# Minnesota Wetland Conservation Act Notice of Application

Local Government Unit (LGU)  City of Minnetonka		Address 11522 Minnetonka Boulevard Minnetonka, MN 55305			
1.	PROJECT INFORM	1ATION			
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	
Type of Application (check all that ap	oply):				
	☐ No-Loss Plan	☐ Exemp ☐ Banking		Sequencing	
Summary and description of proposed					
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:

BWSR Forms 7-1-10 Page 1 of 3

Name and Title of LGU Contact Person	Comments must be received by (minimum 15
Leslie Yetka	business-day comment period):
Natural Resources Manager	November 14, 2019
Address (if different than LGU)	Date, time, and location of decision:
Same as above	Approximately 4pm, November 15, 2019
	11522 Minnetonka Blvd
	Minnetonka, MN 55305
Phone Number and E-mail Address	Decision-maker for this application:
952-988-8415	Staff
lyetka@eminnetonka.com	Governing Board or Council
Signature: What What 3. LIST O	Date: <u>/0-24-/9</u> FADDRESSEES
SWCD TEP member: Stacey Lijewski; stac	ey.lijewski@hennepin.us
BWSR TEP member: Ben Carlson; ben.car	lson@state.mn.us
☐ LGU TEP member (if different than LGU Co	ontact): Aaron Schwartz;
aschwartz@eminnetonka.com	
DNR TEP member: leslie.parris@state.mn.	
DNR Regional Office (if different than DNR	
$1XI = W/II \cap C = W/I/II \cup (1f applicable)$ ; ranhorn(a)nina	emilecreek.org
WD or WMO (if applicable): ranhorn@nine	££
Applicant (notice only) and Landowner (if di  Members of the public who requested notice	fferent)

#### 4. MAILING INFORMATION

>For a list of BWSR TEP representatives: www.bwsr.state.mn.us/contact/WCA areas.pdf

BWSR Wetland Bank Coordinator (wetland bank plan applications only)

For a list of DNR TEP representatives: <a href="www.bwsr.state.mn.us/wetlands/wca/DNR\_TEP\_contacts.pdf">www.bwsr.state.mn.us/wetlands/wca/DNR\_TEP\_contacts.pdf</a>

➤ Department of Natural Resources Regional Offices:

Corps of Engineers Project Manager (notice only)

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.		Reg. Env. Assess. Ecol.
Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources	•
2115 Birchmont Beach Rd. NE		1	Div. Ecol. Resources
	1201 E. Hwy. 2	1200 Warner Road	261 Hwy. 15 South
Bemidji, MN 56601	Grand Rapids, MN 55744	St. Paul, MN 55106	New Ulm, MN 56073

For a map of DNR Administrative Regions, see: <a href="http://files.dnr.state.mn.us/aboutdnr/dnr">http://files.dnr.state.mn.us/aboutdnr/dnr</a> regions.pdf

➤ For a list of Corps of Project Managers: <a href="www.mvp.usace.army.mil/regulatory/default.asp?pageid=687">www.mvp.usace.army.mil/regulatory/default.asp?pageid=687</a> 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:

BWSR Forms 7-1-10 Page 2 of 3

Minnesota Board of Water and Soil Resources Wetland Bank Coordinator 520 Lafayette Road North St. Paul, MN 55155

5. ATTACHMENTS	
In addition to the application, list any other attachments:	
<b>◯</b> Wetland delineation report with Joint Application	

BWSR Forms 7-1-10 Page 3 of 3





**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

### **Table Of Contents**

PART ONE: APPLICANT INFORMATION	2
PART TWO: SITE LOCATION INFORMATION	
PART THREE: GENERAL PROJECT/SITE INFORMATION	
PART FOUR: AQUATIC RESOURCE IMPACT SUMMARY	
PART FIVE: APPLICANT SIGNATURE	
ATTACHMENT A	

### **Appendix**

WETLAND DELINEATION REPORT

### **PART ONE: Applicant Information**

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

Applican	t/Land	low	ner Name:	City	/ Engineer   Phil Olson	
Mailing /	Addres	s:	14600 Min	neto	nka Blvd   Minnetonka, MN 55345	
Phone:	952-9	39-	8239			
E-mail A	ddress	:				
Authoriz	od Cor	+20	t (do not co	mnla	ata if sama as abova):	
Authoriz	eu Coi	ıtac	t (do not co	npie	ete if same as above):	
Mailing A	Addres	s:				
Phone:						
E-mail A	ddress	:				
Agent Na	ame:	Вс	lton & Men	k, Ind	c.   Brandon Bohks	
Mailing A	Addres	s:	12224 Nico	llet A	Ave   Burnsville, MN 55337	
Phone:	952-8	90-	0509 ext 32	44		
E-mail A	ddress	:	brandonbo@	pol	ton-menk.com	

### **PART TWO: Site Location Information**

County:	: Hennepin			City/Township: N	/linnetonka	
Parcel ID and/or Address: Lone Lake Park						
Legal Des	cription (Section, 1	Township,	35, 117, 2	22		
Range):	Range):					
Lat/Long (decimal degree						
Attach a map showing the location of the site in relation to local streets, roads, highways.						
Approxim	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 Impact<sup>1</sup> 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.)	drain or	Impact	Size of Impact <sup>2</sup>	Overall Size of Aquatic Resource <sup>3</sup>	Existing Plant Community Type(s) in Impact Area <sup>4</sup>	County, Major Watershed #, and Bank Service Area # of Impact Area <sup>5</sup>

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

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

N/A

### **PART FIVE: Applicant Signature**

Check here if you are requesting a <u>pre-application</u> consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.
By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.
Signature: Date: 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.

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

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

<sup>&</sup>lt;sup>4</sup>Use Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

<sup>&</sup>lt;sup>5</sup>Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

<sup>&</sup>lt;sup>1</sup> 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

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

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

# **Appendix**



Real People. Real Solutions.



**Wetland Delineation Report** 

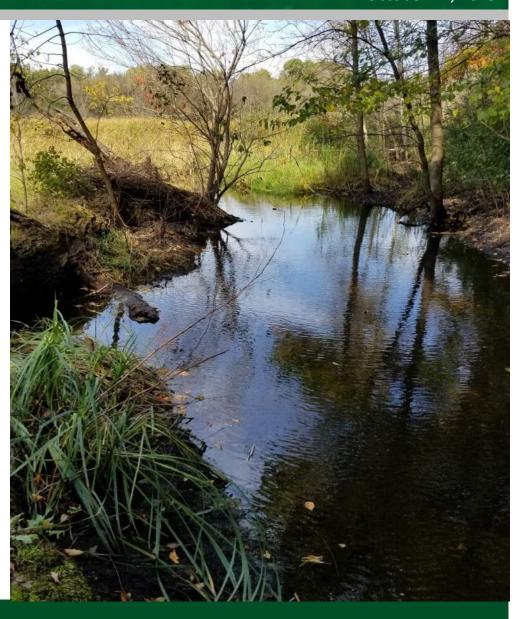
### Lone Lake Mt. Bike Trail

## Minnetonka, Minnesota

October 17, 2019

#### Submitted by:

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



### **Table of Contents**

INTRODUCTION	1
WETLAND DELINEATION METHODOLOGY	1
BACKGROUND INFORMATION	2
CLIMATE DATA	3
FINDINGS	4
CONCLUSION	5
S TAND SUMMARY	5
its	
NTHLY TEMPERATURE RANGE	3
	WETLAND DELINEATION METHODOLOGY

### **Appendix**

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.

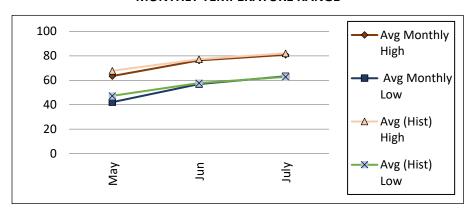
Exhibit G includes the wetland delineation data sheets.

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

#### IV. CLIMATE DATA

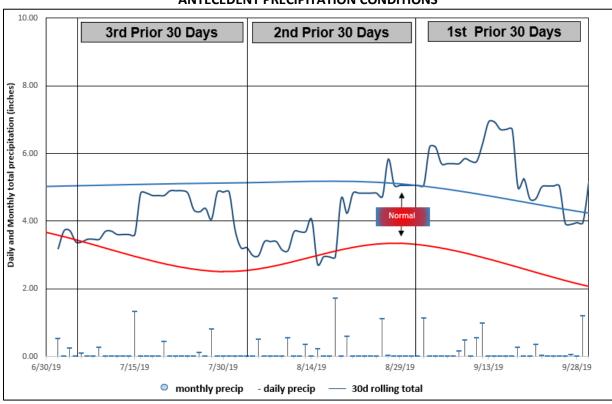
The monthly temperature table below shows the average high and low temperatures for the three months prior to the field delineation, along with the historical averages for these months. The average monthly highs and lows were below normal for the month of May but within the normal range for the months 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, <a href="http://climate.umn.edu/">http://climate.umn.edu/</a> and the National Weather Service Forecast Office, <a href="http://w2.weather.gov/climate/">http://w2.weather.gov/climate/</a>. 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

nunity (W1-D) are considered hydrophytic.

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 1

Wetland 2 (W2):

**NWI Cowardin:** None PWI (Hvdro) 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.



Wetland 2

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. Prepared by: Bolton & Menk, Inc.



Wetland 3

**FINDINGS** 

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 mat 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, depressioanl

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.



OWHM-1

Sample Point (SP-1): NWI Cowardin: PEM1A PWI (Hvdro) 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

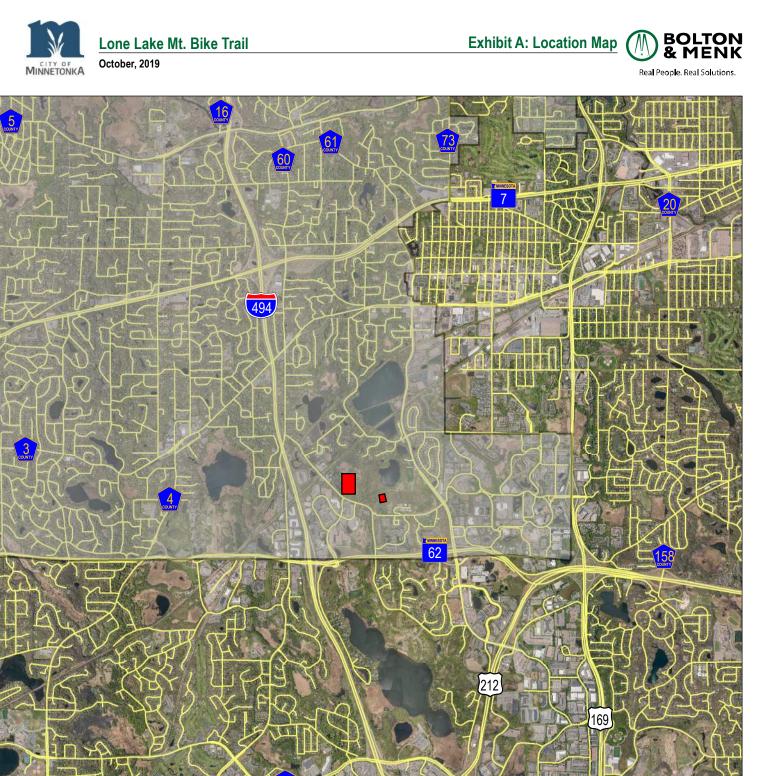
Sincerely,

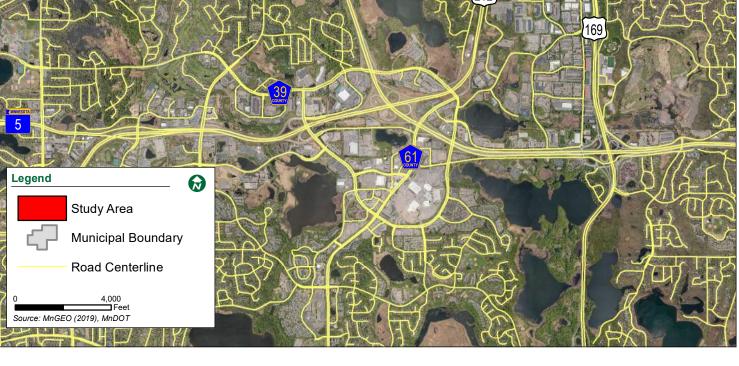
**BOLTON & MENK, INC.** 

**Brandon Bohks** 

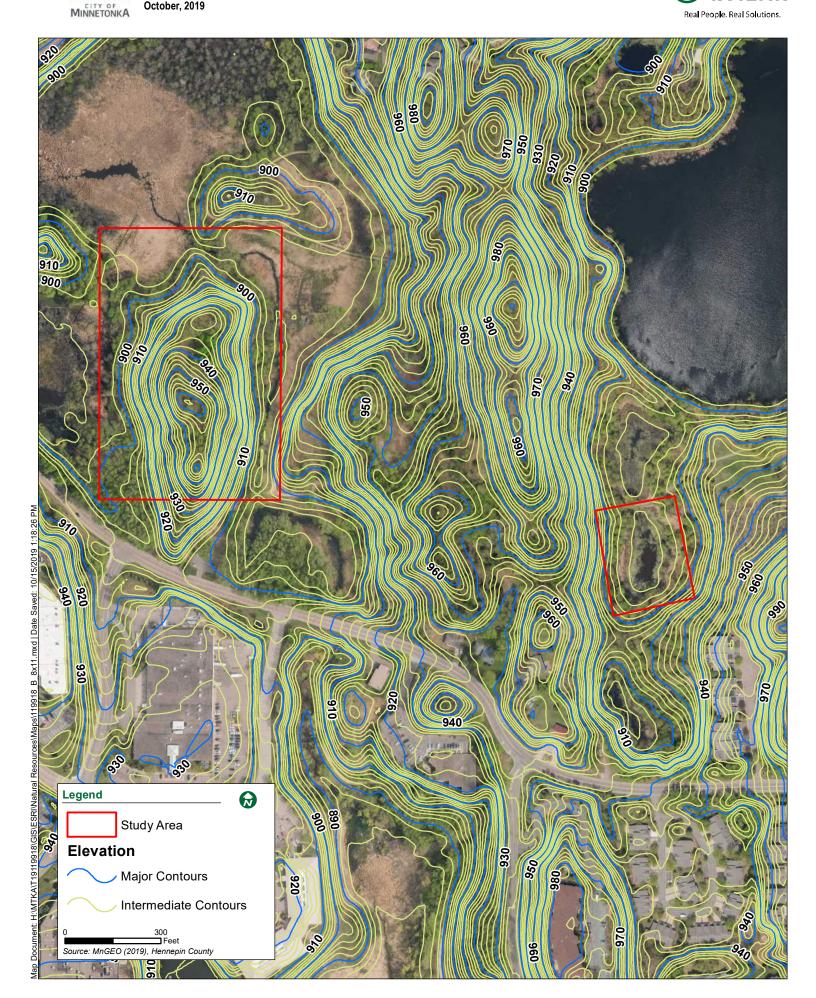
Certified Wetland Delineator, No. 5231

# **APPENDIX**



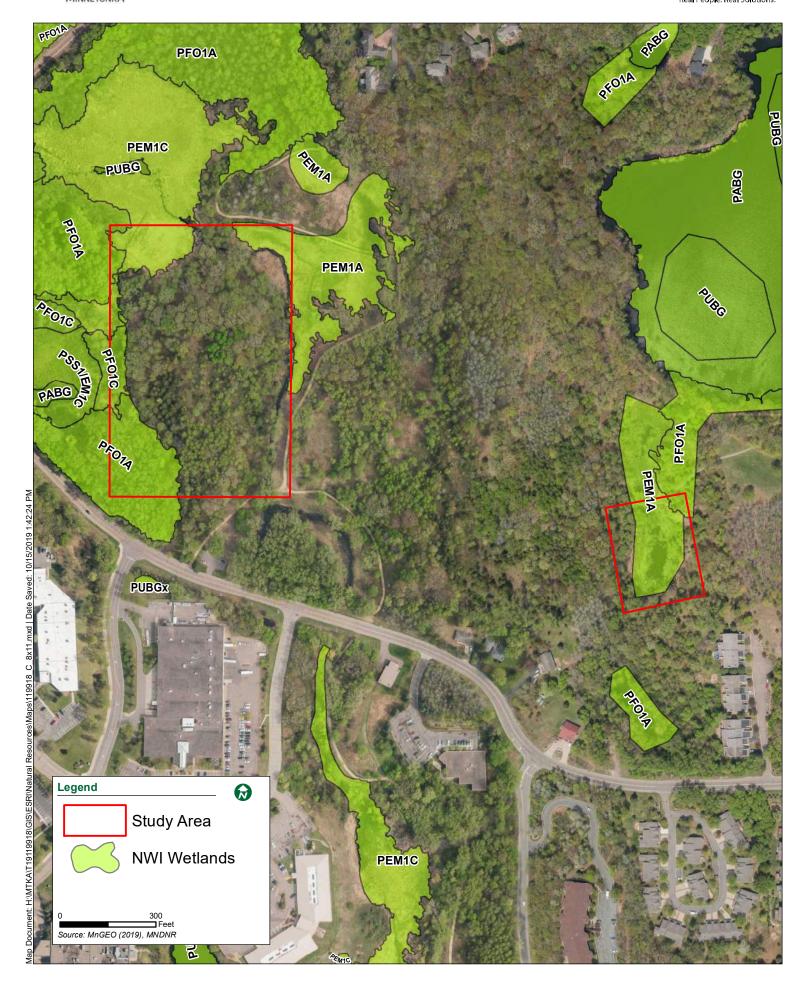


October, 2019







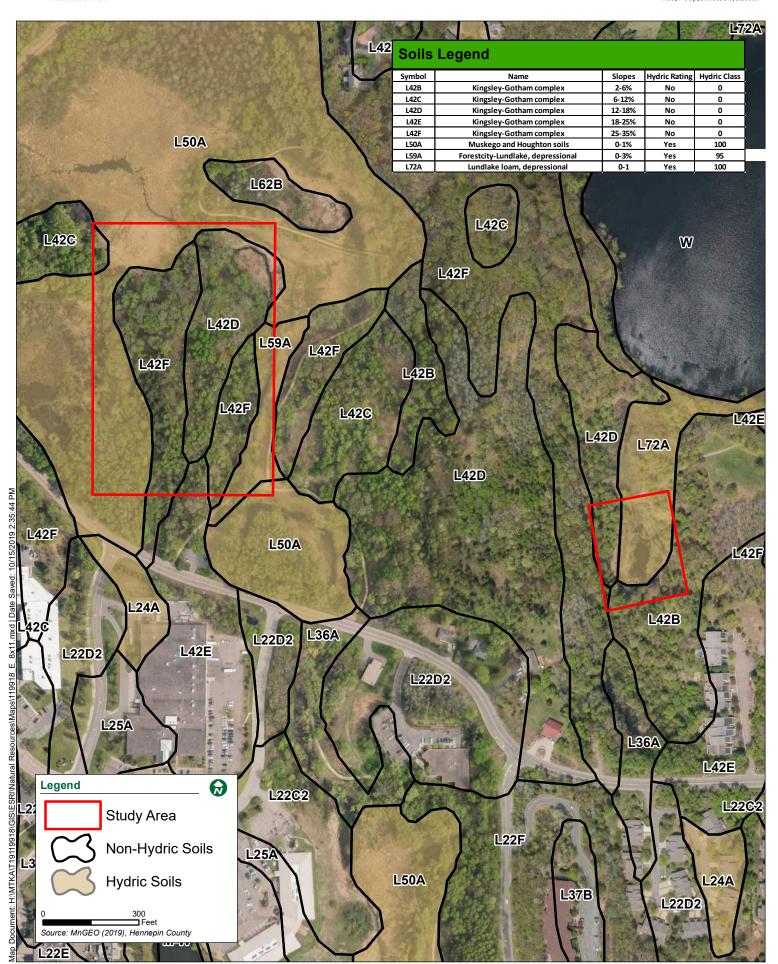




October, 2019

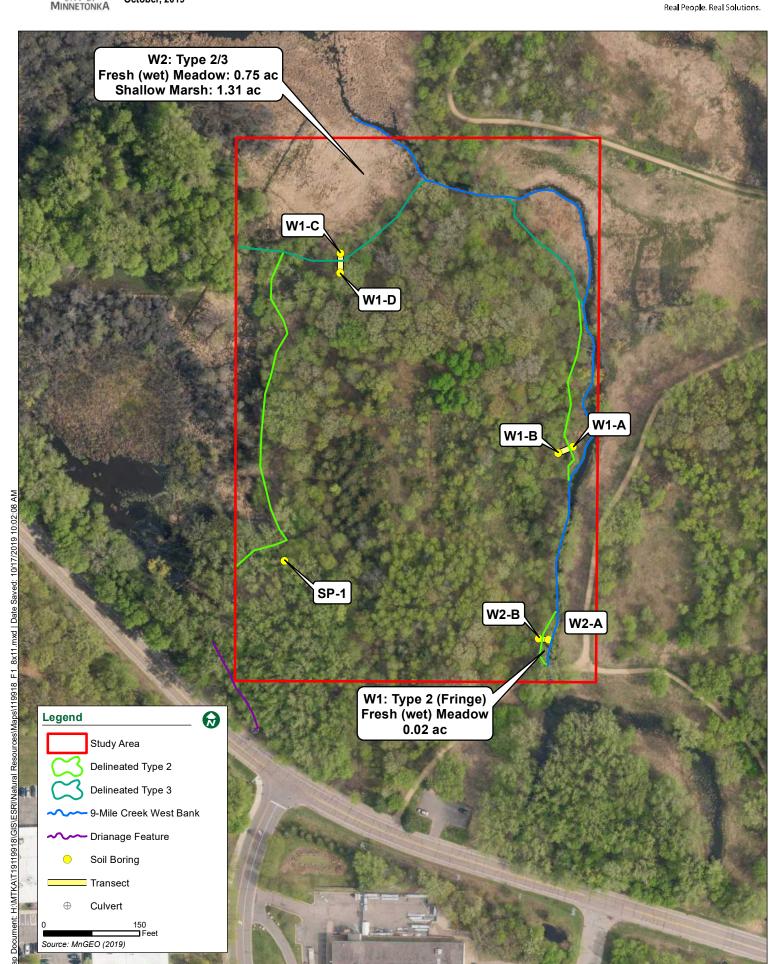
Lone Lake Mt. Bike Trail



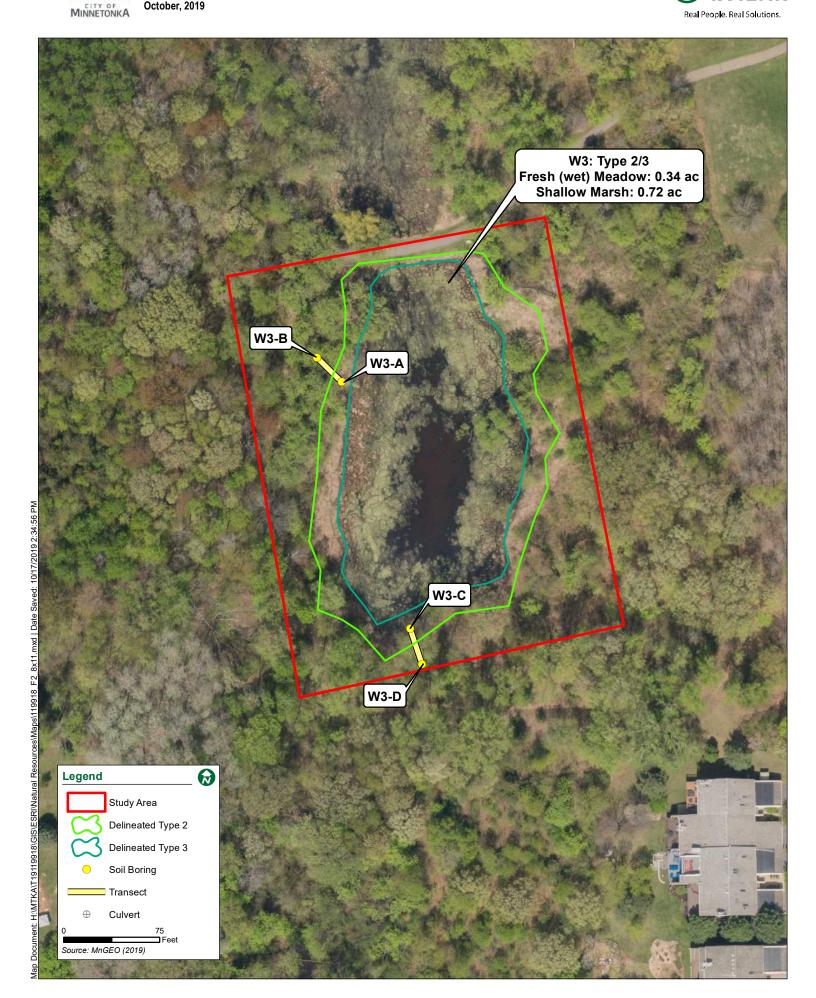


October, 2019

Lone Lake Mt. Bike Trail









# EXHIBIT G: WETLAND DETERMINATION DATA FORM

Real People. Real Solutions.

Project/Site: Lone	Lake Mt Bike Tria	al	Cit	y/County: Henr	nepin	Sampling Date: 10/8/2019			
Applicant/Owner:	City of Minneton	ıka	_	Stat	e: MN	Sample Point: W1-A			
Investigator(s):	Brandon Bohks			Section, Township, Range: 35, 117, 22  Local Relief (concave, convex, none): Concave					
Landforms (hillside,	terrace, etc.): Ba	sin							
Slope (%):	0-2	Latitude:		Longitude:		Datum:			
Soil Map Unit Name	e: Muskego and Ho	ughton soils		NWI Class	sification: PEM1	A			
Are climatic/hydrolo	ogic conditions of the	e site typical fo	or this time of year?	No	_	explain in remarks)			
Are vegetation	, soils	, c	or hydrology		ficantly disturbed				
Are vegetation	, soils	,,	or hydrology		ally problematic?	(If needed, explain any answers in Remarks)			
			SUMMAI	RY OF FINI	DINGS				
-	ophytic vegetation p	resent?	Yes						
_	ic soils present?		Yes		Is the samp	pled area within a wetland? Yes			
Wetla	and hydrology presei	nt?	Yes						
Remarks: Preci	pitation has been a	bove normal	for this time of year	•					
		,	VEGETATION	- Use scientific	names of plants	_			
			Absolute	Dominant	Indicator	<b>Dominance Test Worksheet</b>			
Tree Stratum	(Plot size:	30 feet )	% Cover	Species	Status	Number of dominant species			
1						that are OBL, FACW, or FAC:(A)			
2						Total number of dominant			
3						species across all strata: 2 (B)			
4						Percent of dominant species that			
5						are OBL, FACW or FAC: 100% (A/B)			
G 1: /GI 1 / /	(DL + -			=Total Cover					
Sapling/Shrub stratu	m (Plot size:	15 feet )				Prevalence Index Worksheet  Total % cover of:			
1						one a .			
2			<del></del>			OBL Species: $53$ $x 1 = 53$ FACW Species: $47$ $x 2 = 94$			
4						FAC Species: $0 \times 3 = 0$			
5						FACU species: $0 \times 4 = 0$			
			0 :	=Total Cover		UPL Species: $0 \times 5 = 0$			
Herb stratum:	(Plot size:	5 feet )		- Total Covel		Totals: $100$ (A) $147$ (B)			
1 Phalaris aru	ındinacea	,	45	Yes	FACW	Prevalence Index (B/A): 1.47			
2 Carex lacus			35	Yes	OBL				
	3 Scirpus atrovirens 12 4 Eupatorium perfoliatum 6				OBL	Hydrophytic Vegetation Indicators			
4 Eupatorium					OBL	<b>X</b> Rapid test for hydrophytic vegetation			
5 Solidago gig	antea		2	No	FACW	X Dominance test >50%			
6						X Prevalence index is ≤3.0*			
7 8						Morphological adaptations* (Provide supporting data in remarks)			
9						Problematic hydrophytic vegetation* (Explain in remarks)			
Woody vine stratum	: (Plot size:	15 foot	100	=Total Cover		*Indicators of hydric soil and wetland hydrology			
11	. (110t size	15 feet )				must be present, unless disturbed or problematic			
2						Hydrophytic vegetation			
İ			0 :	=Total Cover		present? Yes			



Real People. Real Solutions.

### EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point:

W1-A

(Midwest Region)

SOILS

Profile Decer	intion: (1)escribe to	the dent	h needed to docu	iment t	he indicator o	or confirm the a	hsence of ir	idicator	s.)	
	Matrix	ine dept	needed to doct		Features	commin the a	Some Of II	-arcator)	···)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks	
0-15	10YR 2/1			, -	JI.		Mucl		TOTALKS	
0 15										
		+								
	*Type: C = Concentr	ation. D :	= Depletion, RM	= Reduc	ed Matrix, M	S = Masked San	d Grains. **	Location	: PL = Pore Lining, M = Matrix	
Hydric Soil I		ution, D	- Depiction, Tuvi	- Iteau	ou mun, m	.5 — Washed San			or Problematic Hydric Soils*:	
-				Sandy	Gleyed Matrix	x (S4)	III		Prairie Redox (A16)( <b>LRR K,L,R</b> )	
· · · · · · · · · ·					Redox (S5)	(54)		_		
	Histic (A3)			•	ed Matrix (S6)	1		Dark Surface (S7)( <b>LRR K, L</b> )  Iron-Manganese Masses (F12)( <b>LRR K, L, R</b> )		
	gen Sulfide (A4)				Mucky Mater			_	hallow Dark Surface (TF12)	
	ied Layers (A5)			-	Gleyed Matri	(Explain in remarks)				
	Muck (A10)			•	ed Matrix (F3)		-	_	Explain in remains)	
	red Below Dark Surfa	co (A11)		•	Dark Surface					
		cc (AII)		•						
Thick Dark Surface (A12)  Depleted Da  Sandy Mysley Metarial (S1)  Paday Dark									of hydrophytic vegetation and wetland must be present, unless disturbed or	
Sandy Mucky Material (S1) Redox Depr					Depressions (	1.0)	113	urology	=	
	Analys Doot on Doot (C	2)							problematic	
5 cm N	Mucky Peat or Peat (S	3)							problematic	
5 cm N  Restrictive L	Mucky Peat or Peat (Sayer (if observed):	3)							problematic	
5 cm M  Restrictive L  Type:	ayer (if observed):	3)				Hydr	ic Soils Pre	sent?	Yes_	
5 cm N  Restrictive L	ayer (if observed):	3)				Hydr	ic Soils Pre	sent?	·	
5 cm M  Restrictive L  Type:	ayer (if observed):		5 inches.	-		Hydr	ic Soils Pre	sent?	·	
5 cm M  Restrictive L  Type: Depth (inches	ayer (if observed):		5 inches.	- - -	HYDROL		ic Soils Pre	sent?	·	
5 cm M  Restrictive L  Type: Depth (inches	ayer (if observed):		5 inches.	-	HYDROL		ic Soils Pre	sent?	·	
5 cm M  Restrictive L  Type: Depth (inches  Remarks	ayer (if observed):  : Soil pit was	dug to 1					ic Soils Pre		·	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indicates	ayer (if observed):  See Soil pit was expressed in the second of the sec	dug to 1		at apply		OGY	ic Soils Pre	Second	Yes	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indic: Surface	ayer (if observed):  See Soil pit was expressed in the second of the sec	dug to 1		nt apply Water-	<u>)</u> Stained Leave	OGY es (B9)	ic Soils Pre	Second	Yes	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydi  Primary Indic: Surface X High V	ayer (if observed):  Si: Soil pit was of the state of the	dug to 1		water- Aquati	)	OGY es (B9)	ic Soils Pre	Second	Yes  dary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10)	
Surface  X High V X Saturar	ayer (if observed):  See Soil pit was expressed in the second of the sec	dug to 1		nt apply Water- Aquati True A	<u>)</u> Stained Leave c Fauna (B13)	OGY es (B9) (B14)	ic Soils Pre	Second	Yes  lary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indic: Surfac  X High V  X Saturar  Water	ayer (if observed):  Si: Soil pit was of the state of the	dug to 1		Mater- Aquati True A	) Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od	OGY es (B9) (B14)		Second	Yes    Alary Indicators (minimum of two required)	
Surface X High V X Saturar Water Sedime	s: Soil pit was a rology Indicators: ators (minimum of or e Water (A1) Water Table (A2) tion (A3) Marks (B1)	dug to 1		wat apply Water- Aquati True A Hydrog Oxidiz	) Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od	es (B9) (B14) dor (C1) res on Living Roc		Second	Alary 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)	
Surface X High V X Saturat Water Sedime Drift D	ayer (if observed):  Soil pit was of the second pit was of the sec	dug to 1		Water- Aquati True A Hydrog Oxidiz Presen	Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od ed Rhizospher ce or Reduced	es (B9) (B14) dor (C1) res on Living Roo	ots (C3)	Second	Yes  Alary 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)	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indica  Surface  X High V  X Saturat  Water  Sedime  Drift D  Algal I	ayer (if observed):  Si: Soil pit was of the second pit was of the	dug to 1		Water- Aquati True A Hydrog Oxidiz Present	Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	es (B9) (B14) dor (C1) res on Living Roo I Iron (C4) on in Tilled Soils	ots (C3)	Second	Yes  dary 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)	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indicator  Surface  X High V  X Saturator  Water  Sedime Drift E  Algal I  Iron D	ayer (if observed):  Soil pit was of the second pit was of the sec	dug to 1:	ired; check all tha	Water- Aquati True A Hydrog Oxidiz Present Recent Thin M	Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	es (B9) (B14) dor (C1) res on Living Root Iron (C4) on in Tilled Soils	ots (C3)	Second	Yes  Alary 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)	
5 cm M  Restrictive L  Type: Depth (inches  Remark:  Wetland Hydr  Primary Indic: Surfac  X High V  X Saturat  Water  Sedime Drift E  Algal I  Iron D  Inunda	ayer (if observed):  Si: Soil pit was of the second pit was of the	dug to 15	y (B7)	Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge	Stained Leave c Fauna (B13) quatic Plants ( gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio	es (B9) (B14) dor (C1) res on Living Roo I Iron (C4) on in Tilled Soils (C7) (C7)	ots (C3)	Second	Lary 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)	
Sedime Drift Days and Sparse	ayer (if observed):  Soil pit was of the pit was of	dug to 15	y (B7)	Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge	Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio luck Surface (for Well Data (	es (B9) (B14) dor (C1) res on Living Roo I Iron (C4) on in Tilled Soils (C7) (C7)	ots (C3)	Second	Lary 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)	
Sedime  Sedime  Algal I  Iron D  Inunda  Sparse  Type:  Depth (inches  Remarks  Remarks  Remarks  Remarks  Remarks  Remarks  Surface  X High V  X Saturat  Water  Sedime  Drift D  Inunda  Sparse	ayer (if observed):  Soil pit was of the prology Indicators: ators (minimum of one Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria	dug to 15	y (B7)	Water- Aquati True A Hydrog Oxidiz Presend Recent Thin M Gauge Other (	Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (Gor Well Data (Explain in Red	es (B9) (B14) dor (C1) res on Living Roc Iron (C4) on in Tilled Soils (C7) (C7) emarks)	ots (C3)	Second X X	Alary 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)	
Sedime Drift E Algal I Iron D Inunda Sparse  5 cm N Restrictive L Type: Depth (inches Remark:  Wetland Hydr Primary Indica Surface X High V X Saturar Water Sedime Drift E Algal I Iron D Inunda Sparse Field Observa Surface Water	ayer (if observed):  Si: Soil pit was of the state of the	dug to 15  ie is requ	y (B7)	Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (	Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Ode ed Rhizospher ce or Reduced Iron Reduction Iuck Surface (Gor Well Data (Explain in Reduction)	es (B9) (B14) dor (C1) res on Living Roo Iron (C4) on in Tilled Soils (C7) (C7) emarks)	ots (C3)	Second X X X	Adary 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)	
Sedime  Sedime  Algal I  Iron D  Inunda  Sparse  Type:  Depth (inches  Remarks  Remarks  Remarks  Remarks  Remarks  Remarks  Surface  X High V  X Saturat  Water  Sedime  Drift D  Inunda  Sparse	ayer (if observed):  Soil pit was of the pit was of	dug to 15	y (B7)	Water- Aquati True A Hydrog Oxidiz Present Recent Thin M Gauge Other (	Stained Leave c Fauna (B13) quatic Plants (gen Sulfide Od ed Rhizospher ce or Reduced Iron Reductio Iuck Surface (Gor Well Data (Explain in Red	es (B9) (B14) dor (C1) res on Living Roo I Iron (C4) on in Tilled Soils (C7) (C7) emarks)	ots (C3)	Second X X X	Alary 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)	



# EXHIBIT G: WETLAND DETERMINATION DATA FORM

Real People. Real Solutions.

Project/Site: Lone	Lake Mt Bike	Trial	City	//County: Henn	epin	Sampling Date: 10/8/2019
Applicant/Owner:	City of Minr	etonka		State	Sample Point: W1-B	
Investigator(s):	Brandon Bo	hks		Section, Town	5, 117, 22	
Landforms (hillside,	terrace, etc.):	Backslope		Local Relief	(concave, conv	ex, none): Convex
Slope (%): 8	-12	Latitude:		Longitude:		Datum:
Soil Map Unit Name	Kingsley-Go	tham complex		NWI Classi	ification: None	
Are climatic/hydrolog	gic conditions	of the site typical for thi	s time of year?	No	(If no	, explain in remarks)
Are vegetation	, soils	, or hy	drology	signif	icantly disturbe	d? Are normal circumstances present? Yes
Are vegetation	, soils	, or hy	drology	natura	ally problematic	? (If needed, explain any answers in Remarks)
			SUMMAR	Y OF FIND	INGS	
Hydro	phytic vegetati	on present?	No			
Hydri	c soils present?	,	No		Is the sam	pled area within a wetland? No
Wetla	nd hydrology p	resent?	No			
Remarks: Preci	pitation has be	een above normal for t	his time of year.			
		VE	GETATION	- Use scientific	names of plants	s
			Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum	(Plot size	: 30 feet )	% Cover	Species	Status	Number of dominant species
1						that are OBL, FACW, or FAC: 1 (A)
2						Total number of dominant
3						species across all strata: 2 (B)
4						
5			<u> </u>			Percent of dominant species that are OBL, FACW or FAC: 50% (A/B
			0 =	Total Cover		die eBE, The Worlder
Sapling/Shrub stratur	n (Plot size	: 15 feet )		Total Cover		Prevalence Index Worksheet
1	= `	,				Total % cover of:
2						OBL Species: $0  \mathbf{x} \ 1 = 0$
3						FACW Species: $0 \times 2 = 0$
4						FAC Species: $34$ $\times 3 = 102$
5						FACU species: 15 $\times 4 = 60$
<u> </u>			0 =	Total Cover		UPL Species: $0 \times 5 = 0$
Herb stratum:	(Plot size	e E foot		Total Covel		Totals: $\frac{0}{49}$ (A) $\frac{162}{162}$ (B)
		5 feet )	17	Yes	FAC	
1 Rhamnus car			12	Yes	FACU	Prevalence Index (B/A): 3.31
2 Zanthoxylun			9			Hudusuhutis Vosstatian Indicators
3 Ribes cynosh			8	No No	FAC FAC	Hydrophytic Vegetation Indicators  Rapid test for hydrophytic vegetation
4 Toxicodendr			3			Dominance test >50%
5 Ageratina al	tissima			No	FACU	<del></del>
6			<u> </u>			Prevalence index is ≤3.0*
7			-			Morphological adaptations* (Provide
8						supporting data in remarks)
910						Problematic hydrophytic vegetation* (Explain in remarks)
Waste	/DI : 1		49 =	Total Cover		*Indicators of hydric soil and wetland hydrology
Woody vine stratum:  1	(Plot size	15 feet )				must be present, unless disturbed or problematic
2						Hydrophytic vegetation
			0 =	Total Cover		present? No



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### EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point:

**W1-B** 

(Midwest Region)

SOILS

					201	LS					
Profile Descr	iption: (Describe to	the dept	th needed to doc	ument t	he indicato	r or confirm the	e absence of indicato	ors.)			
Depth	Matrix			Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-15	10YR 2/1	100					Clay Loam				
15-24+	10YR 4/2	100					Sandy Clay Loan	1			
24-32+	10YR 4/3 100					Sandy Loam					
	*Type: C = Concent	ration, D	= Depletion, RM	= Redu	ced Matrix,	MS = Masked S	and Grains. **Location	on: PL = Pore Lining, M = Matrix			
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils*:			
Histisc	ol (A1)			Sandy	Gleyed Mat	rix (S4)	Coast Prairie Redox (A16)(LRR K,L,R)				
Histic	Epipedon (A2)			Sandy	Redox (S5)		Dark	Surface (S7)(LRR K, L)			
Black	Histic (A3)			Strippe	ed Matrix (S	6)	Iron-	Manganese Masses (F12)( <b>LRR K, L, R</b> )			
Hydrog	gen Sulfide (A4)			Loamy	Mucky Ma	terial (F1)	Very	Very Shallow Dark Surface (TF12)			
Stratifi	ied Layers (A5)			Loamy	Gleyed Ma	trix (F2)	Othe	r (Explain in remarks)			
2 cm N	Muck (A10)			Deplet	ed Matrix (I	F3)					
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)											
Thick Dark Surface (A12)  Depleted Dark Surface (F7)					face (F7)	*Indicators	s of hydrophytic vegetation and wetland				
Sandy Mucky Material (S1) Redox Depressions (F8)					s (F8)	hydrolog	y must be present, unless disturbed or				
5 cm N	5 cm Mucky Peat or Peat (S3)						problematic				
Restrictive L	ayer (if observed):										
Type:				_		Ну	dric Soils Present?	_ No _			
Depth (inches	):			_				<del></del>			
<u>Remark</u>	s: Soil pit was	dug to 3	2 inches.		•						
					HYDRO	LOGY					
Wetland Hyd	rology Indicators:										
Primary Indica	ators (minimum of o	ne is requ	ired; check all the	at apply	)		Seco	ndary Indicators (minimum of two required)			
Surfac	e Water (A1)			Water-	Stained Lea	ves (B9)		Surface Soil Crack (B6)			
High V	Vater Table (A2)			- Aquati	ic Fauna (B1	13)		Drainage Patterns (B10)			
					quatic Plan	ts (B14)		Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Water Marks (B1) Hydrog					gen Sulfide	Odor (C1)					
<del></del>					ed Rhizosph	neres on Living F	Roots (C3)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)			
<del></del>					ce or Reduc	ed Iron (C4)					
Algal I	<del></del>						eduction in Tilled Soils (C6) Geomorphic Position (D2)				
Iron D	Iron Deposits (B5) Thin Muck Surface (C7)										
Inunda	Inundation Visible on Aerial Imagery (B7)  Gauge or Well Data (C7)							_			
Sparse	ly Vegetated Concav	e Surface	e (B8)	Other	(Explain in l	Remarks)					
Field Observa	itions:										
Surface Water	Present?			Ι	Depth (inche	s):	_ [	Indicators of Wetland			
Water Table F	Present?			Ι	Depth (inche	s):		Hydrology Present? No			
Saturation Pre	esent?			Ι	Depth (inche	s):	_				
Remarks	3:		<del></del>				<u> </u>				



# EXHIBIT G: WETLAND DETERMINATION DATA FORM

Real People. Real Solutions.

Project/Site: Lone	Lake Mt Bike	Trial	City	y/County: Henn	epin	Sampling Date: 10/8/2019				
Applicant/Owner:	City of Mini	netonka		State	Sample Point: W1-C					
Investigator(s):	Brandon Bo	hks		Section, Town	5, 117, 22					
Landforms (hillside,	terrace, etc.):	Basin		Local Relief (concave, convex, none): Concave						
Slope (%):	0-2	Latitude:		Longitude:		Datum:				
Soil Map Unit Name	e: Muskego an	d Houghton soils		NWI Class	ification: PEM	1A				
Are climatic/hydrolo	gic conditions	of the site typical for this	s time of year?	No	(If no,	, explain in remarks)				
Are vegetation	, soils	, or hyd	lrology	signif	icantly disturbed	d? Are normal circumstances present? Yes				
Are vegetation	, soils	, or hyd	lrology		ally problematic	? (If needed, explain any answers in Remarks)				
			SUMMAR	Y OF FINE	DINGS					
Hydro	ophytic vegetati	ion present?	Yes							
-	ic soils present?		Yes		Is the sam	pled area within a wetland? Yes				
Wetla	and hydrology p	present?	Yes							
Remarks: Preci	pitation has be	een above normal for tl	his time of year.							
		VEO	GETATION	- Use scientific	names of plants	S				
			Absolute	Dominant	Indicator	Dominance Test Worksheet				
Tree Stratum  1	(Plot size	2:30 feet)	% Cover	Species	Status	Number of dominant species that are OBL, FACW, or FAC: 2 (A				
2						Total number of dominant				
3						species across all strata: 2 (B				
4						Percent of dominant species that				
5						are OBL, FACW or FAC:100%(A				
			0 =	Total Cover						
Sapling/Shrub stratur	m (Plot size	2:15 feet)				Prevalence Index Worksheet				
1 Frangula alı	nus		15	Yes	FACW	Total % cover of:				
2						OBL Species: <b>0</b> x 1 = <b>0</b>				
3						FACW Species: <b>55</b> x 2 = <b>110</b>				
4						FAC Species: $0  \mathbf{x} \ 3 = 0$				
5						FACU species: $0  \mathbf{x} 4 = 0$				
			15 =	Total Cover		UPL Species: $0  \mathbf{x} 5 = 0$				
Herb stratum:	(Plot size	e: 5 feet )				Totals: 55 (A) 110 (B				
1 Phalaris aru	ındinacea		40	Yes	FACW	Prevalence Index (B/A): 2.00				
2						_				
3						Hydrophytic Vegetation Indicators				
4						X Rapid test for hydrophytic vegetation				
5						X Dominance test >50%				
6						$\overline{\mathbf{X}}$ Prevalence index is $\leq 3.0^*$				
7						Morphological adaptations* (Provide				
8						supporting data in remarks)				
9						Problematic hydrophytic vegetation*				
10						(Explain in remarks)				
Woody vine stratum:	(Plot size	2:15 feet)	=	Total Cover		*Indicators of hydric soil and wetland hydrolo must be present, unless disturbed or problema				
2			0 =	Total Cover		Hydrophytic vegetation present? Yes				
				- I Otal COVEI		present: 1es				
Remarks:										



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# EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W1-C

(Midwest Region)

**SOILS** 

Surface (A11 12) (S1)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	red Matrix, MS Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix d Matrix (F3) Dark Surface (	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	Remarks  n: PL = Pore Lining, M = Matrix  or Problematic Hydric Soils*:  Prairie Redox (A16)(LRR K,L,R)  Surface (S7)(LRR K, L)  Manganese Masses (F12)(LRR K, L, R)  Shallow Dark Surface (TF12)  (Explain in remarks)		
centration, D	= Depletion, RM	Sandy Sandy Strippe Loamy Loamy Deplete Redox	ced Matrix, MS Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	S = Masked Sand Go	rains. **Location  Indicators f  Coast  Dark i  Iron-N  Very s	n: PL = Pore Lining, M = Matrix or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	rains. **Location  Indicators f  Coast  Dark i  Iron-N  Very i	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11 12)		Sandy Sandy Strippe Loamy Loamy Deplete Redox	Gleyed Matrix Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Indicators f Coast Dark Iron-N Very	or Problematic Hydric Soils*: Prairie Redox (A16)(LRR K,L,R) Surface (S7)(LRR K, L) Manganese Masses (F12)(LRR K, L, R) Shallow Dark Surface (TF12)		
Surface (A11		Sandy Strippe Loamy Loamy Deplete Redox	Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Coast Dark : Iron-N Very :	Prairie Redox (A16)( <b>LRR K,L,R</b> ) Surface (S7)( <b>LRR K, L</b> ) Manganese Masses (F12)( <b>LRR K, L, R</b> ) Shallow Dark Surface (TF12)		
Surface (A11		Sandy Strippe Loamy Loamy Deplete Redox	Redox (S5) d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Dark in Iron-M	Surface (S7)( <b>LRR K, L</b> )  Manganese Masses (F12)( <b>LRR K, L, R</b> )  Shallow Dark Surface (TF12)		
Surface (A11	)	Strippe Loamy Loamy Deplete Redox	d Matrix (S6) Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Iron-M Very S	Manganese Masses (F12)( <b>LRR K, L, R</b> ) Shallow Dark Surface (TF12)		
Surface (A11	)	Loamy Loamy Deplete Redox	Mucky Mater Gleyed Matrix ed Matrix (F3)	ial (F1) x (F2)	Very	Shallow Dark Surface (TF12)		
Surface (A11	)	Loamy Deplete Redox	Gleyed Matrix (F3)	x (F2)	Very	Shallow Dark Surface (TF12)		
12)	)	Deplete Redox	ed Matrix (F3)	)	Other	(Explain in remarks)		
12)	)	Redox						
12)	)	-	Dark Surface (					
		Deplete		(F6)				
(S1)		- oprou	ed Dark Surfac	ce (F7)	*Indicators	of hydrophytic vegetation and wetland		
		Redox	Depressions (I	F8)		must be present, unless disturbed or		
5 cm Mucky Peat or Peat (S3)						problematic		
ed):								
Restrictive Layer (if observed): Type:					oils Present?	Yes		
		-		Tiyuric S	ons resent.			
was dug to 1	5 inches.							
		]	HYDROL	OGY				
rs:								
of one is requ	uired; check all tha	at apply	<u>)</u>		Secon	dary Indicators (minimum of two required)		
		Water-	Stained Leaves	s (B9)		Surface Soil Crack (B6)		
)		Aquati	c Fauna (B13)			Drainage Patterns (B10)		
<del></del>						Dry-Season Water Table (C2)		
<del>-</del> '						Crayfish Burrows (C8)		
<del></del> .					C3)	Saturation Visible on Aerial Imagery (C9)		
<del>-</del>						Stunted or Stressed Plants (D1)		
<del>-</del>					(i) X	<del></del>		
<del></del>					X	FAC-Neutral Test (D5)		
<del>-</del>						-		
		=						
		D	epth (inches):			Indicators of Wetland		
Y	es		-			Hydrology Present? Yes		
			-			<del></del>		
2	was dug to 1  ors: of one is request.  2)  4)  Aerial Images oncave Surface.	was dug to 15 inches.  ors: of one is required; check all that the second secon	was dug to 15 inches.  Dors:  Of one is required; check all that apply water—  Aquatic True A  Hydrog  Oxidize  Presence  4)  Recent  Thin M  Aerial Imagery (B7)  Gauge  Oxneave Surface (B8)  Other (D  Yes	was dug to 15 inches.  HYDROL  Ors:  Of one is required; check all that apply)  Water-Stained Leave Aquatic Fauna (B13)  True Aquatic Plants ( Hydrogen Sulfide Od Oxidized Rhizospher Presence or Reduced Aerial Imagery (B7) Oncave Surface (B8)  Depth (inches):  Yes  Depth (inches):	was dug to 15 inches.  HYDROLOGY  Ors:  Of one is required; check all that apply)  Water-Stained Leaves (B9)  Aquatic Fauna (B13)  True Aquatic Plants (B14)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres on Living Roots (Presence or Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (C6)  Thin Muck Surface (C7)  Aerial Imagery (B7) Other (Explain in Remarks)  Depth (inches):  Yes  Depth (inches):  5	was dug to 15 inches.  HYDROLOGY  Ors:  Of one is required; check all that apply)  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)  Ale Recent Iron Reduction in Tilled Soils (C6)  Thin Muck Surface (C7)  Aerial Imagery (B7)  Gauge or Well Data (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):  Secon  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)  X  Aerial Imagery (B7)  Gauge or Well Data (C7)  Other (Explain in Remarks)		



# EXHIBIT G: WETLAND DETERMINATION DATA FORM

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·	Lake Mt Bike	1 гіаі	City	//County: Henn	epın	Sampling Date: 10/8/2019
Applicant/Owner:	City of Minn	etonka		State	Sample Point: W1-D	
Investigator(s):	Brandon Bo	nks		Section, Town		
Landforms (hillside,	terrace, etc.):	Backslope		Local Relief	(concave, conve	ex, none): Convex
Slope (%): 9	-13	Latitude:		Longitude:		Datum:
Soil Map Unit Name	Kingsley-Go	tham complex		NWI Class	ification: None	
Are climatic/hydrolog	gic conditions of	of the site typical for thi	s time of year?	No	(If no,	explain in remarks)
Are vegetation	, soils	, or hy	drology	signif	icantly disturbed	d? Are normal circumstances present? Yes
Are vegetation	, soils	, or hy	drology		ally problematic	? (If needed, explain any answers in Remarks)
			SUMMAR	Y OF FIND	INGS	
Hydro	phytic vegetati	on present?	Yes			
	c soils present?		Yes		Is the sam	pled area within a wetland? No
Wetla	nd hydrology p	resent?	No			
Domarka Duasi	nitation has be	on above normal for t	his time of voor			
Remarks: Preci	pitation has be	en above normal for t			0.1	
		VE	GETATION			Dominance Test Worksheet
Tree Stratum	(Plot size	: 20 foot	Absolute	Dominant	Indicator	
1	(1 lot size	: 30 feet )	% Cover	Species	Status	Number of dominant species that are OBL, FACW, or FAC: 2 (A)
2						
3						Total number of dominant species across all strata: 3 (B)
4						``
5						Percent of dominant species that are OBL, FACW or FAC: 67% (A/B)
3				Total Cover		are OBL, FACW or FAC: 67% (A/B)
Sapling/Shrub stratur	n (Plot size	: 15 feet )	0 =	Total Cover		Prevalence Index Worksheet
1 Rhamnus car		13 1661	70	Yes	FAC	Total % cover of:
2	шагиса				——	OBL Species: $0  \mathbf{x} 1 = 0$
3						FACW Species: $8 \times 2 = 16$
4						FAC Species: 82 x 3 = 246
5						FACU species: $24$ $x 4 = 96$
<u> </u>			70 =	Total Cover		UPL Species: $0 \times 5 = 0$
Herb stratum:	(Plot size	: 5 feet )		Total Covel		Totals: 114 (A) 358 (B)
1 Rhamnus car	•	- <u>3 leet</u> )	12	Yes	FAC	Prevalence Index (B/A): <b>3.14</b>
2 Ageratina al			12	Yes	FACU	Trevarence fidex (B/A). 3.14
3 Onoclea sens			8	No	FACW	Hydrophytic Vegetation Indicators
4 Rubus idaeu			5	No	FACU	Rapid test for hydrophytic vegetation
5 Ribes cynosh			4	No	FACU	X Dominance test >50%
6 Sanguinaria			3	No	FACU	Prevalence index is ≤3.0*
7	cunadensis					<del></del>
8						Morphological adaptations* (Provide supporting data in remarks)
10						Problematic hydrophytic vegetation*  (Explain in remarks)
Woody vine stratum:	(Plot size	:15 feet)	=	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2			0 =	Total Cover		Hydrophytic vegetation present? Yes
			=	Total Cover		present? Yes



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### EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point:

**W1-D** 

					SOILS	S					
Profile Descr	iption: (Describe to t	he dep	th needed to docu	ıment t	he indicator o	or confirm the	absence of indicator	s.)			
Depth	Matrix			Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-25	10YR 2/1	100					Clay Loam				
25-30	10YR 4/1	100					Sandy Clay Loam				
30-35	10YR 4/1	95	7.5YR 4/6	5	С	M	Sandy Clay Loam				
	*Type: C = Concentra	tion, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked Sa	nd Grains. **Location	n: PL = Pore Lining, M = Matrix			
Hydric Soil I	ndicators:						Indicators f	or Problematic Hydric Soils*:			
Histisc	ol (A1)			Sandy	Gleyed Matrix	(S4)	Coast	Prairie Redox (A16)( <b>LRR K,L,R</b> )			
Histic	Epipedon (A2)			Sandy	Redox (S5)		Dark S	Surface (S7)(LRR K, L)			
Black	Histic (A3)			Strippe	ed Matrix (S6)		Iron-N	Manganese Masses (F12)(LRR K, L, R)			
Hydrog	gen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)	Very S	Shallow Dark Surface (TF12)			
Stratifi	ed Layers (A5)			Loamy	Gleyed Matri	x (F2)	Other	(Explain in remarks)			
2 cm N	2 cm Muck (A10) Depleted Ma										
Depleted Below Dark Surface (A11) Redox Dark S						(F6)					
X Thick Dark Surface (A12) Depleted Dar						ce (F7)	*Indicators	of hydrophytic vegetation and wetland			
Sandy Mucky Material (S1) Redox Depre						F8)	hydrology	must be present, unless disturbed or			
5 cm Mucky Peat or Peat (S3)								problematic			
Restrictive Layer (if observed):											
Type:						Hyd	lric Soils Present?	Yes			
Depth (inches	):			•				<del></del>			
Remark	Soil pit was d	lug to 3	5 inches.								
					HYDROL	OGY					
Wetland Hyd	rology Indicators:										
Primary Indica	ators (minimum of one	e is requ	iired; check all tha	at apply	)		Secon	dary Indicators (minimum of two required)			
Surfac	e Water (A1)			Water-	Stained Leave	s (B9)		Surface Soil Crack (B6)			
High V	Vater Table (A2)			- Aquati	c Fauna (B13)			Drainage Patterns (B10)			
Satura	Saturation (A3)  True Aquati-							Dry-Season Water Table (C2)			
Water	Water Marks (B1) Hydrogen Su							Crayfish Burrows (C8)			
Sedime	<u> </u>						nizospheres on Living Roots (C3) Saturation Vis				
Drift D	<del></del>						Reduced Iron (C4) Stunted or Stresse				
Algal I	Algal Mat or Crust (B4)  Recent Iron R						ls (C6)	Geomorphic Position (D2)			
Iron D	Iron Deposits (B5)  Thin Muck Su										
Inunda	Inundation Visible on Aerial Imagery (B7)  Gauge or Wel							•			
Sparse	Sparsely Vegetated Concave Surface (B8)  Other (Explain										
Field Observa	ations:										
Surface Water				Ι	Depth (inches):		,	Indicators of Wetland			
Water Table F					Depth (inches):		·	Hydrology Present? No			
Saturation Pre		N	lo		Depth (inches):	· · · — — —					
					- , /		· <u>I</u>				
Remarks	3:										



# EXHIBIT G: WETLAND DETERMINATION DATA FORM

Real People. Real Solutions.

Investigator(s): Brandon Bohks Landforms (hillside, terrace, etc.): Fringe Wetland Local Relief (concave, convex, none): Linear    Local Relief (concave, convex, none): Linear   Local Relief (concave, convex, none): Lace	
Local Relief (concave, convex, none): Linear   Local Relief (concave, convex, none): Local Relief (concave, convex, none): Linear   Local Relief (concave, convex, none): Local Reli	wers in Remarks)
Slope (%):   1-2	wers in Remarks)
Note   Climatic   Note   Note   Climatic   Note   Note   Climatic   Note   Note   Climatic   Note   Note   Note   Climatic   Note	wers in Remarks)
Are climatic/hydrologic conditions of the site typical for this time of year?  Are vegetation	wers in Remarks)
Are vegetation soils or hydrology naturally problematic? (If needed, explain any any SUMMARY OF FINDINGS  Hydrophytic vegetation present? Yes Hydric soils present? Yes Wetland hydrology present? Yes Is the sampled area within a wetland?  **Tree Stratum** (Plot size: 30 feet ) % Cover Species Status Number of dominant specific that are OBL, FACW, or FAC 2 Ulmus americana 15 Yes FAC Total number of dominant species tare OBL, FACW or FAC 4 Sequence 15 feet ) Percent of dominant species across all stratum (Plot size: 15 feet ) Prevalence Index    **Tree Stratum** (Plot size: 15 feet ) 1 Phalaris arundinacea 45 Yes FAC Wetland hydrology present? Yes FACW 10 Prevalence Index (B/A Species: 0 x FACW)	wers in Remarks)
Are vegetation soils soils or hydrology naturally problematic? (If needed, explain any and SUMMARY OF FINDINGS  Hydrophytic vegetation present? Yes Hydric soils present? Yes Wetland hydrology present? Yes Is the sampled area within a wetland?  Remarks: Precipitation has been above normal for this time of year.  VEGETATION - Use scientific names of plants  Tree Stratum (Plot size: 30 feet ) % Cover Species Status 1 Number of dominant species across all stree of the sampled area within a wetland?  1 Populus deltoides 50 Yes FAC Total number of dominant species across all stree of the species of the sampled area within a wetland?  1 Populus deltoides 50 Yes FAC Total number of dominant species across all stree of the species of the sp	wers in Remarks)
Hydrophytic vegetation present?   Yes   Hydric soils present?   Yes   Yes   Wetland hydrology present?   Yes   Yes   Is the sampled area within a wetland?	
Hydrophytic vegetation present?   Yes	Yes
Hydric soils present?   Yes	Yes
New teland hydrology present?   Yes	Yes
Number of dominant spect status   Species across all strategy   Sapling/Shrub stratum   (Plot size: 15 feet   )	
Number of dominant species   Status   Status   Number of dominant species   Status   Status   Status   Number of dominant species   Status   S	
Number of dominant species   Status   Status   Number of dominant species   Status   Status   Status   Number of dominant species   Status   S	
Absolute   Dominant   Indicator   Species   Status   Number of dominant specification   Species   Status   Status   Number of dominant specification   Species   Status   Status   Number of dominant specification   Species   Status   Status   Number of dominant specification   Species across all stratem   Species	
Number of dominant species   Saphing   Subminant   Number of dominant species   Saphing   S	
Tree Stratum         (Plot size: 30 feet )         % Cover Species         Status FAC that are OBL, FACW, or FA           1 Populus deltoides         15         Yes         FAC           2 Ulmus americana         15         Yes         FACW           3	Vorksheet
Populus deltoides	ies
Total number of dominant species across all strate	
Sapling/Shrub stratum   (Plot size: 15 feet   )	ent .
Percent of dominant species tare OBL, FACW or FACW o	
Sapling/Shrub stratum   (Plot size: 15 feet   )	
Sapling/Shrub stratum   (Plot size: 15 feet   )	
Rhamnus cathartica   10   Yes   FAC   Total % cover of:   OBL Species:   0   x   FAC   FAC   Species:   0   x   FAC   FAC   Species:   0   x   FAC   FAC   Species:   0   x   Total   Species:	```
OBL Species: 0 x	
OBL Species: 0 x	
FACW Species: 74 x FAC Species: 60 x FACU species: 0 x FACU species: 0 x    10	1 = 0
FAC Species: 60 x   FACU species: 0 x   UPL Speci	2 = 148
FACU species: 0 x   UPL Specie	3 = 180
10	4 = 0
Herb stratum: (Plot size: 5 feet )   Totals: 134 (A)	5 = 0
1 Phalaris arundinacea 45 Yes FACW Prevalence Index (B/A) 2 Impatiens capensis 9 No FACW 3 Solidago gigantea 5 No FACW Hydrophytic Vegetati 4 Rapid test for hydroph 5 Dominance test >50%	328 (B)
2 Impatiens capensis 9 No FACW 3 Solidago gigantea 5 No FACW Hydrophytic Vegetati Rapid test for hydroph 5	
3 Solidago gigantea 5 No FACW Hydrophytic Vegetati Rapid test for hydroph The solidago gigantea Solida	1)
Rapid test for hydroph  X Dominance test >50%	on Indicators
5 X Dominance test >50%	
	the vegetation
f) I A Prevalence index is <3	0.4
	0*
7 Morphological adaptat	
8supporting data in rem	ırks)
9 Problematic hydrophyt	ic vegetation*
10(Explain in remarks)	
59 =Total Cover *Indicators of hydric soil and	
Woody vine stratum: (Plot size: 15 feet ) must be present, unless distu	wetland hydrology
1	
2 Hydrophytic vegetation	
0 =Total Cover present?	
Remarks:	



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#### **EXHIBIT G:** WETLAND DETERMINATION DATA FORM

Sample Point:

W2-A

					SOIL	$\mathbf{S}$					
Profile Descr	ription: (Describe to	the dep	th needed to doci	ıment t	he indicator o	or confirm the a	absence of indicato	rs.)			
Depth	Matrix			Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-14	10YR 2/1						Sandy Clay Loam				
14-22+	10YR 4/1	90	7.5YR 4/6	10	С	M	Sandy Clay Loam				
	*Type: C = Concentr	ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked San	d Grains. **Location	on: PL = Pore Lining, M = Matrix			
Hydric Soil I			1					for Problematic Hydric Soils*:			
Histisc				Sandy	Gleyed Matrix	x (S4)		t Prairie Redox (A16)( <b>LRR K,L,R</b> )			
	Epipedon (A2)			-	Redox (S5)	(- )		Surface (S7)(LRR K, L)			
	Histic (A3)			-	ed Matrix (S6)			Manganese Masses (F12)( <b>LRR K, L, R</b> )			
	gen Sulfide (A4)			•		iron-Manganese Masses (F12)(LKK K, L, ucky Material (F1)  Very Shallow Dark Surface (TF12)					
	ied Layers (A5)				Gleyed Matri						
	Muck (A10)			-	ed Matrix (F3)		<del></del> -				
Depleted Below Dark Surface (A11)  Redox Dark S											
X Thick Dark Surface (A12) Depleted Dar											
Sandy Mucky Material (S1)  Redox Depreted Date  Redox Depreted Date  Redox Depreted Date  Sandy Mucky Material (S1)								of hydrophytic vegetation and wetland y must be present, unless disturbed or			
5 cm Mucky Peat or Peat (S3)					Depressions (	10)	nydrolog	problematic			
		13)						-			
	ayer (if observed):										
Type:						Hydr	ric Soils Present?	Yes			
Depth (inches	<u> </u>			-							
Remark	s: Soil pit was	dua to 2	22 inches								
Kemark	s. Son pit was	uug to 2	22 menes.								
				]	HYDROL	OGY					
Wetland Hyd	rology Indicators:										
Primary Indic	ators (minimum of or	ne is requ	uired; check all tha	at apply	)		Seco	ndary Indicators (minimum of two required)			
Surfac	Surface Water (A1) Water-Sta				Stained Leave	es (B9)		Surface Soil Crack (B6)			
X High V	X High Water Table (A2) Aquatic Fa					una (B13) Drainage Patterns (B10)					
X Satura	X Saturation (A3) True Aquatic					c Plants (B14) Dry-Season Water Table (C2)					
Water	Water Marks (B1) Hydrogen Su					ulfide Odor (C1) X Crayfish Burrows (C8)					
Sedim	<del></del>					zospheres on Living Roots (C3) Saturation Visible on Aerial Im					
Drift I	<del></del>					Reduced Iron (C4)  Stunted or Stressed Plants (D1)					
Algal 1	<del></del>						Reduction in Tilled Soils (C6) Geomorphic Position (D2)				
Iron D	eposits (B5)	·	Thin M	luck Surface (							
Inunda	Inundation Visible on Aerial Imagery (B7)  Gauge or Wel							_			
Sparse	Sparsely Vegetated Concave Surface (B8)  Other (Explain					marks)					
Field Observa	ations:										
Surface Water				Γ	Depth (inches):			Indicators of Wetland			
Water Table I		Y	es		Depth (inches):			Hydrology Present? Yes			
Saturation Pre			es		Depth (inches):						
Remarks	•										



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Project/Site: Lone Lake Mt Bike Trial	City	y/County: Henn	-	Sampling Date: 10/8/2019		
Applicant/Owner: City of Minnetonka		State	e: MN	Sample Point: W2-B		
Investigator(s): Brandon Bohks		Section, Township, Range: 35, 117, 22				
Landforms (hillside, terrace, etc.): Backslope		Local Relief	(concave, conv	ex, none): Convex		
Slope (%): 5-8 Latitude:		Longitude:		Datum:		
Soil Map Unit Name: Kingsley-Gotham complex		NWI Class	ification: None			
Are climatic/hydrologic conditions of the site typical for t	his time of year?	No	(If no	, explain in remarks)		
Are vegetation , soils , or l	nydrology	signif	icantly disturbe	d? Are normal circumstances present? Yes		
Are vegetation , soils , or l	nydrology	natura	ally problematic	? (If needed, explain any answers in Remarks)		
<u></u>	SUMMAR	Y OF FIND	INGS			
Hydrophytic vegetation present?	No					
Hydric soils present?	Yes		Is the sam	pled area within a wetland? No		
Wetland hydrology present?	No			<del></del>		
Remarks: Precipitation has been above normal for	this time of year.	•				
V	EGETATION	- Use scientific	names of plants			
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size: 30 feet )	% Cover	Species	Status	Number of dominant species		
1 Acer negundo	40	Yes	FAC	that are OBL, FACW, or FAC: (A)		
2 Prunus serotina		Yes	FACU	Total number of dominant		
3				species across all strata: 6 (B)		
4				Percent of dominant species that		
5				are OBL, FACW or FAC: 50% (A/B)		
	60 =	Total Cover				
Sapling/Shrub stratum (Plot size: 15 feet )				Prevalence Index Worksheet		
1 Rhamnus cathartica	25	Yes	FAC	Total % cover of:		
2				OBL Species: <b>0</b> x 1 = <b>0</b>		
3				FACW Species: $0$ $\mathbf{x} \ 2 = 0$		
4				FAC Species: <b>78</b> x 3 = <b>234</b>		
5				FACU species: 35 x 4 = 140		
	25 =	Total Cover		UPL Species: $0  \mathbf{x}  5 = 0$		
Herb stratum: (Plot size: 5 feet )				Totals: 113 (A) 374 (B)		
1 Rhamnus cathartica	10	Yes	FAC	Prevalence Index (B/A): 3.31		
2 Pilea fontana	8	Yes	FACU			
3 Ageratina altissima	7	Yes	FACU	Hydrophytic Vegetation Indicators		
4 Toxicodendron rydbergii	3	No	FAC	Rapid test for hydrophytic vegetation		
5	_			Dominance test >50%		
6				Prevalence index is ≤3.0*		
7	_			Morphological adaptations* (Provide		
8				supporting data in remarks)		
9	_			<u> </u>		
10	_			Problematic hydrophytic vegetation* (Explain in remarks)		
		Total Cover		(Explain in Telliures)		
Woody vine stratum: (Plot size: 15 feet )		- 1 Otal CUVEI		*Indicators of hydric soil and wetland hydrology		
				must be present, unless disturbed or problematic		
1						
۷		T 1.C.		Hydrophytic vegetation		
	0 =	Total Cover		present? No		



#### **EXHIBIT G:**WETLAND DETERMINATION DATA FORM

Sample Point: **W2-B** 

(Midwest Region)

Profile Descr	iption: (Describe to	the dep	th needed to docu	ment t	he indicator (	or confirm the	e absence of indicato	rs.)			
Depth	Matrix			Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-25	10YR 2/1	100					Clay Loam				
25-31	10YR 4/1	85	10YR 5/1	10	D	M	Sandy Clay Loam				
			7.5YR 4/6	5	C	M	Sandy Clay Loam				
		ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked S	and Grains. **Location	on: PL = Pore Lining, M = Matrix			
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils*:			
Histisc	ol (A1)			Sandy	Gleyed Matrix	x (S4)	Coas	Prairie Redox (A16)( <b>LRR K,L,R</b> )			
Histic Epipedon (A2) Sandy Redox							Dark	Surface (S7)(LRR K, L)			
Black	Histic (A3)			Strippe	ed Matrix (S6)		Iron-	Manganese Masses (F12)(LRR K, L, R)			
Hydrog	gen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)	Very	Shallow Dark Surface (TF12)			
Stratifi	ed Layers (A5)			Loamy	Gleyed Matri	ix (F2)	Othe	(Explain in remarks)			
2 cm N	Muck (A10)			Deplet	ed Matrix (F3)	)					
Deplet	ed Below Dark Surfa	ce (A11)		Redox	Dark Surface	(F6)					
X Thick	Dark Surface (A12)			Deplet	ed Dark Surfa	*Surface (F7) *Indicators of hydrophytic vegetation and wetland					
Sandy	Mucky Material (S1)			Redox	Depressions (	F8)	hydrolog	y must be present, unless disturbed or			
5 cm N	Mucky Peat or Peat (S	(3)						problematic			
Restrictive L	ayer (if observed):										
Type:						Ну	dric Soils Present?	Yes			
Depth (inches	):			•				<del></del>			
				•							
Remarks	Soil pit was	dug to 3	1 inches.								
				]	HYDROL	OGY					
Wetland Hydi	rology Indicators:										
Primary Indica	ators (minimum of on	ne is requ	ired; check all tha	t apply	)		Seco	ndary Indicators (minimum of two required)			
Surface	e Water (A1)			Water-	Stained Leave	es (B9)		Surface Soil Crack (B6)			
High V	Vater Table (A2)			Aquati	c Fauna (B13)	)		Drainage Patterns (B10)			
Saturat	tion (A3)			True A	quatic Plants	(B14)		Dry-Season Water Table (C2)			
Water	Marks (B1)			Hydrog	gen Sulfide Oo	dor (C1)		Crayfish Burrows (C8)			
Sedime	ent Deposits (B2)			Oxidiz	ed Rhizospher	res on Living F	_Saturation Visible on Aerial Imagery (C9)				
Drift D	Deposits (B3)			Presen	ce or Reduced	Iron (C4)		Stunted or Stressed Plants (D1)			
Algal I	Algal Mat or Crust (B4) Recent Iron Reduction in Tille							Geomorphic Position (D2)			
Iron De	Iron Deposits (B5)  Thin Muck Surface (C7)							FAC-Neutral Test (D5)			
Inunda	tion Visible on Aeria	l Imager	ry (B7)	Gauge	or Well Data	(C7)		_			
Sparse	ly Vegetated Concave	e Surface	e (B8)	Other (	Explain in Re	emarks)					
Field Observa	tions:										
Surface Water	Present?			Ε	Depth (inches):			Indicators of Wetland			
Water Table F	Present?			Γ	Depth (inches):	:		Hydrology Present? No			
Saturation Pre	esent?	N	lo	Γ	Depth (inches):	27	_				
Remarks	::						<b>I</b>				



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Project/Site: Lone Lake Mt Bike Trial	City	y/County: Henn	epin	Sampling Date: 10/8/2019			
Applicant/Owner: City of Minnetonka			: MN	Sample Point: W3-A			
Investigator(s): Brandon Bohks		Section, Township, Range: 35, 117, 22					
Landforms (hillside, terrace, etc.): Basin		Local Relief	(concave, conve	ex, none): Concave			
Slope (%): 0-2 Latitude:		Longitude:		Datum:			
Soil Map Unit Name: Lundlake loam, depressional		NWI Classi	fication: PEM1	IA			
Are climatic/hydrologic conditions of the site typical for this	s time of year?	No	(If no,	explain in remarks)			
Are vegetation , soils , or hyd	lrology	signifi	cantly disturbed	d? Are normal circumstances present? Yes			
Are vegetation , soils , or hyd	lrology	natura	lly problematic	? (If needed, explain any answers in Remarks)			
	SUMMAR	Y OF FIND	INGS				
Hydrophytic vegetation present?	Yes						
Hydric soils present?	Yes		Is the sam	pled area within a wetland? Yes			
Wetland hydrology present?	Yes						
Remarks: Precipitation has been above normal for the	nis time of year.	•					
VEC	GETATION	- Use scientific	names of plants	I			
	Absolute	Dominant	Indicator	Dominance Test Worksheet			
Tree Stratum (Plot size: 30 feet )	% Cover	Species	Status	Number of dominant species			
1 Ulmus americana	15	Yes	FACW	that are OBL, FACW, or FAC: 4 (A)			
2				Total number of dominant			
3				species across all strata: 4 (B)			
4				Percent of dominant species that			
5				are OBL, FACW or FAC: 100% (A/B)			
	<u>15</u> =	Total Cover					
Sapling/Shrub stratum (Plot size: 15 feet )				Prevalence Index Worksheet			
1 Rhamnus cathartica	5	Yes	FAC	Total % cover of:			
2				OBL Species: <u>15</u> x 1 = <u>15</u>			
3				FACW Species: 106 x 2 = 212			
4				FAC Species: 5 x 3 = 15			
5				FACU species: $5   x 4 = 20$			
	5 =	Total Cover		UPL Species: $0   x 5 = 0$			
Herb stratum: (Plot size: 5 feet )				Totals: 131 (A) 262 (B)			
1 Phalaris arundinacea	70	Yes	FACW	Prevalence Index (B/A): 2.00			
2 Scirpus cyperinus	15	No	OBL				
3 Impatiens capensis	8	No	FACW	Hydrophytic Vegetation Indicators			
4 Solidago gigantea	5	No	FACW	Rapid test for hydrophytic vegetation			
5 Solidago canadensis	5	No	FACU	X Dominance test >50%			
6				$\overline{\mathbf{X}}$ Prevalence index is $\leq 3.0^*$			
7				<del></del>			
8				Morphological adaptations* (Provide supporting data in remarks)			
9				Problematic hydrophytic vegetation* (Explain in remarks)			
	103 =	Total Cover		Windless of the 12 of the 2 of the 2			
Woody vine stratum: (Plot size:15 feet)				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
1 Vitis riparia	8	Yes	FACW	mast be present, unless disturbed of problematic			
2				Hydrophytic vegetation			
	8 =	Total Cover		present? Yes			
	-			<u> </u>			



Sample Point:

**W3-A** 

Real Peop	ole. Real Solutions.				(Midwest R	_						
					SOIL							
Profile Descr	iption: (Describe to	the dep	th needed to docu			or confirm the	e absence of indica	tors.)				
Depth	Matrix	1			Features	T shale	4					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks				
0-9	10YR 2/1						Sandy Clay Loa	m				
9-15+	10YR 4/1	90	7.5YR 4/6	10	С	M	Sandy Loam					
	*Type: C = Concentr	ation, D	= Depletion, RM	= Reduc	ed Matrix, M	IS = Masked S	and Grains. **Locat	ion: PL = Pore Lining, M = Matrix				
Hydric Soil I	ndicators:						Indicator	s for Problematic Hydric Soils*:				
Histisc	ol (A1)			Sandy 0	Gleyed Matri	x (S4)	Coa	ast Prairie Redox (A16)( <b>LRR K,L,R</b> )				
Histic Epipedon (A2)					Redox (S5)		Dar	k Surface (S7)( <b>LRR K, L</b> )				
Black Histic (A3)					d Matrix (S6	)	Iron	n-Manganese Masses (F12)( <b>LRR K, L, R</b> )				
Hydrogen Sulfide (A4)					Mucky Mate	erial (F1)	Ver	ry Shallow Dark Surface (TF12)				
Stratified Layers (A5)					Gleyed Matr	ix (F2)	Oth	Other (Explain in remarks)				
2 cm Muck (A10)					Depleted Matrix (F3)							
X Deplet	ed Below Dark Surfa	ce (A11	)	Redox Dark Surface (F6)								
Thick Dark Surface (A12)					ed Dark Surfa	ace (F7)	*Indicato	rs of hydrophytic vegetation and wetland				
Sandy	Mucky Material (S1)	)		Redox	Depressions	(F8)	hydrology must be present, unless disturbed or					
5 cm N	Mucky Peat or Peat (S	33)		problematic								
Restrictive La	ayer (if observed):											
Type:	•					Hv	dric Soils Present?	Yes				
Depth (inches	):			-		,	dire boils i resent.					
- · F · · · (				-								
Remarks	Soil pit was	dug to 1	5 inches.									
				1	HYDROL	OGY						
Wetland Hydi	rology Indicators:											
•	ators (minimum of or	ne is requ	ired; check all tha	at apply)			Sec	ondary Indicators (minimum of two required)				
Surface	e Water (A1)	•		Water-	Stained Leav	es (B9)		Surface Soil Crack (B6)				
	Vater Table (A2)			- Aquatic	: Fauna (B13	3		Drainage Patterns (B10)				
	tion (A3)			-	quatic Plants		_	Dry-Season Water Table (C2)				
	Marks (B1)		-	-	en Sulfide O			Crayfish Burrows (C8)				
	ent Deposits (B2)		-	•		res on Living F	Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
	Deposits (B3)			-	e or Reduced	=		<del></del>				
	Mat or Crust (B4)			-		on in Tilled So	Stunted or Stressed Plants (D1)  X Geomorphic Position (D2)					
	eposits (B5)			-	uck Surface		. ,	FAC-Neutral Test (D5)				
	tion Visible on Aeria	ıl Imager	v (B7)	-	or Well Data			The-reduction (D3)				
	ly Vegetated Concav	_		•	Explain in Re							
Field Observa												
Surface Water					epth (inches)		-	Indicators of Wetland				
Water Table P			es		epth (inches)		-	Hydrology Present? Yes				
Saturation Pre	esent?	Y	es	D	epth (inches)	: Surface	_					
Remarks	s:											



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Project/Site: Lone Lake Mt Bike Trial	Cit	y/County: Henn	epin	Sampling Date: 10/8/2019			
Applicant/Owner: City of Minnetonka		State	e: 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 thi	s time of year?	No	(If no	, explain in remarks)			
Are vegetation , soils , or hy	drology	signif	icantly disturbe	d? Are normal circumstances present? Yes			
Are vegetation , soils , or hy	drology	natura	ally problematic	? (If needed, explain any answers in Remarks)			
	SUMMAR	Y OF FIND	INGS				
Hydrophytic vegetation present?	No						
Hydric soils present?	Yes		Is the sam	pled area within a wetland? No			
Wetland hydrology present?	No						
Remarks: Precipitation has been above normal for t							
VE	GETATION	- Use scientific	names of plants				
The Charles (District 2000)	Absolute	Dominant	Indicator	Dominance Test Worksheet			
<u>Tree Stratum</u> (Plot size: 30 feet )	% Cover	Species	Status	Number of dominant species			
1 Acer negundo	65	Yes	FAC	that are OBL, FACW, or FAC:(A)			
2				Total number of dominant			
3				species across all strata:5 (B)			
4				Percent of dominant species that			
5				are OBL, FACW or FAC: 40% (A/B)			
	65	Total Cover					
Sapling/Shrub stratum (Plot size: 15 feet )				Prevalence Index Worksheet			
1 Rhamnus cathartica	15	Yes	FAC	Total % cover of:			
2 Prunus virginian	10	Yes	FACU	OBL Species: $0$ $\mathbf{x} \ 1 = 0$			
3				FACW Species: $0$ $\mathbf{x} \ 2 = 0$			
4				FAC Species: <b>89</b> x 3 = <b>267</b>			
5				FACU species: 27 x 4 = 108			
	25	Total Cover		UPL Species: $0   x 5 = 0$			
Herb stratum: (Plot size: 5 feet )				Totals: <b>116</b> (A) <b>375</b> (B)			
1 Rubus idaeus	10	Yes	FACU	Prevalence Index (B/A): 3.23			
2 Ageratina altissima	7	Yes	FACU				
3 Rhamnus cathartica	5	No	FAC	Hydrophytic Vegetation Indicators			
4 Carex species	4	No	FAC	Rapid test for hydrophytic vegetation			
5				X Dominance test >50%			
6				$\overline{\mathbf{X}}$ Prevalence index is $\leq 3.0^*$			
7	<u> </u>	•		Morphological adaptations* (Provide			
8		-		supporting data in remarks)			
9				Problematic hydrophytic vegetation*			
10				(Explain in remarks)			
W. danie data	=	=Total Cover		*Indicators of hydric soil and wetland hydrology			
Woody vine stratum: (Plot size: 15 feet )				must be present, unless disturbed or problematic			
1	<u> </u>						
2				Hydrophytic vegetation			
	0 =	Total Cover		present? No			



#### **EXHIBIT G:**WETLAND DETERMINATION DATA FORM

Sample Point: W3-B

(Midwest Region)

Profile Descr	iption: (Describe to	the dep	th needed to docu	ment t	he indicator o	or confirm the	e absence of indicato	rs.)		
Depth	Matrix			Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-11	10YR 2/1						Sandy Clay Loam			
11-19	10YR 4/1	90	7.5YR 4/6	5	C	M	Sandy Clay Loam			
			10YR 5/1	5	C	M	Sandy Clay Loam			
	*Type: C = Concentra	ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked S	and Grains. **Location	on: PL = Pore Lining, M = Matrix		
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils*:		
Histisc	ol (A1)			Sandy	Gleyed Matrix	(S4)	Coas	Prairie Redox (A16)( <b>LRR K,L,R</b> )		
Histic Epipedon (A2) Sandy Redox							Dark	Surface (S7)(LRR K, L)		
Black	Histic (A3)			Strippe	ed Matrix (S6)		Iron-	Manganese Masses (F12)(LRR K, L, R)		
Hydrog	gen Sulfide (A4)			Loamy	Mucky Mater	rial (F1)	Very	Shallow Dark Surface (TF12)		
Stratifi	ed Layers (A5)			Loamy	Gleyed Matri	x (F2)	Othe	(Explain in remarks)		
2 cm N	Muck (A10)			Deplet	ed Matrix (F3)	)				
X Deplet	ed Below Dark Surface	ce (A11		Redox	Dark Surface	(F6)				
Thick	Dark Surface (A12)			Deplet	ed Dark Surfa	ce (F7)	*Indicators	of hydrophytic vegetation and wetland		
Sandy	Mucky Material (S1)			Redox	Depressions (	F8)	hydrolog	y must be present, unless disturbed or		
5 cm N	Mucky Peat or Peat (S	3)						problematic		
Restrictive L	ayer (if observed):									
Type:						Ну	dric Soils Present?	Yes		
Depth (inches	):			-				<del></del>		
ъ 1										
<u>Remarks</u>	s: Soil pit was o	dug to 1	9 inches.							
					HYDROL	OGY				
-	rology Indicators:									
	ators (minimum of on	e is requ	ired; check all tha		_		Seco	ndary Indicators (minimum of two required)		
	e Water (A1)			Water-	Stained Leave	es (B9)		Surface Soil Crack (B6)		
	Vater Table (A2)			Aquati	c Fauna (B13)	)		_ Drainage Patterns (B10)		
	tion (A3)			True A	quatic Plants	Plants (B14) Dry-Season Water Table (C2)				
Water	Marks (B1)			Hydro	gen Sulfide Od	ide Odor (C1) Crayfish Burrows (C8)				
	ent Deposits (B2)			Oxidiz	ed Rhizospher	es on Living F	Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
	Drift Deposits (B3) Presence or Reduced Iron (C4)							Stunted or Stressed Plants (D1)		
Algal I	Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Sc							Geomorphic Position (D2)		
Iron De	Iron Deposits (B5) Thin Muck Surface (C7)							FAC-Neutral Test (D5)		
Inunda	tion Visible on Aeria	l Imager	y (B7)	Gauge	or Well Data	(C7)				
Sparse	ly Vegetated Concave	Surface	e (B8)	Other	(Explain in Re	marks)				
Field Observa	tions:									
Surface Water	Present?			Ε	Depth (inches):		_	Indicators of Wetland		
Water Table P	Present?			Ι	Depth (inches):		_	Hydrology Present? No		
Saturation Pre	esent?	N	lo		Depth (inches):	18	_			
Remarks	::						•			



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		y/County: Henn	сріп	Sampling Date: 10/8/2019			
Applicant/Owner: City of Minnetonka		State	e: 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 (%): <b>0-2</b> 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	signif	icantly disturbe	d? Are normal circumstances present? Yes			
Are vegetation , soils , or	hydrology	natura	ally problematic	? (If needed, explain any answers in Remarks)			
	SUMMAR	RY OF FIND	INGS				
Hydrophytic vegetation present?	Yes						
Hydric soils present?	Yes		Is the sam	pled area within a wetland? Yes			
Wetland hydrology present?	Yes			<del></del>			
. 3.1		<u> </u>					
Remarks: Precipitation has been above normal for	or this time of year	•					
·	EGETATION	- Use scientific	names of plant	s			
	Absolute	Dominant	Indicator	Dominance Test Worksheet			
Tree Stratum (Plot size: 30 feet )	% Cover	Species	Status	Number of dominant species			
1				that are OBL, FACW, or FAC: 2 (A)			
2				Total number of dominant			
3				species across all strata: 2 (B)			
4	_			Percent of dominant species that			
5				are OBL, FACW or FAC: 100% (A/B)			
				` ′			
	0 =	=Total Cover					
Sapling/Shrub stratum (Plot size: 15 feet )		=Total Cover		Prevalence Index Worksheet			
<del></del> `			FAC	Prevalence Index Worksheet  Total % cover of:			
1 Rhamnus cathartica	65	=Total Cover  Yes	FAC	Total % cover of:			
1 Rhamnus cathartica			FAC	Total % cover of:  OBL Species: 0 x 1 = 0			
1 Rhamnus cathartica 2 3			FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4			FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3	65	Yes	FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5	65		FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet )	65	Yes		Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea	65	Yes  =Total Cover  Yes	FACW	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana	65 65 55 10	Yes  =Total Cover  Yes  No	FACW FACW	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina	65 65 55 10 7	Yes  Total Cover  Yes  No No	FACW FACW FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica	65 65 55 10 7 3	Yes  Total Cover  Yes  No  No  No	FACW FAC FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina	65 65 55 10 7	Yes  Total Cover  Yes  No No	FACW FACW FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica	65 65 55 10 7 3	Yes  Total Cover  Yes  No  No  No	FACW FAC FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7	65 65 55 10 7 3	Yes  Total Cover  Yes  No  No  No	FACW FAC FAC	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 $\le 3.0*$ Morphological adaptations* (Provide			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7 8	65 65 55 10 7 3	Yes  Total Cover  Yes  No  No  No	FACW FAC FAC	Total % cover of:  OBL Species: $0 \times 1 = 0$ FACW Species: $73 \times 2 = 146$ FAC Species: $75 \times 3 = 225$ FACU species: $2 \times 4 = 8$ UPL Species: $0 \times 5 = 0$ Totals: $150 \times 379 \times 9$ Prevalence Index (B/A): $2.53$ Hydrophytic Vegetation Indicators Rapid test for hydrophytic vegetation  X Dominance test >50% X Prevalence index is $\leq 3.0*$ Morphological adaptations* (Provide supporting data in remarks)			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7	65 65 55 10 7 3	Yes  Total Cover  Yes  No  No  No	FACW FACW FAC FAC	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 $\leq 3.0*$ Morphological adaptations* (Provide			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7 8 9	65 65 55 10 7 3 2	Yes  Total Cover  Yes  No  No  No	FACW FACW FAC FAC	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)			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7 8 9 10	65 65 55 10 7 3 2	Yes  Total Cover  Yes  No  No  No	FACW FACW FAC FAC	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			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7 8 9 10	65 65 55 10 7 3 2	Yes  Total Cover  Yes  No  No  No	FACW FACW FAC FAC	Total % cover of:  OBL Species: 0			
1 Rhamnus cathartica 2 3 4 5 Herb stratum: (Plot size: 5 feet ) 1 Phalaris arundinacea 2 Pilea fontana 3 Athyrium Filix-femina 4 Rhamnus cathartica 5 Ageratina altissima 6 7 8 9 10	65 65 55 10 7 3 2	Yes  Total Cover  Yes  No  No  No  Total Cover	FACW FAC FAC FAC	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			



#### **EXHIBIT G:**WETLAND DETERMINATION DATA FORM

Sample Point:

**W3-C** 

(Midwest Region)

France Descr		the deri	h noodod 4a d		a indicator -		a abcomaa af !	diacta-	a )
	Matrix	ине аері	h needed to docu		Features	or confirm the	e absence of in	uicator	5.)
Depth	Color (moist)	%	Color (moist)	%	Type*	Loc**	T	_	Damada
(inches)	10YR 2/1	70	Color (moist)	70	Type	Loc	Sandy Clay		Remarks
0-7	101 R 2/1 10YR 4/1	00	7.5VD 4/6	10	C	M			
7-16+	101 K 4/1	90	7.5YR 4/6	10	C	IVI	Sandy Lo	oam	
						<u> </u>			
	***************************************		D. I.C. DM		137 / 37	G M 1 10	10 : **		DI D I I I I I I I I I I I I I I I I I
		ation, D	= Depletion, RM	= Reduc	ed Matrix, M	S = Masked S			:: PL = Pore Lining, M = Matrix
Hydric Soil I				G 1 .	C1 13.6	(0.4)	Indic		or Problematic Hydric Soils*:
Histisc	, ,		-	-	Gleyed Matrix	x (S4)		_	Prairie Redox (A16)( <b>LRR K,L,R</b> )
	Epipedon (A2)		-	•	Redox (S5)			_	Surface (S7)(LRR K, L)
	Histic (A3)			•	d Matrix (S6)			_	Ianganese Masses (F12)(LRR K, L, R)
	gen Sulfide (A4)			•	Mucky Mater			_	Shallow Dark Surface (TF12)
	ied Layers (A5)			•	Gleyed Matri			Other (	(Explain in remarks)
	Muck (A10)				ed Matrix (F3)				
	ted Below Dark Surfa	ce (A11)		•	Dark Surface				
	Dark Surface (A12)			•	ed Dark Surfa				of hydrophytic vegetation and wetland
Sandy	Mucky Material (S1)			Redox	Depressions (	F8)	hy	drology	must be present, unless disturbed or problematic
5 cm N	Mucky Peat or Peat (S	(3)							problematic
	Aucky Peat or Peat (Sayer (if observed):	53)							problematic
		(33)				Ну	dric Soils Pre	sent?	Yes
Restrictive L	ayer (if observed):	(33)		-		Ну	dric Soils Pres	sent?	
Restrictive L Type:	ayer (if observed):		6 inches.			Ну	dric Soils Pre	sent?	
Restrictive L Type: Depth (inches	ayer (if observed):		6 inches.	 	HYDROL		dric Soils Pre	sent?	
Restrictive L Type: Depth (inches	ayer (if observed):		6 inches.	1	HYDROL		dric Soils Pre	sent?	
Restrictive L Type: Depth (inches Remark	ayer (if observed):  S: Soil pit was	dug to 1					dric Soils Pre		_Yes_
Restrictive L Type: Depth (inches Remark Wetland Hyd	ayer (if observed):  S: Soil pit was rology Indicators:	dug to 1		nt apply)		OGY	dric Soils Pre		Yes dary Indicators (minimum of two required)
Restrictive L Type: Depth (inches  Remark  Wetland Hyde  Primary Indic  Surfac	ayer (if observed):  S: Soil pit was  rology Indicators: ators (minimum of or	dug to 1		nt apply) Water-	Stained Leave	OGY es (B9)	dric Soils Pre		Yes  dary Indicators (minimum of two required) Surface Soil Crack (B6)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd  Primary Indic.  Surfac  X High V	ayer (if observed):  S: Soil pit was rology Indicators: ators (minimum of or e Water (A1)	dug to 1		wat apply) Water-S	Stained Leave Fauna (B13)	OGY es (B9)	dric Soils Pre		
Restrictive L Type: Depth (inches  Remark  Wetland Hyde  Primary Indic  Surfac  X High V  X Satura	ayer (if observed):  S: Soil pit was rology Indicators: ators (minimum of or e Water (A1)  Water Table (A2)	dug to 1		Mater-S Aquation	Stained Leave Fauna (B13) quatic Plants	OGY es (B9) (B14)	dric Soils Pre		Alary Indicators (minimum of two required) Surface Soil Crack (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd: Primary Indic. Surfac  X High V X Satura Water	s: Soil pit was rology Indicators: ators (minimum of or e Water (A1) Water Table (A2) tion (A3) Marks (B1)	dug to 1		Mater-S Aquation True A	Stained Leave c Fauna (B13) quatic Plants cen Sulfide Oc	OGY es (B9) (B14) dor (C1)			
Restrictive L Type: Depth (inches  Remark  Wetland Hyde  Primary Indic  Surfac  X High V  X Satura  Water  Sedime	ayer (if observed):  S: Soil pit was rology Indicators: ators (minimum of or e Water (A1) Water Table (A2) tion (A3)	dug to 1		Mater-Aquation True Ao Hydrog	Stained Leave E Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher	OGY es (B9) (B14) dor (C1) res on Living I			Adary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd: Primary Indic. Surfac  X High V X Saturar Water Sedime Drift I	ayer (if observed):  Si: Soil pit was a sile of the si	dug to 1		Water- Aquation True A Hydrog Oxidize Presence	Stained Leave E Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher	es (B9) (B14) (dor (C1) res on Living I	Roots (C3)	Second	
Restrictive L Type: Depth (inches  Remark  Wetland Hyd Primary Indic Surfac X High V X Satura Water Sedime Drift L Algal I	rology Indicators: ators (minimum of ore Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4)	dug to 1		Water-: Aquatic True Ac Hydrog Oxidize Presenc	Stained Leave Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher ee or Reduced	oGY  es (B9)  (B14)  dor (C1)  res on Living I  I Iron (C4)  on in Tilled So	Roots (C3)	Second	Lary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd Primary Indic Surfac X High V X Satura Water Sedime Drift I Algal I Iron D	ayer (if observed):  Si: Soil pit was a sile of the si	dug to 1	ired; check all tha	Water-S Aquation True And Hydrog Oxidized Presence Recent Thin M	Stained Leave e Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher ee or Reduced Iron Reduction	oGY  es (B9) ) (B14) dor (C1) res on Living I I Iron (C4) on in Tilled So	Roots (C3)	Second	
Restrictive L Type: Depth (inches  Remark  Wetland Hyd: Surfac  X High V  X Satura  Water Sedime Drift I  Algal I  Iron D  Inunda	ayer (if observed):  Si: Soil pit was:  rology Indicators: ators (minimum of or e Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) eposits (B5)	dug to 1	y (B7)	Water-Aquation True Ac Hydrog Oxidize Presence Recent Thin M Gauge	Stained Leave Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher ee or Reduced	oGY  es (B9) (B14) dor (C1) res on Living I I Iron (C4) on in Tilled So (C7) (C7)	Roots (C3)	Second	Lary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd: Surfac  X High V  X Satura  Water Sedime Drift I  Algal I  Iron D  Inunda Sparse	ayer (if observed):  Soil pit was a served pit was a serv	dug to 1	y (B7)	Water-Aquation True Ac Hydrog Oxidize Presence Recent Thin M Gauge	Stained Leave e Fauna (B13) quatic Plants gen Sulfide Oc ed Rhizospher se or Reduced Iron Reduction fuck Surface (	oGY  es (B9) (B14) dor (C1) res on Living I I Iron (C4) on in Tilled So (C7) (C7)	Roots (C3)	Second	Lary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hydi Primary Indic Surfac X High V X Satura Water Sedime Drift I Algal I Iron D Inunda Sparse  Field Observa	rology Indicators: ators (minimum of ore Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria	dug to 1	y (B7)	Water-; Aquatio True A Hydrog Oxidize Presence Recent Thin M Gauge Other (	Stained Leave c Fauna (B13) quatic Plants cen Sulfide Oc ed Rhizospher ce or Reduced Iron Reduction fuck Surface ( for Well Data Explain in Re	oGY  es (B9)  (B14)  dor (C1)  res on Living I  I Iron (C4)  on in Tilled So  (C7)  (C7)  marks)	Roots (C3)	Second X X	dary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hyd Primary Indic Surfac X High V X Satura Water Sedime Drift L Algal I Iron D Inunda Sparse  Field Observa Surface Water	ayer (if observed):  Si: Soil pit was a rology Indicators: ators (minimum of or e Water (A1) Water Table (A2) tion (A3) Marks (B1) ent Deposits (B2) Deposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria cly Vegetated Concaverations: r Present?	dug to 1	y (B7)	Water- Aquatio True A Hydrog Oxidize Presenc Recent Thin M Gauge Other (	Stained Leave e Fauna (B13) quatic Plants en Sulfide Oc ed Rhizospher ee or Reduced Iron Reduction fuck Surface ( or Well Data Explain in Re	es (B9) (B14) dor (C1) res on Living I I Iron (C4) on in Tilled So (C7) (C7) emarks)	Roots (C3)	Second X X	dary 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)
Restrictive L Type: Depth (inches  Remark  Wetland Hydi Primary Indic Surfac X High V X Satura Water Sedime Drift I Algal I Iron D Inunda Sparse  Field Observa	ayer (if observed):  Soil pit was a served pit was a serv	dug to 1	y (B7)	Aquation True Ac Hydrog Oxidize Presence Recent Thin M Gauge Other (	Stained Leave c Fauna (B13) quatic Plants cen Sulfide Oc ed Rhizospher ce or Reduced Iron Reduction fuck Surface ( for Well Data Explain in Re	oGY  es (B9) (B14) dor (C1) res on Living I I Iron (C4) on in Tilled So (C7) (C7) emarks)	Roots (C3)	Second X X	dary 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)



Real People. Real Solutions.

Applicant/Owner: City of Minnetonka  Investigator(s): Brandon Bohks  Landforms (hillside, terrace, etc.): Backslope  Slope (%): 7-9 Latitude:  Soil Map Unit Name: Kingsley-Gotham complex  Are climatic/hydrologic conditions of the site typical for this start vegetation , soils , or hydromydray , soils , or hydromydrae ,	ology	Section, Town Local Relief Longitude: NWI Classi No signifi	fication: None (If no,	Sample Point: W3-D  5, 117, 22  ex, none): Convex  Datum:
Landforms (hillside, terrace, etc.):  Slope (%):  7-9  Latitude:  Soil Map Unit Name: Kingsley-Gotham complex  Are climatic/hydrologic conditions of the site typical for this have vegetation  , soils  , or hydrologic conditions.	ology	Local Relief Longitude: NWI Classi No signifi	fication: None	ex, none): Convex
Slope (%): 7-9 Latitude:  Soil Map Unit Name: Kingsley-Gotham complex  Are climatic/hydrologic conditions of the site typical for this start and the start a	ology	Longitude:  NWI Classi  No  signifi	fication: None (If no,	
Soil Map Unit Name: Kingsley-Gotham complex  Are climatic/hydrologic conditions of the site typical for this Are vegetation , soils , or hydrologic , soils , soils , or hydrologic , soils , soils , or hydrologic , soils ,	ology	NWI Classi No signifi	(If no,	Datum:
Are climatic/hydrologic conditions of the site typical for this are vegetation, soils, or hydr	ology	No signifi	(If no,	
Are vegetation, soils, or hydr	ology	signifi	_	
	ology			explain in remarks)
Are vegetation , soils , or hydr			cantly disturbed	d? Are normal circumstances present? Yes
	SUMMAR	natura	lly problematic	? (If needed, explain any answers in Remarks)
		Y OF FIND	INGS	
Hydrophytic vegetation present?	Yes			
Hydric soils present?	Yes		Is the sam	pled area within a wetland? No
Wetland hydrology present?	No			
Remarks: Precipitation has been above normal for thi	s time of year.			
VEG	ETATION	- Use scientific	names of plants	
	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30 feet )	% Cover	Species	Status	Number of dominant species
1 Prunus serotina	45	Yes	FACU	that are OBL, FACW, or FAC: 3 (A)
2 Acer negundo	20	Yes	FAC	Total number of dominant
3 Populus deltoides	15	No	FAC	species across all strata: 5 (B)
4 Ulmus americana	10	No	FACW	Percent of dominant species that
5			,	are OBL, FACW or FAC: <b>60%</b> (A/B)
	90 =	Total Cover		
Sapling/Shrub stratum (Plot size: 15 feet )				Prevalence Index Worksheet
1 Rhamnus cathartica	15	Yes	FAC	Total % cover of:
2				OBL Species: $0  \mathbf{x} \ 1 = 0$
3				FACW Species: $10 \times 2 = 20$
4			-	FAC Species: $90 \times 3 = 270$
5				FACU species: $62 \times 4 = 248$
	15 =	Total Cover		UPL Species: $0 \times 5 = 0$
Herb stratum: (Plot size: 5 feet )		Total Cover		Totals: 162 (A) 538 (B)
1 Rhamnus cathartica	40	Yes	FAC	Prevalence Index (B/A): 3.32
	12	Yes	FACU	Frevalence fildex (B/A). 3.32
2 Rubus idaeus	5	No	FACU	Hydrophytic Vegetation Indicators
3 Ageratina altissima			FACU	
4				Rapid test for hydrophytic vegetation
5				X Dominance test >50%
6				Prevalence index is ≤3.0*
7 8				Morphological adaptations* (Provide supporting data in remarks)
9				Problematic hydrophytic vegetation* (Explain in remarks)
	<del></del>	Total Cover		
Woody vine stratum: (Plot size: 15 feet )				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2				Hydrophytic vegetation
	0 =	Total Cover		present? Yes
				<del></del>



#### EXHIBIT G: WETLAND DETERMINATION DATA FORM

Sample Point: W3-D

(Midwest Region)

Profile Descr	iption: (Describe to	the dept	th needed to docu	ment t	he indicator o	or confirm the	e absence of indicat	ors.)		
Depth	Matrix			Redo	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-18	10YR 2/1	100					Sandy Clay Loan	n		
18-25	10YR 4/1	10	7.5YR 4/6	10	С	M	Sandy Clay Loan	n		
25-32	10YR 5/1	100					Sandy Clay Loan	n		
	*Type: C = Concentra	ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked S	and Grains. **Locati	on: PL = Pore Lining, M = Matrix		
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils*:		
Histisc	d (A1)			Sandy	Gleyed Matrix	(S4)	Coa	st Prairie Redox (A16)( <b>LRR K,L,R</b> )		
Histic	Epipedon (A2)			Sandy	Redox (S5)		Dari	Surface (S7)(LRR K, L)		
Black Histic (A3)					ed Matrix (S6)		Iron	-Manganese Masses (F12)(LRR K, L, R)		
Hydrogen Sulfide (A4)					Mucky Mater	ial (F1)	Ver	Shallow Dark Surface (TF12)		
Stratifi	ed Layers (A5)			Loamy	Gleyed Matri	x (F2)	Othe	er (Explain in remarks)		
2 cm N	Muck (A10)			Deplet	ed Matrix (F3)	)				
Deplet	ed Below Dark Surfa	ce (A11)	)	Redox	Dark Surface	(F6)				
X Thick Dark Surface (A12)					ed Dark Surfac	ce (F7)	*Indicator	s of hydrophytic vegetation and wetland		
Sandy Mucky Material (S1)				Redox	Depressions (	F8)		hydrology must be present, unless disturbed or		
5 cm N	Mucky Peat or Peat (S	3)						problematic		
Restrictive L	ayer (if observed):									
Type:						Ну	dric Soils Present?	Yes		
Depth (inches	):			•						
				•						
Remarks	Soil pit was o	dug to 3	2 inches.							
					HYDROL	OGY				
Wetland Hydi	rology Indicators:									
Primary Indica	ators (minimum of on	e is requ	ired; check all tha	t apply	)		Seco	ondary Indicators (minimum of two required)		
Surface	e Water (A1)			Water-	Stained Leave	s (B9)		Surface Soil Crack (B6)		
High V	Vater Table (A2)			Aquati	c Fauna (B13)			Drainage Patterns (B10)		
Saturat	tion (A3)			True A	quatic Plants	(B14)		Dry-Season Water Table (C2)		
Water	Marks (B1)			Hydro	gen Sulfide Od	lor (C1)		Crayfish Burrows (C8)		
Sedime	ent Deposits (B2)			Oxidiz	ed Rhizospher	es on Living F	Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift D	Deposits (B3)			Presen	ce or Reduced	Iron (C4)		Stunted or Stressed Plants (D1)		
Algal I	Mat or Crust (B4)			Recent	Iron Reductio	n in Tilled So	ils (C6)	Geomorphic Position (D2)		
Iron De	eposits (B5)			Thin M	luck Surface (	C7)	<u></u>	FAC-Neutral Test (D5)		
Inunda	tion Visible on Aeria	l Imager	y (B7)	Gauge	or Well Data	(C7)				
Sparse	ly Vegetated Concave	Surface	e (B8)	Other	Explain in Re	marks)				
Field Observa	tions:									
Surface Water	Present?			Ι	Depth (inches):		_	Indicators of Wetland		
Water Table P	Present?			Ι	Depth (inches):		_	Hydrology Present? No		
Saturation Pre	sent?	N	0		Depth (inches):	20		<del></del> _		
Remarks	:									



# BOLTON EXHIBIT G: OTHER AQUATIC RESOURCES DATA FORM

Real People. Real		onin County	Sampling Date: 10/8/2019
	Lake Mt. Bike TrailCity/County:HennCity of MinnetonkaState	· ·	Sample Point: OHWM-1
Investigator(s):		p, Ran: <b>35, 117, 22</b>	Associated WTL: W1
MN DNR ID -	105599	DNR Hydro ID:	TISSOCIALCU WIE
WATERC	OURSE ATTRIBUITES (Within project limits)	WATERBOD	Y ATTRIBUTES (Within project limits)
Watercourse Type:	Stream Watercourse Depth		Pond
Flow Type:	Perennial (inches): 0-18+		Lake
Watercourse	Top of Bank (at sample location): 18	Waterbody Type:	Gravel Pit
Width (feet):	Water Surface (at sample location): 15		Other:
Watercourse is:	Natural Subsurface flow? Unknown	Waterbody depth:	Subsurface flow?
OHWM Width a	t sample location (feet): 16-17	Watercourse is:	
	✓ Natural line impressed on banks	_	Natural line impressed on banks
	Changes in character of soil		Changes in character of soil
	Presence of litter or debris		Presence of liter or debris
	☐ Vegetation matted down, bent or absent		Vegetation matted down, bent, absent
	Sediment sorting		Sediment sorting
	Scour		Scour
OHWM Indicator	Multiple observed flow events	OHWM Indicator	☐ Multiple observed flow events
(Check all	✓ Water staining	(Check all	Water staining
applicable):	Shelving	applicable):	Shelving
	Litter disturbed or washed away		Litter disturbed or washed away
	Destruction of terrestrial vegetation		Destruction of terrestrial vegetation
	Wracking		☐ Wracking
	Change in plant community		Change in plant community
	Deposition		Deposition
	✓ Bed and bank		Bed and bank
Bank Height	Left: <b>0-4 feet</b>		Sand bar
(Downstream at sample location):	Right: <b>0-2 feet</b>		☐ Gravel bar
sample location).	✓ Silts Bedrock	1	Mud bar
Watercourse	Concrete Vegetation		Undercut banks
substrate (Check	Cobbles Sands	Aquatic habitats	Gravel riffles
all that apply)	✓ Muck ☐ Other:	(check all that	Deep pools
	Gravel	apply)	Bank root system
	Sand bar	1	Overhanging trees/shrubs
	Gravel bar		☐ In-stream emergent plants
	☐ Mud bar		☐ In-stream submergent plants
	Undercut banks		Fringing wetlands
Aquatic habitats	Gravel riffles		
(check all that	☐ Deep pools		☐ Silts ☐ Bedrock
apply)	Bank root system		☐ Concrete ☐ Vegetation
	Overhanging trees/shrubs	Shoreland type:	☐ Cobbles ☐ Sands
			☐ Muck ☐ Other:
	✓ In-stream submergent plants		Gravel
	Fringing wetlands		
		·	
Comments:			



Real People. Real Solutions.

Project/Site: Lone Lake Mt Bike Trial	City	y/County: Henn	epin	Sampling Date: 10/8/2019		
Applicant/Owner: City of Minnetonka			: MN	Sample Point: SP-1		
Investigator(s): Brandon Bohks		Section, Township, Range: 35, 117, 22				
Landforms (hillside, terrace, etc.): Terrace		Local Relief	(concave, conve	ex, none): Linear		
Slope (%): 1-4 Latitude:		Longitude:		Datum:		
Soil Map Unit Name: Muskego and Houghton complex		NWI Classi	fication: None			
Are climatic/hydrologic conditions of the site typical for thi	s time of year?	No	(If no,	explain in remarks)		
Are vegetation , soils , or hy	drology	signifi	icantly disturbed	d? Are normal circumstances present? Yes		
Are vegetation , soils , or hy	drology	natura	lly problematic	? (If needed, explain any answers in Remarks)		
	SUMMAR	Y OF FIND	INGS			
Hydrophytic vegetation present?	Yes					
Hydric soils present?	Yes		Is the sam	pled area within a wetland? No		
Wetland hydrology present?	No					
		ı				
Remarks: Precipitation has been above normal for t	his time of year.					
VE	GETATION	- Use scientific	names of plants			
	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size:30 feet)	% Cover	Species	Status	Number of dominant species		
1 Acer negundo	40	Yes	FAC	that are OBL, FACW, or FAC:4(A)		
2 Populus deltoides	40	Yes	FAC	Total number of dominant		
3 Fraxinus pennsylvanica	25	Yes	FACW	species across all strata: <b>6</b> (B)		
4				Percent of dominant species that		
5				are OBL, FACW or FAC: 67% (A/B)		
	105 =	Total Cover				
Sapling/Shrub stratum (Plot size: 15 feet )				Prevalence Index Worksheet		
1				Total % cover of:		
2				OBL Species: $0$ $\mathbf{x} 1 = 0$		
3				FACW Species: $45$ $\times 2 = 90$		
4				FAC Species: $80   x 3 = 240$		
5				FACU species: 36 x 4 = 144		
<u> </u>	0 =	Total Cover		UPL Species: $0$ $\mathbf{x} 5 = 0$		
Herb stratum: (Plot size: 5 feet )		Total Cover		Totals: <b>161</b> (A) <b>474</b> (B)		
1 Pilea fontana	20	Yes	FACW	Prevalence Index (B/A): 2.94		
2 Arctium minus	15	Yes	FACU	Trevarence mack (B/Tr).		
3 Ageratina altissima	12	Yes	FACU	Hydrophytic Vegetation Indicators		
4 Glechoma hederacea	9	No	FACU	Rapid test for hydrophytic vegetation		
5				X Dominance test >50%		
6				$\frac{\mathbf{X}}{\mathbf{X}}$ Prevalence index is $\leq 3.0^*$		
7	<u> </u>			<del></del>		
8				Morphological adaptations* (Provide supporting data in remarks)		
9				Problematic hydrophytic vegetation* (Explain in remarks)		
Woody vine stratum: (Plot size: 15 feet )	56 =	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
				Hydrophytic vegetation		
2	0 =	Total Cover		present? Yes		



### **EXHIBIT G:**WETLAND DETERMINATION DATA FORM

Sample Point: **SP-1** 

(Midwest Region)

<b>Profile Descr</b>	ription: (Describe to	the dep	th needed to docu	ıment t	he indicator o	or confirm the	absence of indicato	rs.)	
Depth Matrix			Redox Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 2/1	100					Sandy Clay Loam		
18-24	10YR 4/2	100					Sandy Loam		
24-32	10YR 4/2	95	7.5YE 4/6	5	C	M	Sandy Loam		
	*Type: C = Concentra	ation, D	= Depletion, RM	= Redu	ced Matrix, M	S = Masked Sa	nd Grains. **Locatio	n: PL = Pore Lining, M = Matrix	
Hydric Soil Indicators: Indicators for Problematic Hydric Soils*:									
Histisol (A1) Sandy Gl					Gleyed Matrix	(S4)	Prairie Redox (A16)( <b>LRR K,L,R</b> )		
Histic Epipedon (A2)					Sandy Redox (S5)			Surface (S7)( <b>LRR K, L</b> )	
Black Histic (A3) Stripp					tripped Matrix (S6)			Manganese Masses (F12)(LRR K, L, R)	
Hydrogen Sulfide (A4) Loan					oamy Mucky Material (F1)			Shallow Dark Surface (TF12)	
Stratified Layers (A5) Loam					oamy Gleyed Matrix (F2)			Other (Explain in remarks)	
2 cm Muck (A10) Depleted Matr						)			
Depleted Below Dark Surface (A11) Redox Dark S						(F6)			
X Thick Dark Surface (A12) Depleted Da					ed Dark Surfac	hydrology must be present, unless disturbed or			
Sandy Mucky Material (S1) Redox Depre					Depressions (				
5 cm N	Mucky Peat or Peat (S	3)		-				problematic	
Restrictive L	ayer (if observed):								
Type: Hydric Soils Present? Yes									
Depth (inches):									
Remarks: Soil pit was dug to 32 inches.									
					HYDROL	OGY			
Wetland Hyd	rology Indicators:								
Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of two								dary Indicators (minimum of two required)	
Surface Water (A1)					Water-Stained Leaves (B9)			Surface Soil Crack (B6)	
High Water Table (A2)				Aquatic Fauna (B13)				Drainage Patterns (B10)	
Saturation (A3)				True Aquatic Plants (B14)				Dry-Season Water Table (C2)	
Water Marks (B1)				Hydrogen Sulfide Odor (C1)				Crayfish Burrows (C8)	
Sediment Deposits (B2) Oxidi					Oxidized Rhizospheres on Living Roots (C3)			Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)				Presence or Reduced Iron (C4)				Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)					Recent Iron Reduction in Tilled Soils (C6)			Geomorphic Position (D2)	
Iron Deposits (B5)				Thin Muck Surface (C7)				FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (B7)  Gauge or V					or Well Data	(C7)		_	
Sparsely Vegetated Concave Surface (B8) Other (Expla					(Explain in Re	marks)			
Field Observa	ntions:			-					
Surface Water Present?				Depth (inches):				Indicators of Wetland	
Water Table Present?				Depth (inches):				Hydrology Present? No	
Saturation Present? No			lo .	Depth (inches): 24			·		
							<u> </u>		
Remarks	S:								