herb stratum:	(Plot size: <u>5 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	<u>Rhamnus cathartica</u>	<u>12</u>	<u>Yes</u>	<u>FAC</u>	
2	<u>Ageratina altissima</u>	<u>12</u>	<u>Yes</u>	<u>FACU</u>	
3	<u>Onoclea sensibilis</u>	<u>8</u>	<u>No</u>	<u>FACW</u>	
4	<u>Rubus idaeus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5	<u>Ribes cynosbati</u>	<u>4</u>	<u>No</u>	<u>FACU</u>	
6	<u>Sanguinaria canadensis</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	Hydrophytic vegetation present? <u>Yes</u>
		<u>44</u>	=Total Cover		
Woody vine stratum:	(Plot size: <u>15 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		<u>0</u>	=Total Cover		

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W1-D

(Midwest Region)

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include 0-25, 25-30, and 30-35 inch depths.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ X Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 35 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

Secondary Indicators (minimum of two required)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)
___ Surface Soil Crack (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?
Water Table Present?
Saturation Present? No
Depth (inches): 25

Indicators of Wetland Hydrology Present? No

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W2-A
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Fringe Wetland Local Relief (concave, convex, none): Linear
Slope (%): 1-2 Latitude: Longitude: Datum:
Soil Map Unit Name: Forestcity-Lundlake, depressional NWI Classification: PEM1A
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Rows include: Hydrophytic vegetation present? Yes; Hydric soils present? Yes; Wetland hydrology present? Yes; Is the sampled area within a wetland? Yes

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet) - 1 Populus deltoides (50% cover, Yes, FAC), 2 Ulmus americana (15% cover, Yes, FACW), Total Cover 65%
Sapling/Shrub stratum (Plot size: 15 feet) - 1 Rhamnus cathartica (10% cover, Yes, FAC), Total Cover 10%
Herb stratum (Plot size: 5 feet) - 1 Phalaris arundinacea (45% cover, Yes, FACW), 2 Impatiens capensis (9% cover, No, FACW), 3 Solidago gigantea (5% cover, No, FACW), Total Cover 59%
Woody vine stratum (Plot size: 15 feet) - Total Cover 0%
Dominance Test Worksheet: Number of dominant species that are OBL, FACW, or FAC: 4 (A); Total number of dominant species across all strata: 4 (B); Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)
Prevalence Index Worksheet: Total % cover of: OBL Species: 0 x 1 = 0; FACW Species: 74 x 2 = 148; FAC Species: 60 x 3 = 180; FACU species: 0 x 4 = 0; UPL Species: 0 x 5 = 0; Totals: 134 (A), 328 (B); Prevalence Index (B/A): 2.45
Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation: X Dominance test >50%; X Prevalence index is <=3.0*
Morphological adaptations* (Provide supporting data in remarks)
Problematic hydrophytic vegetation* (Explain in remarks)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Hydrophytic vegetation present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: W2-A

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include 0-14 and 14-22+ depth intervals.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ X Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 22 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ X High Water Table (A2)
___ X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present? Yes
Saturation Present? Yes
Depth (inches): 4
Depth (inches): Surface

Indicators of Wetland Hydrology Present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W2-B
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Backslope Local Relief (concave, convex, none): Convex
Slope (%): 5-8 Latitude: Longitude: Datum:
Soil Map Unit Name: Kingsley-Gotham complex NWI Classification: None

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

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Rows include: Hydrophytic vegetation present? No; Hydric soils present? Yes; Wetland hydrology present? No; Is the sampled area within a wetland? No

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Vegetation data tables for Tree, Sapling/Shrub, Herb, and Woody vine strata. Includes Dominance Test Worksheet, Prevalence Index Worksheet, and Hydrophytic Vegetation Indicators.

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W2-B

(Midwest Region)

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include data for depths 0-25 and 25-31 inches.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ X Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 31 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present?
Saturation Present? No
Depth (inches): 27

Indicators of Wetland Hydrology Present? No

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W3-A
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Basin Local Relief (concave, convex, none): Concave
Slope (%): 0-2 Latitude: Longitude: Datum:
Soil Map Unit Name: Lundlake loam, depressional NWI Classification: PEM1A
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Rows include: Hydrophytic vegetation present? Yes; Hydric soils present? Yes; Wetland hydrology present? Yes; Is the sampled area within a wetland? Yes

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet) - 1 Ulmus americana (15% cover, FACW)
Sapling/Shrub stratum (Plot size: 15 feet) - 1 Rhamnus cathartica (5% cover, FAC)
Herb stratum (Plot size: 5 feet) - 1 Phalaris arundinacea (70% cover, FACW), 2 Scirpus cyperinus (15% cover, OBL), 3 Impatiens capensis (8% cover, FACW), 4 Solidago gigantea (5% cover, FACW), 5 Solidago canadensis (5% cover, FACU)
Woody vine stratum (Plot size: 15 feet) - 1 Vitis riparia (8% cover, FACW)
Dominance Test Worksheet: Number of dominant species that are OBL, FACW, or FAC: 4 (A); Total number of dominant species across all strata: 4 (B); Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)
Prevalence Index Worksheet: Total % cover of: OBL Species: 15 x 1 = 15; FACW Species: 106 x 2 = 212; FAC Species: 5 x 3 = 15; FACU species: 5 x 4 = 20; UPL Species: 0 x 5 = 0; Totals: 131 (A), 262 (B); Prevalence Index (B/A): 2.00
Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation: X Dominance test >50%; X Prevalence index is <=3.0*
Morphological adaptations* (Provide supporting data in remarks)
Problematic hydrophytic vegetation* (Explain in remarks)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Hydrophytic vegetation present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Sample Point: W3-A

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include 0-9 and 9-15+ depth intervals.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ X Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ X High Water Table (A2)
___ X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present? Yes
Saturation Present? Yes
Depth (inches): 4
Depth (inches): Surface

Indicators of Wetland Hydrology Present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W3-B

Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22

Landforms (hillside, terrace, etc.): Backslope Local Relief (concave, convex, none): Convex

Slope (%): 6-9 Latitude: _____ Longitude: _____ Datum: _____

Soil Map Unit Name: Kingsley-Gotham complex NWI Classification: None

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

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

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

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>No</u>	Is the sampled area within a wetland?	<u>No</u>
Hydric soils present?	<u>Yes</u>		
Wetland hydrology present?	<u>No</u>		

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum	(Plot size: <u>30 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> (A) Total number of dominant species across all strata: <u>5</u> (B) Percent of dominant species that are OBL, FACW or FAC: <u>40%</u> (A/B)
1	<u>Acer negundo</u>	<u>65</u>	<u>Yes</u>	<u>FAC</u>	
2	_____	_____	_____	_____	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>65</u>	=Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15 feet</u>)				Prevalence Index Worksheet Total % cover of: OBL Species: <u>0</u> x 1 = <u>0</u> FACW Species: <u>0</u> x 2 = <u>0</u> FAC Species: <u>89</u> x 3 = <u>267</u> FACU species: <u>27</u> x 4 = <u>108</u> UPL Species: <u>0</u> x 5 = <u>0</u> Totals: <u>116</u> (A) <u>375</u> (B) Prevalence Index (B/A): <u>3.23</u>
1	<u>Rhamnus cathartica</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
2	<u>Prunus virginian</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3	_____	_____	_____	_____	
4	_____	_____	_____	_____	
5	_____	_____	_____	_____	
		<u>25</u>	=Total Cover		
Herb stratum:	(Plot size: <u>5 feet</u>)				Hydrophytic Vegetation Indicators Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (Provide supporting data in remarks) Problematic hydrophytic vegetation* (Explain in remarks) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Rubus idaeus</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
2	<u>Ageratina altissima</u>	<u>7</u>	<u>Yes</u>	<u>FACU</u>	
3	<u>Rhamnus cathartica</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
4	<u>Carex species</u>	<u>4</u>	<u>No</u>	<u>FAC</u>	
5	_____	_____	_____	_____	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
		<u>26</u>	=Total Cover		
Woody vine stratum:	(Plot size: <u>15 feet</u>)				Hydrophytic vegetation present? <u>No</u>
1	_____	_____	_____	_____	
2	_____	_____	_____	_____	
		<u>0</u>	=Total Cover		

Remarks: Carex species found but unable to identify. Placing a FAC designation to prevent skewing the herb stratum.



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W3-B

(Midwest Region)

SOILS

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include data for depths 0-11 and 11-19 inches.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ X Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 19 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Indicators of Wetland Hydrology Present? No

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W3-C
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Basin Local Relief (concave, convex, none): Concave
Slope (%): 0-2 Latitude: Longitude: Datum:
Soil Map Unit Name: Lundlake loam, depressional NWI Classification: PEM1A
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer. Rows include: Hydrophytic vegetation present? Yes; Hydric soils present? Yes; Wetland hydrology present? Yes; Is the sampled area within a wetland? Yes

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet) Sapling/Shrub stratum (Plot size: 15 feet) Herb stratum (Plot size: 5 feet) Woody vine stratum (Plot size: 15 feet)
Dominance Test Worksheet: Number of dominant species that are OBL, FACW, or FAC: 2 (A); Total number of dominant species across all strata: 2 (B); Percent of dominant species that are OBL, FACW or FAC: 100% (A/B)
Prevalence Index Worksheet: Total % cover of: OBL Species: 0 x 1 = 0; FACW Species: 73 x 2 = 146; FAC Species: 75 x 3 = 225; FACU species: 2 x 4 = 8; UPL Species: 0 x 5 = 0; Totals: 150 (A) 379 (B); Prevalence Index (B/A): 2.53
Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation: X Dominance test >50%; X Prevalence index is <=3.0*
Morphological adaptations* (Provide supporting data in remarks)
Problematic hydrophytic vegetation* (Explain in remarks)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Hydrophytic vegetation present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W3-C

(Midwest Region)

SOILS

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-7	10YR 2/1						Sandy Clay Loam	
7-16+	10YR 4/1	90	7.5YR 4/6	10	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes

Remarks: **Soil pit was dug to 16 inches.**

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence or Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? _____
Water Table Present? Yes
Saturation Present? Yes
Depth (inches): _____
Depth (inches): 3
Depth (inches): Surface

Indicators of Wetland Hydrology Present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: W3-D

Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22

Landforms (hillside, terrace, etc.): Backslope Local Relief (concave, convex, none): Convex

Slope (%): 7-9 Latitude: _____ Longitude: _____ Datum: _____

Soil Map Unit Name: Kingsley-Gotham complex NWI Classification: None

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

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

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

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	<u>Yes</u>	Is the sampled area within a wetland?	<u>No</u>
Hydric soils present?	<u>Yes</u>		
Wetland hydrology present?	<u>No</u>		

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum	(Plot size: <u>30 feet</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1	<u>Prunus serotina</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>		Number of dominant species that are OBL, FACW, or FAC: <u>3</u> (A) Total number of dominant species across all strata: <u>5</u> (B) Percent of dominant species that are OBL, FACW or FAC: <u>60%</u> (A/B)
2	<u>Acer negundo</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>		
3	<u>Populus deltoides</u>	<u>15</u>	<u>No</u>	<u>FAC</u>		
4	<u>Ulmus americana</u>	<u>10</u>	<u>No</u>	<u>FACW</u>		
5	_____	_____	_____	_____		
		<u>90</u>	=Total Cover			
Sapling/Shrub stratum	(Plot size: <u>15 feet</u>)				Prevalence Index Worksheet	
1	<u>Rhamnus cathartica</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>		Total % cover of: OBL Species: <u>0</u> x 1 = <u>0</u> FACW Species: <u>10</u> x 2 = <u>20</u> FAC Species: <u>90</u> x 3 = <u>270</u> FACU species: <u>62</u> x 4 = <u>248</u> UPL Species: <u>0</u> x 5 = <u>0</u> Totals: <u>162</u> (A) <u>538</u> (B) Prevalence Index (B/A): <u>3.32</u>
2	_____	_____	_____	_____		
3	_____	_____	_____	_____		
4	_____	_____	_____	_____		
5	_____	_____	_____	_____		
		<u>15</u>	=Total Cover			
Herb stratum:	(Plot size: <u>5 feet</u>)				Hydrophytic Vegetation Indicators	
1	<u>Rhamnus cathartica</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>		Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test >50% Prevalence index is ≤3.0* Morphological adaptations* (Provide supporting data in remarks) Problematic hydrophytic vegetation* (Explain in remarks) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<u>Rubus idaeus</u>	<u>12</u>	<u>Yes</u>	<u>FACU</u>		
3	<u>Ageratina altissima</u>	<u>5</u>	<u>No</u>	<u>FACU</u>		
4	_____	_____	_____	_____		
5	_____	_____	_____	_____		
6	_____	_____	_____	_____		
7	_____	_____	_____	_____		
8	_____	_____	_____	_____		
9	_____	_____	_____	_____		
10	_____	_____	_____	_____		
		<u>57</u>	=Total Cover			
Woody vine stratum:	(Plot size: <u>15 feet</u>)				Hydrophytic vegetation present?	
1	_____	_____	_____	_____		<u>Yes</u>
2	_____	_____	_____	_____		
		<u>0</u>	=Total Cover			

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W3-D

(Midwest Region)

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include depths 0-18, 18-25, and 25-32 inches.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ X Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 32 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?
Water Table Present?
Saturation Present? No
Depth (inches): 20

Indicators of Wetland Hydrology Present? No

Remarks:



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EXHIBIT G: OTHER AQUATIC RESOURCES DATA FORM

Project/Site: Lone Lake Mt. Bike Trail City/County: Hennepin County Sampling Date: 10/8/2019
 Applicant/Owner: City of Minnetonka State: _____ Sample Point: OHWM-1
 Investigator(s): Brandon Bohks Sec, Twp, Ran: 35, 117, 22 Associated WTL: W1
 MN DNR ID - 105599 DNR Hydro ID: _____

WATERCOURSE ATTRIBUTES (Within project limits)	WATERBODY ATTRIBUTES (Within project limits)
Watercourse Type: <u>Stream</u> Watercourse Depth Flow Type: <u>Perennial</u> (inches): <u>0-18+</u>	Waterbody Type: <input type="checkbox"/> Pond <input type="checkbox"/> Lake <input type="checkbox"/> Gravel Pit <input type="checkbox"/> Other: _____
Watercourse Top of Bank (at sample location): <u>18</u> Width (feet): Water Surface (at sample location): <u>15</u>	Waterbody depth: _____ Subsurface flow? _____
Watercourse is: <u>Natural</u> Subsurface flow? <u>Unknown</u>	Watercourse is: _____
OHWM Width at sample location (feet): <u>16-17</u>	
OHWM Indicator (Check all applicable): <input checked="" type="checkbox"/> Natural line impressed on banks <input type="checkbox"/> Changes in character of soil <input type="checkbox"/> Presence of litter or debris <input type="checkbox"/> Vegetation matted down, bent or absent <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Scour <input type="checkbox"/> Multiple observed flow events <input checked="" type="checkbox"/> Water staining <input type="checkbox"/> Shelving <input type="checkbox"/> Litter disturbed or washed away <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Wracking <input type="checkbox"/> Change in plant community <input type="checkbox"/> Deposition <input checked="" type="checkbox"/> Bed and bank	OHWM Indicator (Check all applicable): <input type="checkbox"/> Natural line impressed on banks <input type="checkbox"/> Changes in character of soil <input type="checkbox"/> Presence of litter or debris <input type="checkbox"/> Vegetation matted down, bent, absent <input type="checkbox"/> Sediment sorting <input type="checkbox"/> Scour <input type="checkbox"/> Multiple observed flow events <input type="checkbox"/> Water staining <input type="checkbox"/> Shelving <input type="checkbox"/> Litter disturbed or washed away <input type="checkbox"/> Destruction of terrestrial vegetation <input type="checkbox"/> Wracking <input type="checkbox"/> Change in plant community <input type="checkbox"/> Deposition <input type="checkbox"/> Bed and bank
Bank Height (Downstream at sample location): Left: <u>0-4 feet</u> Right: <u>0-2 feet</u>	Aquatic habitats (check all that apply): <input type="checkbox"/> Sand bar <input type="checkbox"/> Gravel bar <input type="checkbox"/> Mud bar <input type="checkbox"/> Undercut banks <input type="checkbox"/> Gravel riffles <input type="checkbox"/> Deep pools <input type="checkbox"/> Bank root system <input type="checkbox"/> Overhanging trees/shrubs <input type="checkbox"/> In-stream emergent plants <input type="checkbox"/> In-stream submergent plants <input type="checkbox"/> Fringing wetlands
Watercourse substrate (Check all that apply): <input checked="" type="checkbox"/> Silts <input type="checkbox"/> Concrete <input type="checkbox"/> Cobbles <input checked="" type="checkbox"/> Muck <input type="checkbox"/> Gravel <input type="checkbox"/> Bedrock <input type="checkbox"/> Vegetation <input type="checkbox"/> Sands <input type="checkbox"/> Other: _____	Shoreland type: <input type="checkbox"/> Silts <input type="checkbox"/> Concrete <input type="checkbox"/> Cobbles <input type="checkbox"/> Muck <input type="checkbox"/> Gravel <input type="checkbox"/> Bedrock <input type="checkbox"/> Vegetation <input type="checkbox"/> Sands <input type="checkbox"/> Other: _____
Aquatic habitats (check all that apply): <input type="checkbox"/> Sand bar <input type="checkbox"/> Gravel bar <input type="checkbox"/> Mud bar <input type="checkbox"/> Undercut banks <input type="checkbox"/> Gravel riffles <input type="checkbox"/> Deep pools <input type="checkbox"/> Bank root system <input type="checkbox"/> Overhanging trees/shrubs <input checked="" type="checkbox"/> In-stream emergent plants <input checked="" type="checkbox"/> In-stream submergent plants <input checked="" type="checkbox"/> Fringing wetlands	

Comments:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

(Midwest Region)

Project/Site: Lone Lake Mt Bike Trial City/County: Hennepin Sampling Date: 10/8/2019
Applicant/Owner: City of Minnetonka State: MN Sample Point: SP-1
Investigator(s): Brandon Bohks Section, Township, Range: 35, 117, 22
Landforms (hillside, terrace, etc.): Terrace Local Relief (concave, convex, none): Linear
Slope (%): 1-4 Latitude: Longitude: Datum:
Soil Map Unit Name: Muskego and Houghton complex NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of year? No (If no, explain in remarks)
Are vegetation, soils, or hydrology significantly disturbed? Are normal circumstances present? Yes
Are vegetation, soils, or hydrology naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS

Table with 2 columns: Question and Answer.
Hydrophytic vegetation present? Yes
Hydric soils present? Yes
Wetland hydrology present? No
Is the sampled area within a wetland? No

Remarks: Precipitation has been above normal for this time of year.

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: 30 feet)
1 Acer negundo 40% Yes FAC
2 Populus deltoides 40% Yes FAC
3 Fraxinus pennsylvanica 25% Yes FACW
Total Cover: 105%
Sapling/Shrub stratum (Plot size: 15 feet)
Total % cover of:
OBL Species: 0 x 1 = 0
FACW Species: 45 x 2 = 90
FAC Species: 80 x 3 = 240
FACU species: 36 x 4 = 144
UPL Species: 0 x 5 = 0
Totals: 161 (A) 474 (B)
Prevalence Index (B/A): 2.94
Herb stratum: (Plot size: 5 feet)
1 Pilea fontana 20% Yes FACW
2 Arctium minus 15% Yes FACU
3 Ageratina altissima 12% Yes FACU
4 Glechoma hederacea 9% No FACU
Total Cover: 56%
Woody vine stratum: (Plot size: 15 feet)
Total Cover: 0%
Hydrophytic vegetation present? Yes

Remarks:



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EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: SP-1

(Midwest Region)

SOILS

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type*, Loc**), Texture, Remarks. Rows include 0-18, 18-24, and 24-32 inch depths.

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

Hydric Soil Indicators:

- ___ Histisol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ X Thick Dark Surface (A12)
___ Sandy Mucky Material (S1)
___ 5 cm Mucky Peat or Peat (S3)

- ___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Material (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils*:

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

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

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soils Present? Yes

Remarks: Soil pit was dug to 32 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

- ___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence or Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Indicators of Wetland Hydrology Present? No

Remarks: