



Building a Better World  
for All of Us®

## MEMORANDUM

TO: Brian Corcoran, VLAWMO

FROM: Rebecca Beduhn, SEH (CWD 1243, PWS 2758)

DATE: September 15<sup>th</sup>, 2020

RE: Vadnais/Sucker Park Wetland Assessment

SEH No. VADLA 154641 14.00

### INTRODUCTION

The purpose of this memorandum is to provide results of a wetland assessment completed within the boundary of the Vadnais/Snail Park in Vadnais Heights, Minnesota. The Vadnais Lake Area Water Management Organization (VLAWMO) gathering information to gain a better understanding of the quantity and quality on the wetlands in the park. As part of this documentation, function assessments of existing wetland habitat were quantified utilizing the Minnesota Routine Assessment Methodology (MnRAM) Version 3.4.

This memo summarizes the findings of the investigation, including the MnRAM Scores for each wetland basin within the park boundary.

### SITE DESCRIPTION

The project site is located in portions of sections 19, 29, 30, 31 and 32 of Township 30 North, Range 22 West in Vadnais Heights, Ramsey County, Minnesota as shown on **Figure 1**.

The 1,200-acre site is located in the existing Vadnais-Sucker Lake Regional Park in major watershed; Mississippi River - Twin Cities #20, and Bank Service Area (BSA); #7. The project site consists of a variety of upland and wetland plant communities.

The wetland and upland communities onsite are described in more detail in the following sections.

### METHODOLGY

The project site was examined on June 15-17<sup>th</sup> for areas meeting the technical wetland criteria in accordance with the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE 2012).


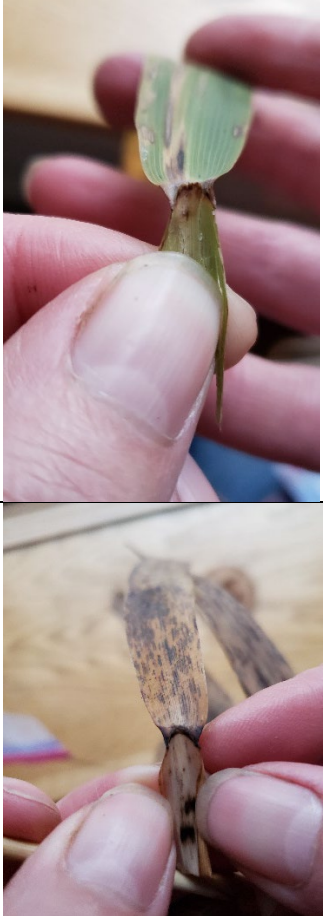
The delineation procedures in the *Corps Manual* (i.e., the Routine Onsite Determination Method), in combination with wetland indicators and guidance provided in the *Regional Supplement* were applied for this delineation. Where differences in the two documents occur, the *Regional Supplement* takes precedence over the *Corps Manual* for applications in the *Northcentral and Northeast Region* (USACE 2012).

Field notes, samples, and photographs were taken at representative locations in each wetland basin. The respective wetland and upland plots for each wetland were documented on Wetland Determination Data Forms (**Appendix C**). Relevant photographs of the site are included below as part of the wetland descriptions; all other photographs will be retained on file at SEH.

**Invasive Phragmites Addendum (inserted into the report on 11/4/2020 by D. Tanner)**

Invasive European Phragmites (*Phragmites australis* subsp. *australis*) was reported by SEH in Wetland 5, Shallow Marsh. This location was checked in Oct. 2020, a sample was collected, and the location sampled was verified by SEH. Currently, no invasive Phragmites is present at the site. UMN experts (J. Bohnen) identified the samples collected at the site as native.

Continuing to watch this and other locations in the watershed are important in working to eradicate this invasive species and protect wetland functions for water quality.

<p>This map shows the location of Wetland 5</p>	<p>The appearance of the ligule is used to definitively distinguish between native and invasive Phragmites. Phragmites currently present in Wetland 5 is native.</p>
<p>Potential location of invasive Phragmites stand identified by SEH, Summer 2020</p> 	



**Invasive Yellow iris Addendum (inserted into the report on 6/10/2021 by D. Tanner)**

Invasive Yellow iris (*Iris pseudacorus*) was reported by SEH in Wetland 22, Shallow Marsh/Seasonally flooded basin. This location was checked on June 9, 2021. Currently, no invasive Yellow iris is present at the site.

Continuing to watch this and other locations in the watershed are important in working to eradicate this invasive species and protect wetland functions for water quality.

Photos below show large stands of native Blue-flag iris that are present in the wetland and could have been misidentified as Yellow iris due to their abundance.









**RESULTS**

The field delineation was conducted under precipitation conditions that were considered normal as compared to the historical average for the region according to Minnesota Climatology Working Group (**Appendix D**). Most of the vegetation was identifiable, including all dominant species.

Forty one (41) wetland basins were identified, delineated, and classified (**Figures 2, 3 and 4**). The Wetland Determination Data Forms (**Appendix C**) indicate the dominant species of vegetation and the soil and hydrologic characteristics at representative locations around each basin. **Table 1** is a summary of the size and classification of each wetland basin. A summary description of each delineated wetland basin is included in **Appendix A**.

**Table 1 – Wetland and Aquatic Resource Characteristics**

Wetland ID	Size (acres) <sup>1</sup>	Eggers & Reed Classification	MnRAM Score
1	1.244	Shallow Marsh, Seasonally Flooded Basin	Manage 1
2	1.2611	Shallow Open Water, Fresh (wet) Meadow	Manage 1
3	35.4112	Seasonally Flooded Basin, Shallow Marsh, Shrub Carr	Manage 1, Preserve
4	0.1841	Fresh (wet) Meadow, Shallow Open Water	Manage 2
5	92.687	Shallow Marsh, Shrub Carr	Manage 1, Preserve
6	0.0457	Shallow Open Water	Manage 1
7	0.5313	Shallow Marsh, Seasonally Flooded Basin	Manage 1
8	0.0459	Seasonally Flooded Basin	Manage 2
9	0.031	Fresh (wet) Meadow	Manage 2
10	0.276	Shallow Open Water, Shallow Marsh	Manage 1
11	0.0306	Seasonally Flooded Basin	Manage 2
12	2.996	Seasonally Flooded Basin, Shallow Marsh	Manage 1
13	0.0632	Fresh (wet) Meadow	Manage 1
14	0.3297	Seasonally Flooded Basin	Manage 3
15	0.1967	Seasonally Flooded Basin	Preserve
16	0.0307	Seasonally Flooded Basin	Preserve
17	0.2023	Seasonally Flooded Basin	Preserve
18	7.2825	Seasonally Flooded Basin, Shallow Marsh, Shrub Carr	Preserve
19	0.2131	Seasonally Flooded Basin	Manage 1
20	0.575	Shallow Marsh	Manage 1
21	1.1543	Seasonally Flooded Basin, Fresh (wet) Meadow	Manage 1
22	1.7549	Seasonally Flooded Basin, Shallow Marsh	Preserve
23	0.6381	Fresh (wet) Meadow	Manage 2
24	13.1333	Shallow Marsh, Shrub Carr	Preserve
25	0.0643	Seasonally Flooded Basin	Preserve
26	0.1215	Seasonally Flooded Basin	Preserve
27	0.0471	Seasonally Flooded Basin	Preserve
28	0.4804	Seasonally Flooded Basin, Shallow Marsh	Manage 1
29	0.2998	Shallow Marsh, Shallow Open Water	Manage 1
30	0.4538	Sedge Meadow	Preserve
31	0.2554	Shallow Open Water	Preserve
32	0.3836	Fresh (wet) Meadow	Preserve
33	0.4097	Fresh (wet) Meadow	Preserve
34	0.2984	Fresh (wet) Meadow	Manage 2
35	1.8227	Seasonally Flooded Basin	Manage 1
36	0.0528	Seasonally Flooded Basin	Manage 1
37	0.0143	Shallow Marsh	Manage 1
38	0.604	Fresh (wet) Meadow	Preserve
39	0.2362	Fresh (wet) Meadow	Manage 2
40	0.0481	Shallow Marsh	Manage 2
41	0.1031	Seasonally Flooded Basin	Manage 2

<sup>1</sup> Size includes areas of wetland within the area of investigation only. Areas of open water or lake habitat have been excluded. Wetlands may extend beyond the limits of the area investigated and actual wetland size may be larger than that indicated.

### Functions and Values Assessment

A primary purpose of the site evaluation was an assessment and classification of the wetland habitat within the park boundary. To determine the quality of wetlands onsite, the MnRAM (3.4) was utilized to provide a basis of wetland management recommendations.

MnRAM uses a numeric model to rank each wetland function via an Access database. It was developed by wetland professionals to complete wetland inventories and determine wetland management classifications. Its primary use is to make wetland management decisions based on existing wetland functions.

The MnRAM database classifies a wetland into one of four categories, listed in order of higher quality to lower quality: Preserve, Manage 1, Manage 2, or Manage 3. Definitions of the MnRAM classifications as provided by "The MnRAM Wetland Management Classification Guidance" document (BWSR, 2018), are provided below:

- *The Preserve category is for exceptional and highest-functioning wetlands or those sensitive wetlands receiving conveyed storm water runoff that have yet retained a medium level of vegetative diversity/integrity. These wetlands are those that should be preserved in (or improved to) their most pristine or highest functional capacity with wide, natural buffers, in perpetuity.*
- *In the Manage 1 category are high-quality wetlands that should be protected from development and other pressures of increased use, including indirect effects. Maintaining natural buffers will help to retain the significant function these wetlands provide. In the event that impacts to these wetlands cannot be avoided, replacement ratios for mitigation should exceed the state-required minimums.*
- *Manage 2 wetlands provide medium functional levels and the wetland extent should be maintained. These wetlands often provide optimal restoration opportunity.*
- *Manage 3 wetlands have been substantially disturbed; replacement considerations can be minimized after proper sequencing.*

In order to determine the quality of the wetlands, a functional assessment was completed on all 41 wetlands within the project area. Some wetlands (Wetlands 3, 4, 5, 18, 24) are very large and it was determined that a single MnRAM score would not provide sufficient data for management decisions. In these cases, wetland communities were grouped together to create several MnRAM scores in each wetland. A total of 49 MnRAM workbooks were completed. MnRAM scores are included in **Table 1** (above), and explained in greater detail as part of wetland descriptions in **Appendix A**. MnRAM Classification Reports are included in **Appendix B**.

### Wetland Community Ecological Survey

While the MnRAM scores provide a measureable assessment of overall wetland health and quality, using the MnRAM output as the sole means to compare wetlands when making wetland permitting/impact decisions is discouraged by many wetland regulation agencies. To aid project proposers in making a long term management and restoration plan, a wetland vegetation survey was completed to evaluate the restoration potential of wetland habitats throughout the project area. During the on-site investigation, scientists compiled a plant list for each wetland community, making note of any invasive or noxious weeds as well as any rare or endangered species present.

Vegetation assessments provide a detailed perspective to aid sponsors in making informed decisions on planning efforts for restoration priorities, to identify candidate high quality wetlands for preservation, and provide baseline data for long-term monitoring efforts.

Each wetland's specific recommendations are included as part of wetland descriptions in **Appendix A**.



## SUMMARY

Overall, the site conditions are considered good. Of the 49 MnRAM scores calculated onsite, 22 were rated “Preserve”, 16 were rated “Manage 1”, 10 were rated “Manage 2” and only 1 was rated “Manage 3”. The recommended wetland management standards table, per the “The MnRAM Wetland Management Classification Guidance” document, outlines management strategies in each management class.

Vegetation quality ratings were on average, medium. A total of 58 individual vegetation communities were rated in the park, and 31 received a “medium” value score. Generally, Medium or Low Value communities contained some invasive or non-native species including narrow-leaf cat-tail (*Typha angustifolia*), reed canary grass (*Phalaris arundinacea*), European/ common buckthorn (*Rhamnus cathartica*) and occasional common reed grass (*Phragmites australis subsp. australis*). Management of these target species may result in a large improvement of the score of the wetland.

While no rare or endangered species were observed in the project limits, several high quality vegetation ratings were observed within the park property. These communities are associated with portions Wetlands 3, 5, 28 and 30 and are illustrated on **Figure 5**.

## BIBLIOGRAPHY

- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. 131 pp.
- Eggers, S. D., and D. M. Reed. 2014. Wetland Plants and Plant Communities of Minnesota and Wisconsin – Version 3.2. U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota.
- Gretag-Macbeth. 1994. Munsell Soil Color Charts. Macbeth Division of Kollmorgen Instruments Corporation, Newburgh, New York.
- Lichvar, R.W., M. D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016.. The National Wetland Plant List: wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- Minnesota Routine Assessment Method for Evaluating Wetland Functions (MinRAM).  
[www.bwsr.state.mn.us/sites/default/files/201812/WETLANDS\\_Function\\_MnRAM\\_Wetland\\_Mgmt\\_Classification\\_Guidance.pdf](http://www.bwsr.state.mn.us/sites/default/files/201812/WETLANDS_Function_MnRAM_Wetland_Mgmt_Classification_Guidance.pdf).
- Shaw, S. P. and C. G. Fredine. 1956. Wetlands of the United States. U.S. Fish and Wildlife Service, Circular 39. 67 pp.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. August 2020
- U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Waterways Experiment Station, Vicksburg, Mississippi.
- U.S. Army Corps of Engineers. 1988. Wetland Evaluation Methodology for the North Central United States. 97 pp. plus appendices.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers: Wetland Delineation Manual: Northcentral and Northeast Region. 152 pp. plus appendices.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2017. Field Indicators of Hydric Soils in the United States, Version 8.1. L. M. Vasilas, G. W. Hurt, and C. V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- U.S. Department of Agriculture - Soil Conservation Service. 1991. Hydric Soils of the United States. In cooperation with the National Technical Committee for Hydric Soils. USDA-SCS, Washington, D.C.
- U.S. Department of Agriculture - Soil Conservation Service, 1994. Keys to Soil Taxonomy. Pocahontas Press, Inc., Blacksburg, Virginia.
- U.S. Department of Agriculture - Soil Conservation Service. 1992. Midwestern Wetland Flora: Field Office Guide to Plant Species. Midwest National Technical Center, Lincoln, Nebraska.
- U.S. Department of Agriculture - Web Soil Survey for Ramsey County, Minnesota. 2020. National Cooperative Soil Survey On-line Database. <http://websoilsurvey.nrcs.usda.gov/app/>.
- U.S. Fish and Wildlife Service National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands>



## ATTACHMENTS

### Figures

**Figure 1** – Site Location

**Figure 2** – Wetland Delineation Results

**Figure 3** – Wetland Community Types

**Figure 4** – MnRAM Assessment Scores

**Figure 4** – Vegetation Quality Index

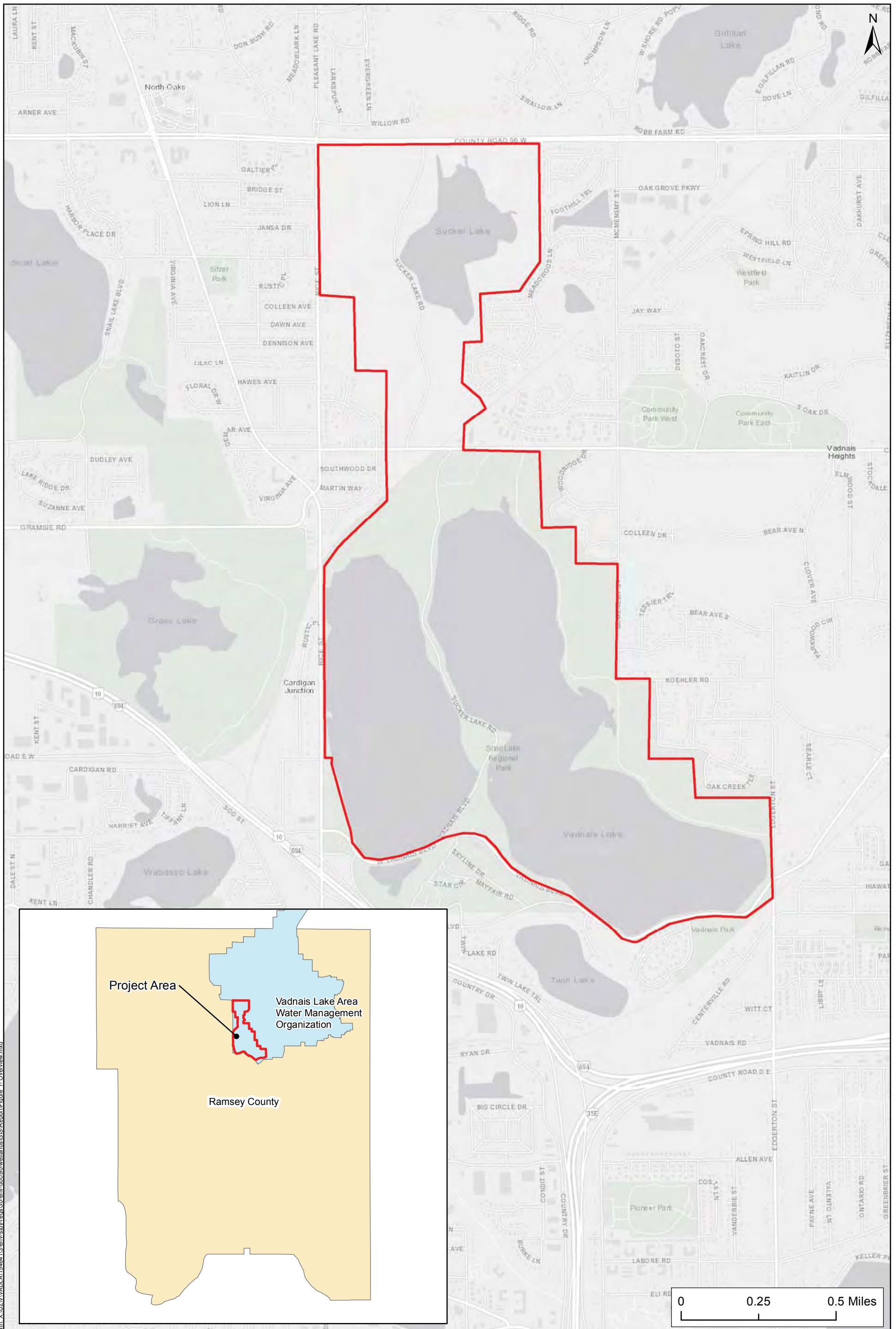
### Appendices

**Appendix A** – Wetland Descriptions

**Appendix B** – MnRAM Assessment

**Appendix C** – Wetland Determination Data Forms

**Appendix D** – Climate Worksheet

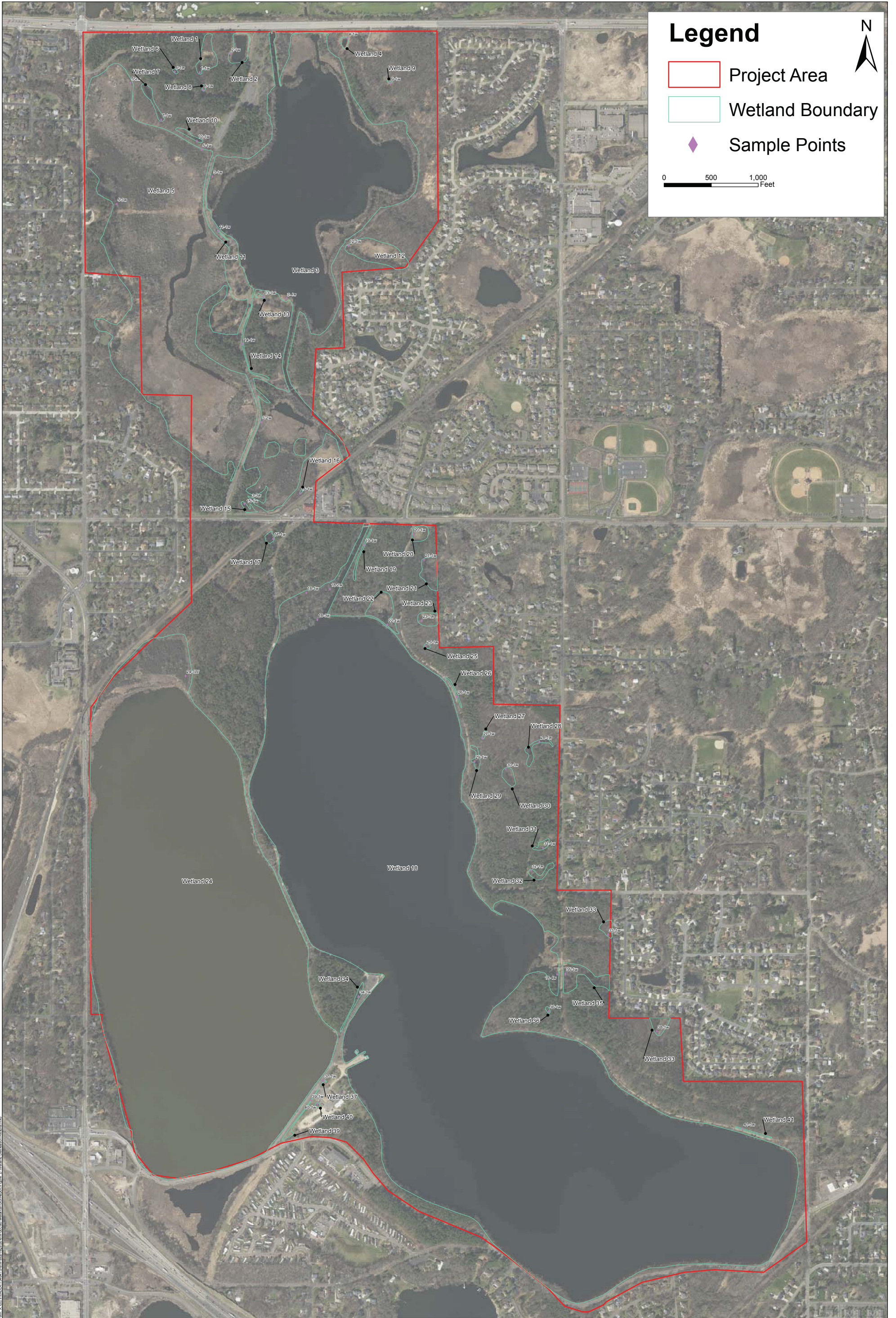


Path: X:\U2V\ADLA\154641\9-env-st\cregs\30-env-dec\30-wetlands\GIS\Report\Figure 1- Overview.mxd

	3535 VADNAIS CENTER DR. ST. PAUL, MN 55110 PHONE: (651) 490-2000 FAX: (888) 908-8166 TF: (800) 325-2055 www.sehinc.com	Project: VADLA 154641 Print Date: 9/8/2020 Map by: RBEDUHN Projection: UTM NAD 83 ZONE 15N Source: MnGeo, SEH, Esri	<h2 style="margin: 0;">Project Overview and Location</h2> <h3 style="margin: 0;">Vadnais/Sucker Park Wetland Assessment</h3> <h3 style="margin: 0;">Ramsey County, MN</h3>	<h1 style="margin: 0;">Figure</h1> <h2 style="margin: 0;">1</h2>
---	---	---	--	--

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.





### Legend

- Project Area
- Wetland Boundary
- ◆ Sample Points

0      500      1,000  
Feet

File: \\SEH\GIS\Projects\154641\Map\_Series\Wetland\_Delineation\_Results.mxd



3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110  
 PHONE: (651) 490-2000  
 FAX: (888) 908-8166  
 TF: (800) 325-2055  
 www.sehinc.com

Project: VADLA 154641  
 Print Date: 9/7/2020

Map by: BNELSON  
 Projection: UTM NAD 83 ZONE 15N  
 Source: MnGeo, SEH, Esri

## Wetland Delineation Results

### Vadnais/Sucker Park Wetland Assessment

#### Ramsey County, MN

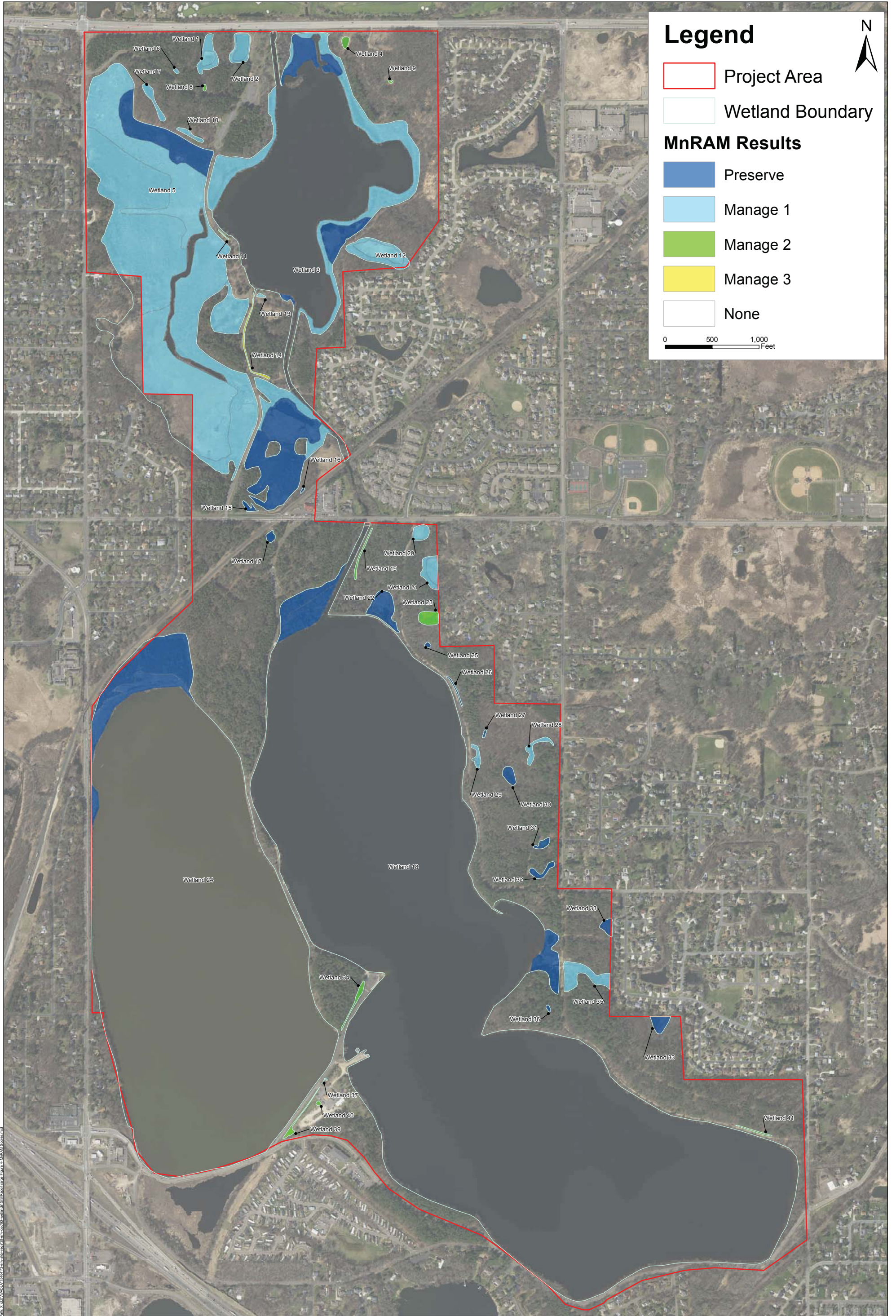
Figure  
 2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources based on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.









Path: \\SEH\GIS\154641\154641\_000000.mxd; Project: Vadnais/Sucker Park Wetland Assessment; Figure 4: MnRAM Scores.mxd

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources based on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.







## **Appendix A – Wetland Descriptions**

## Wetland 1



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh  
**Sample Point ID:** 1-1W

This wetland is located near the northern boundary of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

Non-native or invasive species (cattails, reed canary grass) frequently occurred within community but other species are still common throughout the habitat.

Shrub stratum is dominated by buckthorn (European and glossy). The ground layer is overall reduced in coverage, likely due to shading from the shrub canopy, but native species are still present. Dame's rocket present in the herbaceous stratum but not abundant overall.



## Wetland 2



**Wetland Type:** Shallow Open Water/ Fresh (wet) Meadow  
**Sample Point ID:** 2-1W

This wetland is located near the northern boundary of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

Primary component duckweed (*Lemna* spp.) with a narrow fringe of cattails.

Dominance of native species including a mix of sedges and forbs, some reed canary grass and fringe of cattails present along the open water perimeter.



## Wetland 3



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh/ Shrub-carr  
**Sample Point ID:** 3-1W, 3-2W, 3-3W, 3-4W

This wetland is associated with Sucker Lake. Because this wetland complex is so large, it was broken into community types for a total of 4 MnRAM assessments.

**Seasonally Flooded Basin:**  
**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was "Shoreline Protection".

**Vegetation Quality Rating:** Medium

Seasonally flooded communities occur along the fringe of Sucker Lake. Flood tolerant species, willow shrubs, green ash, ash-leaf maple, etc. are present throughout the habitat. Non-native invasive species occurrence is variable, with reed canary grass, narrow-leaf cat-tail, and buckthorn (European and glossy) present, although typically intermixed with native plants.



**Shallow Marsh:**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Shoreline Protection”.

**Vegetation Quality Rating:** Medium

The shallow marsh habitat is variable, but typically a mix of native sedges and forbs with cat-tails (multiple species) was observed along the shore of Sucker Lake. Most often, the cat-tails were growing with native species and not as dense monocultures. Buckthorn (European and glossy) was often observed along the fringe of the habitat.

**Shrub-Carr:**

***There were two distinct shrub-carr communities present in Wetland 3.***

***Shrub-carr 1 is dominated by red osier and sandbar willow with non-natives dominating the herbaceous layer.***

***Shrub-carr 2 is dominated by speckled alder with native ferns in the herbaceous layer.***

***Because of the large variation in communities, 2 separate assessments were completed.***

**Shrub-carr 1**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Shoreline Protection”.

**Vegetation Quality Rating:** High

This community within wetland 3 is a small area on the southern extent of Sucker Lake. The area is dominated by native species, with red osier and sandbar willow dominate in the shrub stratum, and a variety of forbs with low aerial coverage in the herbaceous stratum. Non-native invasive species observed include garden birds'-foot-trefoil and European buckthorn, but in very low amounts.

**Shrub-carr 2**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Shoreline Protection”.

**Vegetation Quality Rating:** High

The habitat identified as shrub carr 2 likely has the highest species richness and diversity within the basin. European buckthorn is common along the perimeter and glossy buckthorn is present throughout, however speckled alder is also dominant, with scattered willows. The herbaceous stratum is primarily native ferns, forbs, and sedges, with some sporadic cat-tails.

## Wetland 4



**Wetland Type:** Fresh (wet) Meadow/ Shallow Open Water  
**Sample Point ID:** 4-1W

This wetland is located near the northern boundary of the project limits.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Vegetative Diversity”.

**Vegetation Quality Rating:** Low

Fresh (wet) meadow encompasses the fringe of the shallow open water. Reed canary grass is the prevalent species, with some narrow-leaf cat-tail and native forbs intermixed.

The shallow open water is primarily un-vegetated, with duck weed in the deeper portions and narrow-leaf cat-tail along the edges. There are few species present within the habitat.



## Wetland 5



**Wetland Type:** Shallow Marsh/ Shrub-carr  
**Sample Point ID:** 5-1W, 5-2W, 5-3W

This is a large wetland complex located throughout the northern half of the project limits. Because this wetland complex is so large, it was broken into community types for a total of 3 MnRAM assessments.

**Shallow Marsh:**  
**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was "Maintenance of Characteristic Amphibian Habitat".

**Vegetation Quality Rating:** Low

Most of the shallow marsh habitat of Wetland 5 is dominated by cat-tails, likely narrow-leaf and/or hybrid, in some areas forming a monoculture. Native plants are present, as scattered individual plants at low areal coverage, and appear impacted by the current dense cat-tail growth and remnant vegetation from prior years. The fringe of the habitat appears to have greater species richness and diversity, and the deeper portions of the basin less. Dead/drying trees and shrubs were observed throughout, mostly

present as snags (i.e., standing dead wood). There are inclusions of higher quality vegetation and greater species richness/diversity, but the habitat as a whole contains low quality vegetation, low species diversity, and low species richness. The far northern extent of the shallow marsh of Wetland 5 contains a small infestation of European Phragmites (*Phragmites australis* subsp. *australis*). The species was observed intermixed with other plants over an approximately 0.2 acre area. It is not the dominant species in the area currently. Glossy buckthorn is also common in the habitat, in some areas dead or dying, in some areas alive.

### **Shrub-Carr:**

***There were two distinct shrub-carr communities present in Wetland 5.***

***Shrub-carr 1 is dominated by red osier and sandbar willow with non-natives dominating the herbaceous layer.***

***Shrub-carr 2 is dominated by speckled alder with native ferns in the herbaceous layer.***

***Because of the large variation in communities, 2 separate assessments were completed.***

### **Shrub-carr 1**

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was "Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity".

### **Vegetation Quality Rating:** Low

Similar to the shallow marsh habitat, the area identified as shrub carr 1 is dominated by cat-tails, narrow-leaf and/or hybrid, in some areas forming a monoculture. Native herbaceous species are present but are typically clustered around the perimeter or present at low areal coverage. The most prevalent shrubs are glossy and European buckthorn, however dogwoods (*Cornus* spp.), sporadic speckled alder, and willows (*Salix* spp.) are scattered throughout. Some trees, primarily green ash and red maple but several tamarack as well, are present throughout the habitat but many are dead/dying. Younger saplings are more common along the western perimeter of the basin near the transition to upland.

### **Shrub-carr 2**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Maintenance of Water Quality and Vegetative Diversity".

### **Vegetation Quality Rating:** High

The habitat identified as shrub carr 2 likely has the highest species richness and diversity within the basin. Glossy buckthorn is the dominant shrub throughout the habitat, with scattered speckled alder and red osier dogwood. Dead/dying shrubs were observed, likely remnant speckled alder and/or European buckthorn. Tamarack trees are dispersed throughout, although do not have high areal coverage. The herbaceous stratum however, has numerous native graminoid and forbs species throughout. The habitat resembles the Northern Rich Alder Swamp Alder - (Maple - Loosetrife) Swamp (FPn73a) Native Plant Community, although typical dominate shrubs like speckled alder, appear to have been replaced by glossy buckthorn. The shade tolerant herbaceous species have persisted, as glossy buckthorn provides a similar canopy to speckled alder. Other NON-NATIVE INVASIVE species observed are sporadic but include reed canary grass, narrow-leaf cat-tails, and giant chickweed.



## Wetland 6



**Wetland Type:** Shallow Open Water  
**Sample Point ID:** 6-1W

This wetland is located northern part of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Low

The fringe of Wetland 6 is densely covered by European buckthorn, reducing the prevalence of native herbaceous and shrub species. Herbaceous plants are still present but at lesser areal coverage. Within the open water, duck weed is the primary component.



## Wetland 7



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh  
**Sample Point ID:** 7-1W

This wetland is located northern part of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium and Low

The shallow marsh habitat is dominated by native species, primarily sedges (lakebank and uptight) with some sporadic forbs and duck weed. A narrow fringe of buckthorn (European and glossy) is present within the habitat, but overall the presence of non-native invasive within the habitat is relatively low.

Primarily un-vegetated within the open water and surrounding floodplain. Buckthorn (European and glossy) is common along the perimeter, reduces herbaceous growth.



## Wetland 8



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 8-1W

This wetland is located northern part of the project limits.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Low

The most prevalent species within Wetland 8 was buckthorn. The shrub canopy appears to shade much of the ground, likely inhibiting overall growth and occurrence of herbaceous species. Other non-native invasives observed within the basins included reed canary grass and Canada thistle.



## Wetland 9



**Wetland Type:** Fresh (wet) Meadow  
**Sample Point ID:** 9-1W

This wetland is located northern part of the project limits.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Low

Vegetation within this basin primarily includes disturbance adapted and/or non-native invasive species, such as reed canary grass, stinging nettle, and lesser burdock. It appears to be within an area subjected to past disturbance, resulting in the low quality vegetation.



## Wetland 10



**Wetland Type:** Shallow Open Water/ Shallow Marsh  
**Sample Point ID:** 10-1W

This wetland is located northern part of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

The open water is relatively un-vegetated, with duck weed dispersed throughout, and emergent vegetation present along the waters edge. Buckthorn (European and glossy) is common along the fringe of the basin.

The shallow marsh habitat contained a mix of species, with primary coverage of lakebank sedge and cattails. Non-native invasive species included cattails reed canary grass in the herbaceous stratum, although both species are intermixed with other plants, and two species of buckthorn in the shrub stratum. Buckthorn (European and glossy) forms a dense canopy along the perimeter of the wetland.





## Wetland 11



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 11-1W

This wetland is located near the north-central portion of the project limits.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Low

Wetland 11 is a linear wet ditch with buckthorn as the primary species in both the shrub and herbaceous strata. There are other herbaceous species present, but are shaded by a dense shrub canopy.



## Wetland 12



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh

**Sample Point ID:** 12-1W

This wetland is located near the eastern boundary of the project limits in the northern half.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium and Low

Seasonally flooded habitat surrounds the shallow marsh, with cattails, reed canary grass, and a mix of forbs within the herbaceous stratum. The primary shrubs included sandbar willow, European buckthorn, and speckled alder. The buckthorn is present but less frequent.

The shallow marsh is primarily a cattail monoculture with few pockets of shallow open water, and sporadic green ash trees and willow shrubs. The pockets typically included duck weed with, with few other species present in the habitat.



## Wetland 13



**Wetland Type:** Fresh (wet) Meadow

**Sample Point ID:** 13-1W

This wetland is located in the northern half of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Hydrologic Regime and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium

Wetland 13 contains a mix of wetland, non-native invasive and upland species. The primary species are reed canary grass, late goldenrod, and woolly sedge in the herbaceous stratum, with sandbar willow and green ash in the sapling/shrub stratum. European buckthorn is present but not prevalent.



## Wetland 14



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 14-1W

This wetland is a linear feature located along the trail in the norther half of the project limits.

**MnRAM Score:** Manage 3

The critical function that caused this wetland rank was “Vegetative Diversity”.

**Vegetation Quality Rating:** Low

Wetland 14 is a linear wet ditch with buckthorn as the primary species in both the shrub and herbaceous strata.



## Wetland 15



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 15-1W

This wetland is located in the northern half of the project limits, near the center point, along County Road F.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium

The shrub stratum is primarily European buckthorn, but the herbaceous layer contains a mix of native species throughout the basin, with royal fern, jewelweed, and water horsetail commonly observed.



## Wetland 16



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 16-1W

This wetland is located in the northern half of the project limits, near the center point, along County Road F.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Maintenance of Characteristic Wildlife Habitat Structure".

**Vegetation Quality Rating:** Low

The herbaceous layer is sporadic and primarily European buckthorn, with few native species mixed. The shrub stratum contains mixed green ash and buckthorn. There are few other species present other than green ash as trees.



## Wetland 17



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 17-1W

This wetland is located near the center of the of the project limits, south of County Road F.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium

Primarily reed canary grass but mixed in with native species, including lakebank sedge, arrowleaf tearthumb, and northern water plantain.



## Wetland 18



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh/ Shrub-carr  
**Sample Point ID:** 18-1W, 18-2W, 18-3W

This is a large wetland complex associated with East Vadnais Lake, located throughout the southern half of the project limits. Because this wetland complex is so large, it was broken into community types for a total of 3 MnRAM assessments.

**Seasonally Flooded Basin:**  
**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium

Flood tolerant native species were the primary herbaceous vegetation present, however at low aerial coverage. Much of the habitat present ad unvegetated mud flat during sampling. European buckthorn present along the perimeter.



**Shallow Marsh:**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Maintenance of Characteristic Wildlife Habitat Structure".

**Vegetation Quality Rating:** Low

Reed canary grass and narrow-leaf cat-tail most common species, native species intermixed with greater abundance along perimeter. European buckthorn shrubs present along the fringe low aerial coverage overall.

**Shrub-carr 1**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Shoreline Protection".

**Vegetation Quality Rating:** Medium

The shrub carr habitat is variable, with dense areas of reed canary grass and areas with primarily native herbaceous species. Buckthorn (glossy and European) are common throughout the habitat, but do not produce a canopy so dense that native species are completely absent.



## Wetland 19



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 19-1W

This wetland is located near the center of the project area, south of County Road F.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

The herbaceous stratum is primarily native species, with white grass and Canadian wood-nettle common throughout the habitat. Non-native invasive species include European buckthorn in the sapling and herbaceous strata. Buckthorn is common throughout the habitat, however although other species are still prevalent.



## Wetland 20



**Wetland Type:** Shallow Marsh

**Sample Point ID:** 20-1W

This wetland is located near the northern boundary of the project limits.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was "Maintenance of Characteristic Amphibian Habitat".

**Vegetation Quality Rating:** Medium

The basin is dominated by duck weed with sporadic areas of emergent vegetation, primarily sedges, cattails, and reed canary grass. The wetland is fringed by native tree and shrub species, including green ash, black willow, and Missouri willow.



## Wetland 21



**Wetland Type:** Seasonally Flooded Basin/ Fresh (wet) Meadow  
**Sample Point ID:** 21-1W

This wetland is located along the eastern project boundary, near County Road F.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Water Quality and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium and Low

The herbaceous stratum is relatively diverse with a mix of native graminoids and forbs, with some European buckthorn into the shrub stratum. Some reed canary grass is present but as few scattered plants.

The habitat is dominated by reed canary grass, with European buckthorn dominant in the shrub stratum.



## Wetland 22



**Wetland Type:** Shallow Marsh/ Seasonally Flooded Basin  
**Sample Point ID:** 22-1W

This wetland is located near in the south central part of the project limits, separated from Vadnais Lake by a berm.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium and Low

The seasonally flooded portion of the complex includes shallow pools of water dominated by duck weed, with unvegetated mud flats. European buckthorn is common in the shrub stratum, with seedlings mixed with NON-NATIVE INVASIVE and native species in the herbaceous stratum. Non-native invasive species include European buckthorn, and pale-yellow iris.



The shallow marsh is comprised of a cattail monoculture and duck weed in the deeper portions of the habitat, with a fringe of European buckthorn.



## Wetland 23



**Wetland Type:** Fresh (wet) Meadow

**Sample Point ID:** 23-1W

This wetland is located along the eastern boundary of the project limits, in the southern half.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Low

The habitat is dominated by reed canary grass, with European buckthorn dominant in the shrub stratum.



## Wetland 24



**Wetland Type:** Shallow Marsh/ Shrub-carr  
**Sample Point ID:** 24-1W, 24-2W

This is a large wetland complex associated with West Vadnais Lake, located throughout the southern half of the project limits. Because this wetland complex is so large, it was broken into community types for a total of 2 MnRAM assessments.

**Shallow Marsh:**  
**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Shoreline Protection".

**Vegetation Quality Rating:** Low

The shallow marsh occurs as fringe of Vadnais Lake, with cat-tails (narrow-leaf and/or hybrid) as the dominant species. Cat-tails form a monoculture along the open water. The perimeter is encompassed by shrubs, including European buckthorn and red osier dogwood.



**Shrub-carr 1**

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was "Shoreline Protection".

**Vegetation Quality Rating:** Medium

The shrub carr habitat has a dense canopy with little light penetration. The primary shrubs include glossy and European buckthorn, green ash, willows, and red osier dogwood. Cattails (narrow-leaf and/or hybrid) and reed canary grass are predominate near the transition to shallow marsh, with shade tolerant sedges and grasses present within the shrub canopy.



## Wetland 25



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 25-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

Non-native invasive species are intermixed with native plants throughout the basin. European buckthorn seedlings and shrubs are prevalent, however the herbaceous stratum is present and contains primarily native species. Canadian wood-nettle, multiple species of sedges, and European buckthorn are the most common herbaceous species.



## Wetland 26



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 26-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** Medium

Wetland 26 is a linear wet ditch with flood tolerant species. The herbaceous stratum is dominant by natives, with few European buckthorn seedlings. Buckthorn is present in the shrub stratum as well, but mixed with an equal amount of green ash.



## Wetland 27



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 27-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Low

European buckthorn most common species, present as seedlings and shrubs. Few other plants in the herbaceous stratum with low areal coverage. Buckthorn shrub canopy likely reduces herbaceous growth.



## Wetland 28



**Wetland Type:** Seasonally Flooded Basin/ Shallow Marsh  
**Sample Point ID:** 28-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** High

The habitat is comprised of primarily native species, with flood tolerant graminoids and forbs, such as rice cut grass and Canadian wood-nettle, common throughout. Reed canary grass is present but not abundant overall, with European buckthorn along the fringe. Neither species appears to hinder growth of native plants.

The shallow marsh is dominated by a mix of sedges, rice cut grass, and broad-leaf pondweed in the deepest portion of the community. Reed canary grass is present along the fringe but not a dominate species. European buckthorn shrubs are common along the perimeter but are mixed with native species.



## Wetland 29



**Wetland Type:** Shallow Open Water

**Sample Point ID:** 29-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

Primary component lakebank sedge with native forbs intermixed. Some reed canary grass growing with the sedges, overall low in areal coverage, and a fringe of European buckthorn shrubs. Native species comprise most of the habitat.

There is a small pool of shallow open water with primarily northern water plantain and duck weed. No Non-native invasive species were observed within this habitat.



## Wetland 30



**Wetland Type:** Sedge Meadow

**Sample Point ID:** 30-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** High

Wetland 30 is dominated by native graminoids and forbs. Upright, woolly-fruit, and lakebank sedge are the most prevalent species, with an array of native forbs intermixed. Reed canary grass was the only non-native invasive species observed within the wetland, but occurred as scattered clusters or individual plants growing within the native species.



## Wetland 31



**Wetland Type:** Shallow Open Water  
**Sample Point ID:** 31-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

Clusters of reed canary grass occur along the shallow areas of the habitat, with some forming small dense monocultures. European buckthorn shrubs were observed along the perimeter, but not dense enough to shade or inhibit growth of native forbs. Flood tolerant species, such as cinnamon fern and Canadian wood-nettle, are common along the wetland to upland transition. Duck weed was the most prevalent species in the open water.



## Wetland 32



**Wetland Type:** Fresh (wet) Meadow  
**Sample Point ID:** 32-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

Graminoids species are most common in this wetland, with reed canary grass and sedges the most abundant. Reed canary grass is relatively common, although it is growing mixed with other species. European buckthorn encompasses the perimeter with scattered shrubs throughout the basin. Seasonal ponding producing mud flats was observed in the habitat.



## Wetland 33



**Wetland Type:** Fresh (wet) Meadow  
**Sample Point ID:** 33-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

A majority of the wetlands dominated by native species, lakebank sedge and Canadian wood-nettle, with native forbs occurring throughout. Non-native invasive species encompass the perimeter, including Canada thistle, garlic mustard, and European buckthorn seedlings and shrubs. The garlic mustard and thistle are present as scattered individual plants.



## Wetland 34



**Wetland Type:** Fresh (wet) Meadow

**Sample Point ID:** 34-1W

This wetland is a small basin located in the far southern portion of the project limits, located between East and West Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

A majority of the wetlands dominated by native species, lakebank sedge and Canadian wood-nettle, with native forbs occurring throughout. Non-native invasive species encompass the perimeter, including Canada thistle, garlic mustard, and European buckthorn seedlings and shrubs. The garlic mustard and thistle are present as scattered individual plants.



## Wetland 35



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 35-1W

This wetland is located east of Vadnais Lake and connects to the lake via several culverts under the trail.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Medium

The habitat is dominated by flood tolerant species, such as green ash, harlequin blueflag (iris), and sedges. Reed canary grass is prevalent throughout the basin but typically is mixed with other species. Mud flats due to seasonal ponding were observed with reed canary and European buckthorn clustered along the fringe.



## Wetland 36



**Wetland Type:** Seasonally Flooded Basin

**Sample Point ID:** 36-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Wetland Sensitivity to Stormwater and Urban Development and Vegetative Diversity”.

**Vegetation Quality Rating:** Low

There are few species present within this habitat, primarily European buckthorn in the herbaceous and shrub strata, and ash-leaf maple in the tree stratum.



## Wetland 37



**Wetland Type:** Shallow Marsh

**Sample Point ID:** 37-1W

This wetland is a small basin located in the far southern portion of the project limits, located between East and West Vadnais Lake.

**MnRAM Score:** Manage 1

The critical function that caused this wetland rank was “Maintenance of Characteristic Amphibian Habitat”.

**Vegetation Quality Rating:** Low

Wetland 37 is a linear wet ditch. Narrow-leaf cat-tail as the predominant species.



## Wetland 38



**Wetland Type:** Fresh (wet) Meadow

**Sample Point ID:** 38-1W

This wetland is a small basin located in the southern half of the project limits, east of Vadnais Lake.

**MnRAM Score:** Preserve

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

Reed canary grass is a prevalent species within the basin, however native species are intermixed. Lakebank sedge and ferns are common within the shadier areas of the wetland. Other non-native invasive observed include giant chickweed.



## Wetland 39



**Wetland Type:** Fresh (wet) Meadow

**Sample Point ID:** 39-1W

This wetland is a small basin located in the far southern portion of the project limits, located between East and West Vadnais Lake.

**MnRAM Score:** Manage 2

The critical function that caused this wetland rank was “Maintenance of Characteristic Wildlife Habitat Structure”.

**Vegetation Quality Rating:** Medium

Wetland 39 is a linear wet ditch dominated by blunt spike-rush, with scattered narrow-leaf cat-tail and dark-green bulrush.



## **Appendix B – MnRAM Summary Pages**



## Management Classification Report for Wetland 1

ID: 43

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Low	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.1	Stormwater runoff
23	0.1	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 1	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.55	0.52	0.79	0.60	0.00
		Moderate	Moderate	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 1	0.28	0.54	0.52	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.60
	Low	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 1	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	70	0.1	0.10	0.10	0.07
							Low	Low	Low
					70		0.10	0.10	0.07

Denotes incomplete calculation data.



**Management Classification Report for Wetland 2**

**cker Park Wetland Assessment**

ID: 5

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
Moderate	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

<i>Question</i>	<i>Value</i>	<i>Description</i>
14	0.1	Upland land use
20	0.5	Stormwater runoff
23	0.5	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	1	Amphib & reptile overwintering habitat

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 2	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.40	0.53	0.61	0.61	0.00
		Moderate	Moderate	Moderate	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 2	0.50	0.56	0.52	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.61
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 2	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	20	0.1	0.50	0.30	0.42
							Moderate	Low	Moderate
		PUBH	Type 5	Shallow, Open Water Communities	80	0.5	0.50	0.30	0.42
							Moderate	Low	Moderate
					100		0.50	0.30	0.42

Denotes incomplete calculation data.



# Management Classification Report for Wetland 3 Shrub Carr 1

ID: 59

# cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
High	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
High	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Shoreline Protection**

Details of the formula for this action are shown below:

## Shoreline Protection $(Q30+Q31+Q32+Q33+Q34)/5$

Question	Value	Description
30	1	Shoreline rooted vegetation (%cover )
31	1	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 3 Shrub Carr 1	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.40	0.50	0.68	0.70	0.80
		Moderate	Moderate	High	High	High

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 3 Shrub Carr 1	0.43	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.70
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

		Vegetative Diversity/Integrity									
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating		
Wetland Name	Location	Cowardin Classification	Circular 39	Plant Community							
Wetland 3 Shrub Carr 1	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	0.5	0.50	0.50	0.50		
							Moderate	Moderate	Moderate		
							100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 3 Shrub Carr 2

ID: 60

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
High	Vegetative Diversity/Integrity	Exceptional
High	Habitat Structure (wildlife)	Exceptional
Low	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
High	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Maintenance of Wetland Water Quality & Vegetative Diversity**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural Exceptional for unique or rare opportunity

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.73	Adjacent area Management
25	0.73	Adjacent area diversity

\* The classification value settings for these functions are not adjustable



## Management Classification Report for Wetland 3 Shrub Carr 2

ID: 60

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.1	Detritus
3e	1	<No Description Found>
40	1	Wetland interspersion/landscape
41	0.1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 3 Shrub Carr 2	Depressional/Isolated (no discernable inlets or outlets)	0.75	0.64	0.88	0.92	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 3 Shrub Carr 2	0.67	0.00	0.22	2.00	0.00	Combination Discharge, Recharge	0.00	1.00	0.92
	High	Not Applicable	Low	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 3 Shrub Carr 2	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	1	1.00	1.00	1.00
							High	High	High
					100		1.00	1.00	1.00

Denotes incomplete calculation data.



# Management Classification Report for Wetland 3 Seasonally Flooded Blacker Park Wetland Assessment

ID: 54

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Moderate	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Shoreline Protection**

Details of the formula for this action are shown below:

**Shoreline Protection**  $(Q30+Q31+Q32+Q33+Q34)/5$

Question	Value	Description
30	0.5	Shoreline rooted vegetation (%cover )
31	0.5	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 3 Seasonally Floode	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.52	0.42	0.72	0.66	0.60
		Moderate	Moderate	High	Moderate	Moderate

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Additional Information		
							Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 3 Seasonally F	0.33	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.66
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 3 Seasonally Floode	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 3 Shallow Marsh

ID: 53

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Low	Amphibian Habitat	High
High	Fish Habitat	Exceptional
High	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Shoreline Protection**

Details of the formula for this action are shown below:

### Shoreline Protection $(Q30+Q31+Q32+Q33+Q34)/5$

Question	Value	Description
30	0.5	Shoreline rooted vegetation (%cover )
31	1	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 3 Shallow Marsh	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.52	0.42	0.72	0.77	0.70
		Moderate	Moderate	High	High	High

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 3 Shallow Mar	0.44	0.80	0.05	2.00	0.00	Discharge	0.00	0.50	0.77
	Moderate	High	Low	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 3 Shallow Marsh	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 4

ID: 48

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Low	Amphibian Habitat	Low
Moderate	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Vegetative Diversity**

Details of the formula for this action are shown below:

**Vegetative Diversity** **NA**

Question	Value	Description
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 4	Depressional/Isolated (no discernable inlets or outlets)	0.43	0.69	0.75	0.56	0.00
		Moderate	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 4	0.45	0.60	0.30	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.56
	Moderate	Moderate	Low	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
Cowardin Classification	Circular 39	Plant Community							
Wetland 4	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	30	0.5	0.50	0.30	0.22
							Moderate	Low	Low
		PUBH	Type 5	Shallow, Open Water Communities	70	0.1	0.50	0.30	0.22
							Moderate	Low	Low
					100		0.50	0.30	0.22

Denotes incomplete calculation data.



**Management Classification Report for Wetland 5 Shrub Carr 1**

ID: 63

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
<b>High</b>	<b>Stormwater/Urban Sensitivity and Vegetative Diversity</b>	<b>High / Moderate</b>
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

**Wetland Sensitivity to Stormwater and Urban Dev NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

**Vegetative Diversity NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 5 Shrub Carr 1	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.40	0.50	0.68	0.70	0.00
		Moderate	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 5 Shrub Carr 1	0.43	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.70
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 5 Shrub Carr 1	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 5 Shrub Carr 2

ID: 61

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
High	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Low	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
High	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Maintenance of Wetland Water Quality & Vegetative Diversity**

Details of the formula for this action are shown below:

**Maintenance of Wetland Water Quality**  $(Q3e * 2 + Q14 + Q20R + (Q23 + Q24 + Q26) / 3 + Q18 + Q28) / 7$

Question	Value	Description
14	0.1	Upland land use
18	1	Sediment delivery
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.91	Adjacent area Management
26	1	Adjacent area slope
28	1	Nutrient loading
3e	1	<No Description Found>

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 5 Shrub Carr 2

ID: 61

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

### Vegetative Diversity

NA

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 5 Shrub Carr 2	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.52	0.46	0.76	0.92	0.00
		Moderate	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 5 Shrub Carr 2	0.57	0.00	0.22	2.00	0.00	Combination Discharge, Recharge	0.00	1.00	0.92
	Moderate	Not Applicable	Low	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 5 Shrub Carr 2	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	1	1.00	1.00	1.00
							High	High	High
					100		1.00	1.00	1.00

Denotes incomplete calculation data.

## Management Classification Report for Wetland 5 Shallow Marsh

ID: 38

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Not Applicable	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	0.5	Upland land use
20	0.5	Stormwater runoff
23	0.5	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 5 Shallow Marsh	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.52	0.55	0.68	0.49	0.00
		Moderate	Moderate	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 5 Shallow Mar	0.47	0.65	0.50	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.49
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 5 Shallow Marsh	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	0	0.5	0.50	0.50	0.00
							Moderate	Moderate	Not Applicable
							0.50	0.50	0.00

Denotes incomplete calculation data.

## Management Classification Report for Wetland 6

ID: 49

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.5	Stormwater runoff
23	0.5	Buffer width
41	0.1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 6	Depressional/Isolated (no discernable inlets or outlets)	0.75	0.60	0.89	0.78	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 6	0.51	0.60	0.45	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.78
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 6	62-030-22-19-002	PUBH	Type 3	Shallow, Open Water Communities	100	0.5	0.50	0.50	0.50
					100		Moderate	Moderate	Moderate
							0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 7

ID: 50

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
High	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	1	Stormwater runoff
23	1	Buffer width
41	0.1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 7	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.56	0.84	0.80	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 7	0.48	0.70	0.53	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.80
	Moderate	High	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

		Vegetative Diversity/Integrity							
Wetland Name	Location	Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 7	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	50	0.1	0.50	0.30	0.30
							Moderate	Low	Low
		PEMC	Type 3	Shallow Marsh	50	0.5	0.50	0.30	0.30
							Moderate	Low	Low
					100		0.50	0.30	0.30

Denotes incomplete calculation data.

## Management Classification Report for Wetland 8

ID: 22

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	1	Stormwater runoff
23	0.1	Buffer width
24	0.82	Adjacent area Management
25	0.42	Adjacent area diversity
39	0.5	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape

\* The classification value settings for these functions are not adjustable



## Management Classification Report for Wetland 8

ID: 22

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41 1 Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 8	Depressional/Isolated (no discernable inlets or outlets)	0.52	0.69	0.88	0.53	0.00
		Moderate	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 8	0.55	0.00	0.00	2.00	0.00	Recharge	0.00	0.10	0.53
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 8	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 9

ID: 21

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
High	Wetland Water Quality and Vegetative Diversity	- / -
High	Characteristic Hydrology and Vegetative Diversity	- / -
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity
39	0.1	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersions/landscape

\* The classification value settings for these functions are not adjustable

**Management Classification Report for Wetland 9**

ID: 21

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41 1 Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 9	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.63	0.86	0.73	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 9	0.64	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.73
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 9	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 10

ID: 55

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
High	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	1	Stormwater runoff
23	1	Buffer width
41	0.1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 10	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.88	0.47	0.73	0.80	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 10	0.43	0.70	0.53	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.80
	Moderate	High	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 10	62-030-22-19-002	PUBH	Type 5	Shallow, Open Water Communities	50	0.1	0.50	0.30	0.30
							Moderate	Low	Low
		PEMC	Type 3	Shallow Marsh	50	0.5	0.50	0.30	0.30
							Moderate	Low	Low
					100		0.50	0.30	0.30

Denotes incomplete calculation data.

## Management Classification Report for Wetland 11

ID: 23

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	1	Stormwater runoff
23	0.1	Buffer width
24	0.45	Adjacent area Management
25	0.3	Adjacent area diversity
39	0.1	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape

\* The classification value settings for these functions are not adjustable



**Management Classification Report for Wetland 11**

ID: 23

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41      0.5      Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 11	Depressional/Isolated (no discernable inlets or outlets)	0.43	0.74	0.79	0.44	0.00
		Moderate	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 11	0.41	0.00	0.00	2.00	0.00	Recharge	0.00	0.10	0.44
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 11	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 12

ID: 42

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Low	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
High	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.1	Stormwater runoff
23	0.1	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 12	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.55	0.52	0.79	0.66	0.00
		Moderate	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 12	0.32	0.67	0.52	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.66
	Low	High	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 12	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	50	0.5	0.50	0.30	0.30
							Moderate	Low	Low
		PEMA	Type 1	Seasonally Flooded Basin	50	0.1	0.50	0.30	0.30
							Moderate	Low	Low
					100		0.50	0.30	0.30

Denotes incomplete calculation data.



## Management Classification Report for Wetland 13

ID: 7

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
	Vegetative Diversity/Integrity	High
	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Hydrologic Regime & Vegetative Diversity**

Details of the formula for this action are shown below:

### Maintenance of Hydrologic Regime $(Q13+Q14+Q15+Q20R)/4$

Question	Value	Description
13	1	Outlet: hydrologic regime
14	0.1	Upland land use
15	0.5	Soil condition (wetland)
20	1	Stormwater runoff

### Vegetative Diversity **NA**

Question	Value	Description
NA	NA	NA

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 13	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.63	0.84	16.54	0.00
		High	Moderate	High		Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 13	14.46	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	16.54
		Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 13	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	11100	0.5	0.50	0.50	55.50
							Moderate	Moderate	
					11100		0.50	0.50	55.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 14

ID: 24

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 3**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Low
Low	Habitat Structure (wildlife)	Low
Not Applicable	Amphibian Habitat	NA
Not Applicable	Fish Habitat	Low
Not Applicable	Shoreline Protection	NA
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Low / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	Low / Low
Low	Characteristic Hydrology and Vegetative Diversity	Low / Low
Moderate	Flood/Stormwater Attenuation*	High
Not Applicable	Commercial use*	-
Moderate	Downstream Water Quality*	High

The critical function that caused this wetland to rank as **Manage 3** was **Vegetative Diversity**

Details of the formula for this action are shown below:

**Vegetative Diversity** **NA**

Question	Value	Description
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 14	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.20	0.52	0.65	0.46	0.00
		Low	Moderate	Moderate	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 14	0.30	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.46
	Low	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 14	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 15

ID: 25

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
High	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural **Exceptional for unique or rare opportunity**

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.91	Adjacent area Management
25	0.46	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 15

ID: 25

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	1	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 15	Depressional/Isolated (no discernable inlets or outlets)	0.75	0.69	0.82	0.71	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 15	0.77	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.71
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 15	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 16

ID: 26

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

<b>Aesthetics/Recreation/Education/Cultural</b>			<b>Exceptional for unique or rare opportunity</b>
Question	Value	Description	
48	1	Unique/rare educ./cultural/rec.opportunity	
<b>Maintenance of Characteristic Wildlife Habitat Str</b>			
<b>(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8</b>			
Question	Value	Description	
13	1	Outlet: hydrologic regime	
20	0.1	Stormwater runoff	
23	1	Buffer width	
24	0.91	Adjacent area Management	
25	0.46	Adjacent area diversity	

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 16

ID: 26

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 16	Depressional/Isolated (no discernable inlets or outlets)	1.00	0.61	0.83	0.73	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 16	0.67	0.00	0.00	2.00	0.00	Recharge	0.00	0.10	0.73
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 16	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

**Management Classification Report for Wetland 17**

ID: 51

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

**Wetland Sensitivity to Stormwater and Urban Dev NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

**Vegetative Diversity NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 17	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.56	0.83	0.85	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 17	0.61	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.85
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 17	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 18 Shrub Carr

ID: 62

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Low	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
High	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
High	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Shoreline Protection**

Details of the formula for this action are shown below:

### Shoreline Protection $(Q30+Q31+Q32+Q33+Q34)/5$

Question	Value	Description
30	1	Shoreline rooted vegetation (%cover )
31	1	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 18 Shrub Carr	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.40	0.50	0.68	0.71	0.80
		Moderate	Moderate	High	High	High

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 18 Shrub Carr	0.45	0.00	0.04	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.71
	Moderate	Not Applicable	Low	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

		Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
Wetland Name	Location	Cowardin Classification	Circular 39	Plant Community					
Wetland 18 Shrub Carr	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 18 SFB

ID: 27

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
High	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural **Exceptional for unique or rare opportunity**

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	0.1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable



## Management Classification Report for Wetland 18 SFB

ID: 27

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	1	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 18 SFB	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.77	0.43	0.73	0.86	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 18 SFB	0.72	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.86
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 18 SFB	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

**Management Classification Report for Wetland 18 Shallow marsh**

**cker Park Wetland Assessment**

ID: 44

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Low	Amphibian Habitat	Moderate
High	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

<b>Aesthetics/Recreation/Education/Cultural</b>	<b>Exceptional for unique or rare opportunity</b>
<i>Question</i>	<i>Value</i>
48	1
<i>Description</i>	Unique/rare educ./cultural/rec.opportunity
<b>Maintenance of Characteristic Wildlife Habitat Str</b>	
<b>(Q3e*2+Q39+Q37+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/9</b>	

<i>Question</i>	<i>Value</i>	<i>Description</i>
13	1	Outlet: hydrologic regime
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.91	Adjacent area Management
25	0.46	Adjacent area diversity

\* The classification value settings for these functions are not adjustable



**Management Classification Report for Wetland 18 Shallow marsh**

ID: 44

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

37	1	Vegetation cover interspersion
39	0.5	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	0.5	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 18 Shallow marsh	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.88	0.61	0.87	0.78	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 18 Shallow ma	0.68	0.73	0.06	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.78
	High	High	Low	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

		Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
Wetland Name	Location	Cowardin Classification	Circular 39	Plant Community					
Wetland 18 Shallow marsh	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 19

ID: 28

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.73	Adjacent area Management
25	0.38	Adjacent area diversity
39	1	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape

\* The classification value settings for these functions are not adjustable



**Management Classification Report for Wetland 19**

ID: 28

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41      0.5      Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 19	Depressional/Isolated (no discernable inlets or outlets)	0.52	0.69	0.75	0.53	0.00
		Moderate	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 19	0.59	0.00	0.00	2.00	0.00	Recharge	0.00	0.10	0.53
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 19	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 20

ID: 56

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.1	Stormwater runoff
23	0.1	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 20	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.55	0.52	0.79	0.68	0.00
		Moderate	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 20	0.33	0.54	0.52	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.68
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 20	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	70	0.5	0.50	0.50	0.35
							Moderate	Moderate	Moderate
					70		0.50	0.50	0.35

Denotes incomplete calculation data.

## Management Classification Report for Wetland 21

ID: 29

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Wetland Water Quality & Vegetative Diversity**

Details of the formula for this action are shown below:

**Maintenance of Wetland Water Quality**  $(Q3e * 2 + Q14 + Q20R + (Q23 + Q24 + Q26) / 3 + Q18 + Q28) / 7$

Question	Value	Description
14	0.5	Upland land use
18	1	Sediment delivery
20	1	Stormwater runoff
23	1	Buffer width
24	0.91	Adjacent area Management
26	1	Adjacent area slope
28	1	Nutrient loading
3e	0.22	<No Description Found>

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 21

ID: 29

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

### Vegetative Diversity

NA

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 21	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.76	0.70	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 21	0.53	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.70
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 21	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	70	0.1	0.50	0.30	0.22
							Moderate	Low	Low
		PEM1B	Type 2	Fresh (Wet) Meadow	30	0.5	0.50	0.30	0.22
							Moderate	Low	Low
					100		0.50	0.30	0.22

Denotes incomplete calculation data.

## Management Classification Report for Wetland 22

ID: 52

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
High	Amphibian Habitat	High
High	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat**  $(Q43) * [(Q44 + 2*Q23wildlife + Q14 + Q41 + Q20 reversed)/6]$

Question	Value	Description
14	1	Upland land use
20	1	Stormwater runoff
23	1	Buffer width
41	0.1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 22	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.56	0.84	0.74	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 22	0.50	0.70	0.77	2.00	0.00	Discharge	0.00	0.10	0.74
	Moderate	High	High	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 22	62-030-22-19-002	PUBH	Type 5	Shallow, Open Water Communities	70	0.1	0.10	0.10	0.10
							Low	Low	Low
		PEMA	Type 1	Seasonally Flooded Basin	30	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 23

ID: 9

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.5	Stormwater runoff
23	0.5	Buffer width
24	0.91	Adjacent area Management
25	0.46	Adjacent area diversity
39	0.5	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersions/landscape

\* The classification value settings for these functions are not adjustable

**Management Classification Report for Wetland 23**

ID: 9

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41 1 Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 23	Depressional/Isolated (no discernable inlets or outlets)	0.63	0.64	0.82	0.52	0.00
		Moderate	Moderate	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 23	0.60	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.52
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 23	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



# Management Classification Report for Wetland 24 Shrub Carr 1

# cker Park Wetland Assessment

ID: 65

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
High	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
High	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Shoreline Protection**

Details of the formula for this action are shown below:

## Shoreline Protection $(Q30+Q31+Q32+Q33+Q34)/5$

Question	Value	Description
30	1	Shoreline rooted vegetation (%cover )
31	0.5	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 24 Shrub Carr 1	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.40	0.50	0.68	0.70	0.70
		Moderate	Moderate	High	High	High

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Additional Information		
							Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 24 Shrub Carr	0.43	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.70
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	High	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 24 Shrub Carr 1	62-030-22-19-002	PSS1C	Type 6	Shrub Carr	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

**Management Classification Report for Wetland 24 Shallow Marsh**

**cker Park Wetland Assessment**

ID: 64

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Low	Amphibian Habitat	High
High	Fish Habitat	Exceptional
High	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
Moderate	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Shoreline Protection**

Details of the formula for this action are shown below:

**Shoreline Protection** **(Q30+Q31+Q32+Q33+Q34)/5**

<i>Question</i>	<i>Value</i>	<i>Description</i>
30	1	Shoreline rooted vegetation (%cover )
31	1	Shoreline wetland in-water width
32	1	Shoreline emergent veg/erosion resistance
33	0.5	Shoreline erosion potential
34	0.5	Shoreline upslope veg/bank protection

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 24 Shallow Marsh	Lacustrine Fringe (edge of deepwater areas)/Shoreland	0.52	0.46	0.76	0.78	0.80
		Moderate	Moderate	High	High	High

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 24 Shallow Ma	0.45	0.88	0.05	2.00	0.00	Discharge	0.00	0.50	0.78
	Moderate	High	Low	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 24 Shallow Marsh	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 25

ID: 30

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural      Exceptional for unique or rare opportunity

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 25

ID: 30

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 25	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.76	0.67	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 25	0.67	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.67
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 25	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

**Management Classification Report for Wetland 26**

ID: 31

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

<b>Functional rank of this wetland based on MnRAM data</b>	<b>Functional Category</b>	<b>Self-defined classification value settings for this management level</b>
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

**Wetland Sensitivity to Stormwater and Urban Dev NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

**Vegetative Diversity NA**

<i>Question</i>	<i>Value</i>	<i>Description</i>
NA	NA	NA

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 26	Depressional/Isolated (no discernable inlets or outlets)	0.75	0.60	0.88	0.77	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 26	0.63	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.77
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 26	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 27

ID: 32

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural Exceptional for unique or rare opportunity

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 27

ID: 32

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 27	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.76	0.67	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 27	0.67	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.67
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

		Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
Wetland Name	Location	Cowardin Classification	Circular 39	Plant Community					
Wetland 27	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 28

ID: 22

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.5	Stormwater runoff
23	0.5	Buffer width
41	1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 28	Depressional/Isolated (no discernable inlets or outlets), Depressional/Tributary (outlet but no perennial inlet or drainage entering from upstream subwatershed)	0.75	0.67	0.93	0.79	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 28	0.66	0.62	0.60	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.79
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 28	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	40	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
		PEMC	Type 1	Seasonally Flooded Basin	60	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 29

ID: 45

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
Moderate	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	1	Upland land use
20	0.1	Stormwater runoff
23	0.1	Buffer width
41	1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 29	Depressional/Isolated (no discernable inlets or outlets)	0.77	0.74	0.96	0.61	0.00
		High	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 29	0.42	0.54	0.53	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.61
	Moderate	Moderate	Moderate	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
Cowardin Classification	Circular 39	Plant Community							
Wetland 29	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	80	0.1	0.10	0.10	0.10
							Low	Low	Low
		PUBH	Type 5	Shallow, Open Water Communities	20	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 30

ID: 36

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Not Applicable	Vegetative Diversity/Integrity	Exceptional
High	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural **Exceptional for unique or rare opportunity**

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 30

ID: 36

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 30	Depressional/Isolated (no discernable inlets or outlets)	1.00	0.65	0.83	0.71	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 30	0.67	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	1.00	0.71
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 30	62-030-22-19-002	PEMB	Type 2	Sedge Meadow	0	1	1.00	1.00	0.00
							High	High	Not Applicable
							1.00	1.00	0.00

Denotes incomplete calculation data.

## Management Classification Report for Wetland 31

ID: 10

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
Moderate	Habitat Structure (wildlife)	Exceptional
High	Amphibian Habitat	High
High	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	0.5	Upland land use
20	1	Stormwater runoff
23	1	Buffer width
41	1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.5	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 31	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.76	0.79	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 31	0.64	0.70	0.67	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.79
	Moderate	High	High	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 31	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	60	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
		PUBH	Type 5	Shallow, Open Water Communities	40	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 32

ID: 11

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural      Exceptional for unique or rare opportunity

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q38+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/9$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	0.82	Adjacent area Management
25	0.42	Adjacent area diversity

\* The classification value settings for these functions are not adjustable



## Management Classification Report for Wetland 32

ID: 11

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

38	1	Community interspersion
39	0.5	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 32	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.76	0.78	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 32	0.79	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.78
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 32	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	50	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
		PFO1A	Type 1	Seasonally Flooded Basin	50	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 33

ID: 18

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

Aesthetics/Recreation/Education/Cultural			Exceptional for unique or rare opportunity
Question	Value	Description	
48	1	Unique/rare educ./cultural/rec.opportunity	
<b>Maintenance of Characteristic Wildlife Habitat Str</b>			
<b>(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8</b>			
Question	Value	Description	
13	1	Outlet: hydrologic regime	
20	0.1	Stormwater runoff	
23	1	Buffer width	
24	0.77	Adjacent area Management	
25	0.38	Adjacent area diversity	

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 33

ID: 18

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 33	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.75	0.77	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 33	0.76	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.77
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 33	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 34

ID: 14

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Low	Characteristic Hydrology and Vegetative Diversity	- / -
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Vegetative Diversity**

Details of the formula for this action are shown below:

### Vegetative Diversity **NA**

Question	Value	Description
NA	NA	NA

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 34	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.30	0.60	0.71	0.58	0.00
		Low	Moderate	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 34	0.57	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.58
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 34	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 35

ID: 33

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	High
Moderate	Habitat Structure (wildlife)	High
Moderate	Amphibian Habitat	Moderate
High	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
Moderate	Wetland Water Quality and Vegetative Diversity	High / Moderate
Moderate	Characteristic Hydrology and Vegetative Diversity	High / Moderate
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	0.5	Upland land use
20	0.5	Stormwater runoff
23	0.5	Buffer width
41	0.5	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 35	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.40	0.50	0.69	0.60	0.00
		Moderate	Moderate	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 35	0.43	0.73	0.43	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.60
	Moderate	High	Moderate	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 35	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 36

ID: 34

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Preserve**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	Exceptional
High	Habitat Structure (wildlife)	Exceptional
Not Applicable	Amphibian Habitat	High
Not Applicable	Fish Habitat	Exceptional
Not Applicable	Shoreline Protection	High
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Exceptional / High
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	Exceptional / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / High
High	Characteristic Hydrology and Vegetative Diversity	High / High
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Preserve** was **Wetland Sensitivity to Stormwater and Urban Development & Vegetative Diversity**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural **Exceptional for unique or rare opportunity**

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 36

ID: 34

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 36	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.65	0.76	0.79	0.00
		High	Moderate	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 36	0.77	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.79
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 36	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.



## Management Classification Report for Wetland 37

ID: 46

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Low	Habitat Structure (wildlife)	Moderate
Low	Amphibian Habitat	Low
Moderate	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Low	Characteristic Hydrology and Vegetative Diversity	- / -
Moderate	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
Moderate	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Amphibian Habitat**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Amphibian Habitat (Q43) \* [( Q44 + 2\*Q23wildlife + Q14 +Q 41 + Q20 reversed)/6]**

Question	Value	Description
14	0.1	Upland land use
20	0.1	Stormwater runoff
23	0.1	Buffer width
41	0.1	Wildlife barriers
43	1	Amphib breeding potential--fish presence
44	0.1	Amphib & reptile overwintering habitat

This report was printed on: Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 37	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet)	0.10	0.56	0.65	0.43	0.00
		Low	Moderate	Moderate	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 37	0.33	0.43	0.23	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.43
	Low	Moderate	Low	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 37	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 38

ID: 19

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 1**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Moderate	Vegetative Diversity/Integrity	High
High	Habitat Structure (wildlife)	High
Not Applicable	Amphibian Habitat	Moderate
Not Applicable	Fish Habitat	High
Not Applicable	Shoreline Protection	Moderate
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	High / Moderate
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	High / Moderate
High	Wetland Water Quality and Vegetative Diversity	High / Moderate
High	Characteristic Hydrology and Vegetative Diversity	High / Moderate
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	High
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 1** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

### Aesthetics/Recreation/Education/Cultural      Exceptional for unique or rare opportunity

Question	Value	Description
48	1	Unique/rare educ./cultural/rec.opportunity

### Maintenance of Characteristic Wildlife Habitat Str $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	0.1	Stormwater runoff
23	1	Buffer width
24	1	Adjacent area Management
25	0.5	Adjacent area diversity

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 38

ID: 19

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

39	0.5	Detritus
3e	0.5	<No Description Found>
40	1	Wetland interspersion/landscape
41	1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020



## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 38	Depressional/Isolated (no discernable inlets or outlets)	0.88	0.69	0.75	0.77	0.00
		High	High	High	High	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 38	0.77	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.50	0.77
	High	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	High

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 38	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.5	0.50	0.50	0.50
							Moderate	Moderate	Moderate
					100		0.50	0.50	0.50

Denotes incomplete calculation data.

## Management Classification Report for Wetland 39

ID: 20

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Low	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	1	Stormwater runoff
23	0.1	Buffer width
24	0.34	Adjacent area Management
25	0.34	Adjacent area diversity
39	0.1	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersions/landscape

\* The classification value settings for these functions are not adjustable

**Management Classification Report for Wetland 39**

ID: 20

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41      0.1      Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 39	Depressional/Isolated (no discernable inlets or outlets)	0.33	0.67	0.75	0.43	0.00
		Low	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 39	0.34	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.43
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular Plant 39	Community					
Wetland 39	62-030-22-19-002	PEMB	Type 2	Fresh (Wet) Meadow	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.



## Management Classification Report for Wetland 40

ID: 47

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Low	Amphibian Habitat	Low
Moderate	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Moderate	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Low	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q37+Q38+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/10$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	1	Stormwater runoff
23	0.1	Buffer width
24	0.3	Adjacent area Management
25	0.3	Adjacent area diversity
37	0.5	Vegetation cover interspersion
38	0.1	Community interspersion
39	0.1	Detritus

\* The classification value settings for these functions are not adjustable

## Management Classification Report for Wetland 40

ID: 47

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape
41	0.1	Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 40	Depressional/Isolated (no discernable inlets or outlets)	0.33	0.74	0.78	0.43	0.00
		Low	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 40	0.33	0.43	0.10	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.43
	Moderate	Moderate	Low	Exceptional	Not Applicable		Not Applicable	Moderate	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 40	62-030-22-19-002	PEMC	Type 3	Shallow Marsh	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## Management Classification Report for Wetland 41

ID: 35

## cker Park Wetland Assessment

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

Based on the MnRAM data input from field and office review and using the classification settings as shown below, this wetland is classified as **Manage 2**

Functional rank of this wetland based on MnRAM data	Functional Category	Self-defined classification value settings for this management level
Low	Vegetative Diversity/Integrity	Moderate
Moderate	Habitat Structure (wildlife)	Moderate
Not Applicable	Amphibian Habitat	Low
Not Applicable	Fish Habitat	Moderate
Not Applicable	Shoreline Protection	Low
Exceptional	Aesthetic/Cultural/Rec/Ed and Habitat	Moderate / Low
Exceptional	Stormwater/Urban Sensitivity and Vegetative Diversity	- / -
Moderate	Wetland Water Quality and Vegetative Diversity	- / -
Moderate	Characteristic Hydrology and Vegetative Diversity	- / -
High	Flood/Stormwater Attenuation*	-
Not Applicable	Commercial use*	-
High	Downstream Water Quality*	-

The critical function that caused this wetland to rank as **Manage 2** was **Maintenance of Characteristic Wildlife Habitat Structure**

Details of the formula for this action are shown below:

**Maintenance of Characteristic Wildlife Habitat Str**  $(Q3e*2+Q39+Q40+Q41+(Q23+Q24+Q25)/3+Q13+Q20)/8$

Question	Value	Description
13	1	Outlet: hydrologic regime
20	1	Stormwater runoff
23	0.1	Buffer width
24	0.45	Adjacent area Management
25	0.3	Adjacent area diversity
39	0.1	Detritus
3e	0.1	<No Description Found>
40	1	Wetland interspersion/landscape

\* The classification value settings for these functions are not adjustable



**Management Classification Report for Wetland 41**

ID: 35

**cker Park Wetland Assessment**

RAMSEY County  
Mississippi (Metro) Watershed, #20  
Corps Bank Service Area 7

41      0.5      Wildlife barriers

*This report was printed on:* Monday, August 31, 2020

\* The classification value settings for these functions are not adjustable

## Wetland Functional Assessment Summary

Wetland Name	Hydrogeomorphology	Maintenance of Hydrologic Regime	Flood/Stormwater/Attenuation	Downstream Water Quality	Maintenance of Wetland Water Quality	Shoreline Protection
Wetland 41	Depressional/Isolated (no discernable inlets or outlets)	0.43	0.74	0.81	0.46	0.00
		Moderate	High	High	Moderate	Not Applicable

### Additional Information

Wetland Name	Maintenance of Characteristic Wildlife Habitat Structure	Maintenance of Characteristic Fish Habitat	Maintenance of Characteristic Amphibian Habitat	Aesthetics/Recreation/Education/Cultural	Commercial Uses	Ground-Water Interaction	Wetland Restoration Potential	Wetland Sensitivity to Stormwater and Urban Development	Additional Stormwater Treatment Needs
Wetland 41	0.41	0.00	0.00	2.00	0.00	Combination Discharge, Recharge	0.00	0.10	0.46
	Moderate	Not Applicable	Not Applicable	Exceptional	Not Applicable		Not Applicable	Exceptional	Moderate

## Wetland Community Summary

Wetland Name	Location	Vegetative Diversity/Integrity							
		Community			Wetland Proportion	Individual Community Rating	Highest Wetland Rating	Average Wetland Rating	Weighted Average Wetland Rating
		Cowardin Classification	Circular 39	Plant Community					
Wetland 41	62-030-22-19-002	PEMA	Type 1	Seasonally Flooded Basin	100	0.1	0.10	0.10	0.10
							Low	Low	Low
					100		0.10	0.10	0.10

Denotes incomplete calculation data.

## **Appendix C – Wetland Determination Data Forms**

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 1-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.07781528 Long.: -93.10166266 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Blomford loamy fine sand NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 1</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>1</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**VEGETATION** - Use scientific names of plants

Sampling Point: 1-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus rubra</i> -- Northern Red Oak	20	Y	FACU
2	<i>Quercus ellipsoidalis</i> -- Northern Pin Oak	20	Y	FACU
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		40 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i> -- European Buckthorn	40	Y	FAC
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		40 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Bidens cernua</i> -- Nodding Burr-Marigold	15	Y	OBL
2	<i>Athyrium angustum</i> -- Northern Lady Fern	10	Y	FAC
3	<i>Osmunda spectabilis</i> -- Royal Fern	10	Y	OBL
4	<i>Hesperis matronalis</i> -- Mother-of-the-Evening	5	N	FACU
5	<i>Onoclea sensibilis</i> -- Sensitive Fern	5	N	FACW
6	<i>Parthenocissus inserta</i> -- Thicket-Creeper	5	N	FACU
7	<i>Phalaris arundinacea</i> -- Reed Canary Grass	5	N	FACW
8	<i>Carex lacustris</i> -- Lakebank Sedge	5	N	OBL
9	<i>Viola sororia</i> -- Hooded Blue Violet	5	N	FAC
10	<i>Maianthemum stellatum</i> -- Starry FALSE Solomon's-Sea	5	N	FAC
11	--			
12	--			
13	--			
14	--			
15	--			
		70 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
		0 = Total Cover		

**50/20 Thresholds**

	20%	50%
Tree Stratum	8	20
Sapling/Shrub Stratum	8	20
Herb Stratum	14	35
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>30</u> x 1 = <u>30</u>
FACW species	<u>10</u> x 2 = <u>20</u>
FAC species	<u>60</u> x 3 = <u>180</u>
FACU species	<u>50</u> x 4 = <u>200</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column totals	<u>150</u> (A) <u>430</u> (B)
Prevalence Index = B/A =	<u>2.87</u>

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
 Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
 U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 2-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.07835586 Long.: -93.10040302 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Blomford loamy fine sand NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 2</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present?    Yes _____ No <u>X</u> Depth (inches): _____ Water table present?    Yes _____ No <u>X</u> Depth (inches): _____ Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>4</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:			



**VEGETATION** - Use scientific names of plants

Sampling Point: 2-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		0 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Salix interior</i> -- Sandbar Willow	20	Y	FACW
2	<i>Fraxinus pennsylvanica</i> -- Green Ash	10	Y	FACW
3	<i>Rhamnus cathartica</i> -- European Buckthorn	5	N	FAC
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		35 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Phalaris arundinacea</i> -- Reed Canary Grass	20	Y	FACW
2	<i>Typha angustifolia</i> -- Narrow-Leaf Cat-Tail	10	Y	OBL
3	<i>Onoclea sensibilis</i> -- Sensitive Fern	10	Y	FACW
4	<i>Persicaria sagittata</i> -- Arrow-Leaf Tearthumb	10	Y	OBL
5	<i>Fraxinus pennsylvanica</i> -- Green Ash	10	Y	FACW
6	<i>Carex lacustris</i> -- Lakebank Sedge	10	Y	OBL
7	<i>Impatiens capensis</i> -- Spotted Touch-Me-Not	5	N	FACW
8	<i>Equisetum arvense</i> -- Field Horsetail	5	N	FAC
9	<i>Typha latifolia</i> -- Broad-Leaf Cat-Tail	5	N	FAC
10	<i>Bidens frondosa</i> -- Devil's-Pitchfork	5	N	FACW
11	<i>Eutrochium maculatum</i> -- Spotted Trumpetweed	5	N	OBL
12	--			
13	--			
14	--			
15	--			
		95 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
		0 = Total Cover		

**50/20 Thresholds**

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	7	18
Herb Stratum	19	48
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across all Strata: 8 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>35</u> x 1 =	<u>35</u>
FACW species	<u>80</u> x 2 =	<u>160</u>
FAC species	<u>15</u> x 3 =	<u>45</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>130</u> (A)	<u>240</u> (B)
Prevalence Index = B/A =	<u>1.85</u>	

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
 Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
 U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 3-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 5 Lat.: 45.07478583 Long.: -93.10113862 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Seelyeville muck NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 3</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	



**VEGETATION - Use scientific names of plants**

**Sampling Point:** 3-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	17	43
3	--				Herb Stratum	18	46
4	--				Woody Vine Stratum	0	0
5	--				<b>Dominance Test Worksheet</b>		
6	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
7	--				Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
8	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
9	--				<b>Prevalence Index Worksheet</b>		
10	--	0			Total % Cover of:		
		= Total Cover			OBL species <u>25</u> x 1 = <u>25</u>		
					FACW species <u>120</u> x 2 = <u>240</u>		
					FAC species <u>17</u> x 3 = <u>51</u>		
					FACU species <u>15</u> x 4 = <u>60</u>		
					UPL species <u>0</u> x 5 = <u>0</u>		
					Column totals <u>177</u> (A) <u>376</u> (B)		
					Prevalence Index = B/A = <u>2.12</u>		
<b>Sapling/Shrub Stratum</b>					<b>Hydrophytic Vegetation Indicators:</b>		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation		
1	<i>Alnus incana</i> -- <i>Speckled Alder</i>	40	Y	FACW	<input checked="" type="checkbox"/> Dominance test is >50%		
2	<i>Cornus alba</i> -- <i>Red Osier</i>	15	Y	FACW	<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
3	<i>Salix petiolaris</i> -- <i>Meadow Willow</i>	10	N	FACW	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
4	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	N	FAC	Problematic hydrophytic vegetation* (explain)		
5	<i>Salix interior</i> -- <i>Sandbar Willow</i>	5	N	FACW	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
6	<i>Salix discolor</i> -- <i>Pussy Willow</i>	5	N	FACW	<b>Definitions of Vegetation Strata:</b>		
7	--				<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
8	--				<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
9	--				<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
10	--				<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
11	--				<b>Hydrophytic vegetation present?</b> <u>Y</u>		
12	--						
13	--						
14	--						
15	--						
		85 = Total Cover					
<b>Herb Stratum</b>							
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status			
1	<i>Carex scoparia</i> -- <i>Pointed Broom Sedge</i>	30	Y	FACW			
2	<i>Eleocharis obtusa</i> -- <i>Blunt Spike-Rush</i>	25	Y	OBL			
3	<i>Bidens frondosa</i> -- <i>Devil's-Pitchfork</i>	15	N	FACW			
4	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	10	N	FACU			
5	<i>Fragaria virginiana</i> -- <i>Virginia Strawberry</i>	5	N	FACU			
6	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	5	N	FAC			
7	<i>Toxicodendron rydbergii</i> -- <i>Western Poison Ivy</i>	2	N	FAC			
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
		92 = Total Cover					
<b>Woody Vine Stratum</b>							
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status			
1	--						
2	--						
3	--						
4	--						
5	--						
		0 = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 3-2w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.06764098 Long.: -93.09911458 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Seelyeville muck NWI Classification: PEM1Cd  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 3</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply)	<b>Secondary Indicators</b> (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	



**VEGETATION** - Use scientific names of plants

Sampling Point: 3-2w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	14	35
4	--				Woody Vine Stratum	15	37
5	--					0	0
6	--				<b>Dominance Test Worksheet</b>		
7	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)		
8	--				Total Number of Dominant Species Across all Strata: <u>3</u> (B)		
9	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
10	--	0	= Total Cover		<b>Prevalence Index Worksheet</b>		
<b>Sapling/Shrub Stratum</b>					Total % Cover of:		
Plot Size ( 15' Radius )					OBL species <u>69</u> x 1 = <u>69</u>		
1	<i>Salix petiolaris</i> -- <i>Meadow Willow</i>	40	Y	FACW	FACW species <u>70</u> x 2 = <u>140</u>		
2	<i>Salix discolor</i> -- <i>Pussy Willow</i>	20	Y	FACW	FAC species <u>5</u> x 3 = <u>15</u>		
3	<i>Cornus alba</i> -- <i>Red Osier</i>	10	N	FACW	FACU species <u>0</u> x 4 = <u>0</u>		
4	--				UPL species <u>0</u> x 5 = <u>0</u>		
5	--				Column totals <u>144</u> (A) <u>224</u> (B)		
6	--				Prevalence Index = B/A = <u>1.56</u>		
7	--				<b>Hydrophytic Vegetation Indicators:</b>		
8	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation		
9	--				<input checked="" type="checkbox"/> Dominance test is >50%		
10	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
11	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
12	--				Problematic hydrophytic vegetation* (explain)		
13	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
14	--				<b>Definitions of Vegetation Strata:</b>		
15	--	70	= Total Cover		<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
<b>Herb Stratum</b>					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Plot Size ( 5' Radius )					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
1	<i>Typha latifolia</i> -- <i>Broad-Leaf Cat-Tail</i>	60	Y	OBL	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
2	<i>Equisetum arvense</i> -- <i>Field Horsetail</i>	5	N	FAC			
3	<i>Sagittaria latifolia</i> -- <i>Duck-Potato</i>	5	N	OBL			
4	<i>Carex vulpinoidea</i> -- <i>Common Fox Sedge</i>	2	N	OBL			
5	<i>Schoenoplectus tabernaemontani</i> -- <i>Soft-Stem Club-Rush</i>	2	N	OBL			
6	--						
7	--						
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--	74	= Total Cover				
<b>Woody Vine Stratum</b>					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
Plot Size ( 30' Radius )							
1	--						
2	--						
3	--						
4	--						
5	--	0	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 3-3w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.06562444 Long.: -93.09963886 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Isanti loamy fine sand, depressional NWI Classification: PSS1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 3</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**VEGETATION** - Use scientific names of plants

Sampling Point: 3-3w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus rubra</i> -- Northern Red Oak	10	Y	FACU
2	<i>Pinus resinosa</i> -- Red Pine	10	Y	FACU
3	<i>Ulmus americana</i> -- American Elm	2	N	FACW
4	<i>Betula nigra</i> -- River Birch	2	N	FACW
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		24 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Alnus incana</i> -- Speckled Alder	35	Y	FACW
2	<i>Rhamnus cathartica</i> -- European Buckthorn	20	Y	FAC
3	<i>Fraxinus pennsylvanica</i> -- Green Ash	10	N	FACW
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		65 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Impatiens capensis</i> -- Spotted Touch-Me-Not	45	Y	FACW
2	<i>Osmunda spectabilis</i> -- Royal Fern	20	Y	OBL
3	<i>Equisetum arvense</i> -- Field Horsetail	10	N	FAC
4	<i>Onoclea sensibilis</i> -- Sensitive Fern	10	N	FACW
5	<i>Equisetum fluviatile</i> -- Water Horsetail	10	N	OBL
6	<i>Bidens frondosa</i> -- Devil's-Pitchfork	5	N	FACW
7	<i>Osmunda claytoniana</i> -- Interrupted Fern	5	N	FAC
8	<i>Carex stricta</i> -- Uptight Sedge	5	N	OBL
9	<i>Parthenocissus inserta</i> -- Thicket-Creeper	5	N	FACU
10	<i>Carex hystericina</i> -- Porcupine Sedge	2	N	OBL
11	--			
12	--			
13	--			
14	--			
15	--			
		117 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Vitis riparia</i> -- River-Bank Grape	5	Y	FAC
2	--			
3	--			
4	--			
5	--			
		5 = Total Cover		

**50/20 Thresholds**

Tree Stratum	20%	50%
Sapling/Shrub Stratum	5	12
Herb Stratum	13	33
Woody Vine Stratum	23	59
	1	3

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 71.43% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>37</u> x 1 = <u>37</u>
FACW species	<u>109</u> x 2 = <u>218</u>
FAC species	<u>40</u> x 3 = <u>120</u>
FACU species	<u>25</u> x 4 = <u>100</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column totals	<u>211</u> (A) <u>475</u> (B)

Prevalence Index = B/A = 2.25

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 3-3w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-8	10YR 2/1	100					Loamy Sand	
8-20	10YR 4/2	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 3-4w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.07123376 Long.: -93.09809569 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udifluvents NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 3</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 3-4w

Tree Stratum	Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status
1		--			
2		--			
3		--			
4		--			
5		--			
6		--			
7		--			
8		--			
9		--			
10		--			
			0	= Total Cover	
Sapling/Shrub Stratum	Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cornus alba</i>	-- Red Osier	40	Y	FACW
2	<i>Salix interior</i>	-- Sandbar Willow	30	Y	FACW
3	<i>Rhamnus cathartica</i>	-- European Buckthorn	10	N	FAC
4		--			
5		--			
6		--			
7		--			
8		--			
9		--			
10		--			
			80	= Total Cover	
Herb Stratum	Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Bidens frondosa</i>	-- Devil's-Pitchfork	10	Y	FACW
2	<i>Solidago gigantea</i>	-- Late Goldenrod	10	Y	FACW
3	<i>Ribes cynosbati</i>	-- Eastern Prickly Gooseberry	5	Y	FACU
4	<i>Rubus idaeus</i>	-- Common Red Raspberry	5	Y	FACU
5	<i>Lotus corniculatus</i>	-- Garden Bird's-Foot-Trefoil	5	Y	FACU
6	<i>Prunella vulgaris</i>	-- Common Selfheal	5	Y	FAC
7	<i>Carex vulpinoidea</i>	-- Common Fox Sedge	5	Y	OBL
8	<i>Carex scoparia</i>	-- Pointed Broom Sedge	5	Y	FACW
9	<i>Impatiens capensis</i>	-- Spotted Touch-Me-Not	5	Y	FACW
10	<i>Glyceria canadensis</i>	-- Rattlesnake Manna Grass	5	Y	OBL
11	<i>Eupatorium perfoliatum</i>	-- Common Boneset	5	Y	FACW
12	<i>Parthenocissus inserta</i>	-- Thicket-Creeper	5	Y	FACU
13	<i>Eleocharis obtusa</i>	-- Blunt Spike-Rush	5	Y	OBL
14		--			
15		--			
			75	= Total Cover	
Woody Vine Stratum	Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Vitis riparia</i>	-- River-Bank Grape	5	Y	FAC
2		--			
3		--			
4		--			
5		--			
			5	= Total Cover	

**50/20 Thresholds**

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	16	40
Herb Stratum	15	38
Woody Vine Stratum	1	3

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across all Strata: 16 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>15</u> x 1 =	<u>15</u>
FACW species	<u>105</u> x 2 =	<u>210</u>
FAC species	<u>20</u> x 3 =	<u>60</u>
FACU species	<u>20</u> x 4 =	<u>80</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>160</u> (A)	<u>365</u> (B)
Prevalence Index = B/A =	<u>2.28</u>	

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



**SOIL**

**Sampling Point:** 3-4w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 2/1	100					Loamy Sand	
10-20	10YR 4/2	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 4-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.07882089 Long.: -93.0955805 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Chetek sandy loam, 12 to 25 percent slopes NWI Classification: PUBG  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 4</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		







This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 5-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.07556462 Long.: -93.10157866 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Anoka loamy fine sand, 3 to 9 percent slopes NWI Classification: PSS1B  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 5</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 5-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		20%	50%	
1 <i>Quercus rubra</i> -- <i>Northern Red Oak</i>	10	Y	FACU	Tree Stratum	6	15	
2 <i>Acer negundo</i> -- <i>Ash-Leaf Maple</i>	10	Y	FAC	Sapling/Shrub Stratum	0	0	
3 <i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	Herb Stratum	18	45	
4				Woody Vine Stratum	0	0	
5				<b>Dominance Test Worksheet</b>			
6				Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)			
7				Total Number of Dominant Species Across all Strata: <u>4</u> (B)			
8				Percent of Dominant Species that are OBL, FACW, or FAC: <u>75.00%</u> (A/B)			
9				<b>Prevalence Index Worksheet</b>			
10	30 = Total Cover			Total % Cover of:			
Sapling/Shrub Stratum				OBL species <u>10</u> x 1 = <u>10</u>			
Plot Size ( 15' Radius )				FACW species <u>80</u> x 2 = <u>160</u>			
1				FAC species <u>20</u> x 3 = <u>60</u>			
2				FACU species <u>10</u> x 4 = <u>40</u>			
3				UPL species <u>0</u> x 5 = <u>0</u>			
4				Column totals <u>120</u> (A) <u>270</u> (B)			
5				Prevalence Index = B/A = <u>2.25</u>			
6				<b>Hydrophytic Vegetation Indicators:</b>			
7				<input type="checkbox"/> Rapid test for hydrophytic vegetation			
8				<input checked="" type="checkbox"/> Dominance test is >50%			
9				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
10				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
11				Problematic hydrophytic vegetation* (explain)			
12				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
13				<b>Definitions of Vegetation Strata:</b>			
14				<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
15				<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
Herb Stratum				<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Plot Size ( 5' Radius )				<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.			
1				<b>Hydrophytic vegetation present?</b> <u>Y</u>			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	90 = Total Cover						
Woody Vine Stratum							
Plot Size ( 30' Radius )							
1							
2							
3							
4							
5							
	0 = Total Cover						

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 5-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 2/2	100					Muck	
4-20	10YR 2/2	100					Loam	
20-22	10YR 2/2	100					Peat	
22-24	10YR 4/4	100					Sandy Loam	
24-30	10YR 6/1	100					Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric soil present?   Y  

Remarks:

This page intentionally left blank



**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 5-2w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.07750543 Long.: -93.10450639 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Seelyeville muck NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 5</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3)      _____ Roots (C3) _____ Algal Mat or Crust (B4)      _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5)      _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial      _____ Soils (C6) Imagery (B7)      _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave      _____ Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
Field Observations: Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>2</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 5-2w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status		20%	50%
1	--				Tree Stratum	0	0
2	--				Sapling/Shrub Stratum	6	15
3	--				Herb Stratum	28	70
4	--				Woody Vine Stratum	0	0
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		0	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)		
1	<i>Ulmus americana</i> -- American Elm	10	Y	FACW	Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	<i>Rhamnus cathartica</i> -- European Buckthorn	10	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
3	<i>Cornus alba</i> -- Red Osier	10	Y	FACW			
4	--						
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		30	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Typha latifolia</i> -- Broad-Leaf Cat-Tail	50	Y	OBL	OBL species	<u>116</u> x 1 = <u>116</u>	
2	<i>Typha angustifolia</i> -- Narrow-Leaf Cat-Tail	20	Y	OBL	FACW species	<u>37</u> x 2 = <u>74</u>	
3	<i>Eleocharis obtusa</i> -- Blunt Spike-Rush	15	N	OBL	FAC species	<u>17</u> x 3 = <u>51</u>	
4	<i>Schoenoplectus tabernaemontani</i> -- Soft-Stem Club-Rush	10	N	OBL	FACU species	<u>0</u> x 4 = <u>0</u>	
5	<i>Phalaris arundinacea</i> -- Reed Canary Grass	10	N	FACW	UPL species	<u>0</u> x 5 = <u>0</u>	
6	<i>Sagittaria latifolia</i> -- Duck-Potato	5	N	OBL	Column totals	<u>170</u> (A)	<u>241</u> (B)
7	<i>Leersia oryzoides</i> -- Rice Cut Grass	5	N	OBL	Prevalence Index = B/A = <u>1.42</u>		
8	<i>Eupatorium perfoliatum</i> -- Common Boneset	5	N	FACW			
9	<i>Onoclea sensibilis</i> -- Sensitive Fern	5	N	FAC			
10	<i>Scirpus atrovirens</i> -- Dark-Green Bulrush	5	N	OBL			
11	<i>Carex scoparia</i> -- Pointed Broom Sedge	2	N	FACW			
12	<i>Lycopus americanus</i> -- Cut-Leaf Water-Horehound	2	N	OBL			
13	<i>Geum aleppicum</i> -- Yellow Avens	2	N	FAC			
14	<i>Carex pellita</i> -- Woolly Sedge	2	N	OBL			
15	<i>Persicaria sagittata</i> -- Arrow-Leaf Tearthumb	2	N	OBL			
		140	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1	--						
2	--						
3	--						
4	--						
5	--						
		0	= Total Cover				
Definitions of Vegetation Strata:					Hydrophytic vegetation present?		
<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 5-3w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.073984 Long.: -93.105066 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Seelyeville muck NWI Classification: PSS1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 5</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**VEGETATION** - Use scientific names of plants

Sampling Point: 5-3w

Tree Stratum					50/20 Thresholds		
Tree Stratum	Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Fraxinus pennsylvanica</i>	-- <i>Green Ash</i>	15	Y	FACW	4	10
2	<i>Larix laricina</i>	-- <i>American Larch</i>	5	Y	FACW	14	35
3		--				20	50
4		--				0	0
5		--					
6		--					
7		--					
8		--					
9		--					
10		--					
			20	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)	
1	<i>Frangula alnus</i>	-- <i>Glossy FALSE Buckthorn</i>	40	Y	FAC	Total Number of Dominant Species Across all Strata: <u>7</u> (B)	
2	<i>Salix discolor</i>	-- <i>Pussy Willow</i>	15	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
3	<i>Cornus alba</i>	-- <i>Red Osier</i>	10	N	FACW		
4	<i>Alnus incana</i>	-- <i>Speckled Alder</i>	5	N	FACW		
5		--					
6		--					
7		--					
8		--					
9		--					
10		--					
			70	= Total Cover			
Herb Stratum					Prevalence Index Worksheet		
Herb Stratum	Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Typha spp.</i>	-- <i>Cattails</i>	50	Y	OBL	OBL species <u>75</u> x 1 = <u>75</u>	
2	<i>Carex lacustris</i>	-- <i>Lakebank Sedge</i>	25	Y	OBL	FACW species <u>75</u> x 2 = <u>150</u>	
3	<i>Phalaris arundinacea</i>	-- <i>Reed Canary Grass</i>	20	Y	FACW	FAC species <u>40</u> x 3 = <u>120</u>	
4	<i>Impatiens capensis</i>	-- <i>Spotted Touch-Me-Not</i>	5	N	FACW	FACU species <u>0</u> x 4 = <u>0</u>	
5		--				UPL species <u>0</u> x 5 = <u>0</u>	
6		--				Column totals <u>190</u> (A) <u>345</u> (B)	
7		--				Prevalence Index = B/A = <u>1.82</u>	
8		--					
9		--					
10		--					
11		--					
12		--					
13		--					
14		--					
15		--					
			100	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Woody Vine Stratum	Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation	
1		--				<input checked="" type="checkbox"/> Dominance test is >50%	
2		--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
3		--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
4		--				Problematic hydrophytic vegetation* (explain)	
5		--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
			0	= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet)					Definitions of Vegetation Strata:		
Duckweed present in the open water portion of the wetland.					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4					<b>Hydrophytic vegetation present?</b> <u>Y</u>		

**SOIL**

**Sampling Point:** 5-3w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 2/2	100					Muck	
4-20	10YR 2/2	100					Loam	
20-22	10YR 2/2	100					Peat	
22-24	10YR 4/4	100					Sandy Loam	
24-30	10YR 6/1	100					Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 6-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.07783035 Long.: -93.10268621 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 1 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 6</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:			

**VEGETATION** - Use scientific names of plants

Sampling Point: 6-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Acer rubrum</i> -- Red Maple	20	Y	FAC	<b>50/20 Thresholds</b> <table style="width:100%; border:none;"> <tr> <td style="width:60%;"></td> <td style="width:20%; text-align:center;">20%</td> <td style="width:20%; text-align:center;">50%</td> </tr> <tr> <td>Tree Stratum</td> <td style="text-align:center;">4</td> <td style="text-align:center;">10</td> </tr> <tr> <td>Sapling/Shrub Stratum</td> <td style="text-align:center;">8</td> <td style="text-align:center;">20</td> </tr> <tr> <td>Herb Stratum</td> <td style="text-align:center;">16</td> <td style="text-align:center;">41</td> </tr> <tr> <td>Woody Vine Stratum</td> <td style="text-align:center;">0</td> <td style="text-align:center;">0</td> </tr> </table>			20%	50%	Tree Stratum	4	10	Sapling/Shrub Stratum	8	20	Herb Stratum	16	41	Woody Vine Stratum	0	0
	20%	50%																			
Tree Stratum	4	10																			
Sapling/Shrub Stratum	8	20																			
Herb Stratum	16	41																			
Woody Vine Stratum	0	0																			
2	--																				
3	--																				
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10		20	= Total Cover		<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)																
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Rhamnus cathartica</i> -- European Buckthorn	40	Y	FAC																	
2	--																				
3	--																				
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10		40	= Total Cover																		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Lemna minor</i> -- Common Duckweed	50	Y	OBL																	
2	<i>Rhamnus cathartica</i> -- European Buckthorn	10	N	FAC																	
3	<i>Viola sororia</i> -- Hooded Blue Violet	5	N	FAC																	
4	<i>Laportea canadensis</i> -- Canadian Wood-Nettle	5	N	FACW																	
5	<i>Ribes cynosbati</i> -- Eastern Prickly Gooseberry	3	N	FACU																	
6	<i>Urtica dioica</i> -- Stinging Nettle	3	N	FAC																	
7	<i>Parthenocissus inserta</i> -- Thicket-Creeper	3	N	FACU																	
8	<i>Athyrium angustum</i> -- Northern Lady Fern	3	N	FAC																	
9	--																				
10	--																				
11	--																				
12	--																				
13	--																				
14	--																				
15		82	= Total Cover																		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	--																				
2	--																				
3	--																				
4	--																				
5		0	= Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.																					
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4																					

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>50</u>	x 1 =	<u>50</u>
FACW species	<u>5</u>	x 2 =	<u>10</u>
FAC species	<u>81</u>	x 3 =	<u>243</u>
FACU species	<u>6</u>	x 4 =	<u>24</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column totals	<u>142</u> (A)		<u>327</u> (B)
Prevalence Index = B/A =			<u>2.30</u>

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y



**SOIL**

**Sampling Point:** 6-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-3	10YR 2/1	100					Muck	
3-8	10YR 2/1	100					Loamy sand	
8-14	10YR 5/1	95	10YR 5/8	5	C	M	Loamy sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 7-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 0 Lat.: 45.07644011 Long.: -93.10324341 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 1 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 7</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>2</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 7-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds	
Plot Size ( 30' Radius )							20%	50%
1	<i>Acer saccharum</i>	--	<i>Sugar Maple</i>	20	Y	FACU	10	25
2	<i>Populus deltoides</i>	--	<i>Eastern Cottonwood</i>	20	Y	FAC	6	15
3	<i>Populus tremuloides</i>	--	<i>Quaking Aspen</i>	10	Y	FAC	2	5
4		--					0	0
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				50	= Total Cover			
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
Plot Size ( 15' Radius )							Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)	
1	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	30	Y	FAC	Total Number of Dominant Species Across all Strata: <u>6</u> (B)	
2		--					Percent of Dominant Species that are OBL, FACW, or FAC: <u>83.33%</u> (A/B)	
3		--						
4		--						
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				30	= Total Cover			
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
Plot Size ( 5' Radius )							Total % Cover of:	
1	<i>Osmunda spectabilis</i>	--	<i>Royal Fern</i>	5	Y	OBL	OBL species	<u>5</u> x 1 = <u>5</u>
2	<i>Matteuccia struthiopteris</i>	--	<i>Ostrich Fern</i>	5	Y	FAC	FACW species	<u>0</u> x 2 = <u>0</u>
3		--					FAC species	<u>65</u> x 3 = <u>195</u>
4		--					FACU species	<u>20</u> x 4 = <u>80</u>
5		--					UPL species	<u>0</u> x 5 = <u>0</u>
6		--					Column totals	<u>90</u> (A) <u>280</u> (B)
7		--					Prevalence Index = B/A =	<u>3.11</u>
8		--						
9		--						
10		--						
11		--						
12		--						
13		--						
14		--						
15		--						
				10	= Total Cover			
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
Plot Size ( 30' Radius )							<input type="checkbox"/> Rapid test for hydrophytic vegetation	
1		--					<input checked="" type="checkbox"/> Dominance test is >50%	
2		--					<input type="checkbox"/> Prevalence index is ≤3.0*	
3		--					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
4		--					Problematic hydrophytic vegetation* (explain)	
5		--					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
				0	= Total Cover			
							Definitions of Vegetation Strata:	
							<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
							<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
							<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
							<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
							<b>Hydrophytic vegetation present?</b> <u>Y</u>	
Remarks: (Include photo numbers here or on a separate sheet)								
Duckweed present in the open water portion of the wetland.								
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4								

**SOIL**

**Sampling Point:** 7-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-3	10YR 2/1	100					Muck	
3-6	10YR 2/1	100					Loamy sand	
6-12	10YR 5/1	95	10YR 5/8	5	C	M	Loamy sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric soil present?   Y  

Remarks:



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 8-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 6 Lat.: 45.07730265 Long.: -93.10152049 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Braham loamy fine sand, 1 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 8</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 8-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Populus tremuloides</i> -- <i>Quaking Aspen</i>	10	Y	FAC
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		10 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	50	Y	FAC
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		50 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Urtica dioica</i> -- <i>Stinging Nettle</i>	10	Y	FAC
2	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	Y	FACW
3	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	5	Y	FACW
4	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	5	Y	FACU
5	<i>Vitis riparia</i> -- <i>River-Bank Grape</i>	5	Y	FAC
6	<i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	5	Y	FACW
7	<i>Carex scoparia</i> -- <i>Pointed Broom Sedge</i>	5	Y	FACW
8	<i>Calamagrostis canadensis</i> -- <i>Bluejoint</i>	5	Y	OBL
9	<i>Cirsium arvense</i> -- <i>Canadian Thistle</i>	5	Y	FACU
10	--			
11	--			
12	--			
13	--			
14	--			
15	--			
		55 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
		0 = Total Cover		

**50/20 Thresholds**

	20%	50%
Tree Stratum	2	5
Sapling/Shrub Stratum	10	25
Herb Stratum	11	28
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across all Strata: 11 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 81.82% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>5</u> x 1 = <u>5</u>
FACW species	<u>25</u> x 2 = <u>50</u>
FAC species	<u>75</u> x 3 = <u>225</u>
FACU species	<u>10</u> x 4 = <u>40</u>
UPL species	<u>0</u> x 5 = <u>0</u>
Column totals	<u>115</u> (A) <u>320</u> (B)

Prevalence Index = B/A = 2.78

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
 Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
 U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 8-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/2	100					Loamy sand	
6-12	10YR 2/2	95	10YR 5/8	5	C	M	Loamy sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains  
 \*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank



**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 9-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 6 Lat.: 45.07750953 Long.: -93.09382763 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Brill silt loam NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 9</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 9-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>	
1	--				Tree Stratum	20% 0
2	--				Sapling/Shrub Stratum	50% 0
3	--				Herb Stratum	0 20
4	--				Woody Vine Stratum	0 50
5	--					
6	--					
7	--					
8	--					
9	--					
10	--					
		0	= Total Cover			
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>	
1	--				Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
2	--				Total Number of Dominant Species Across all Strata:	1 (B)
3	--				Percent of Dominant Species that are OBL, FACW, or FAC:	100.00% (A/B)
4	--					
5	--					
6	--					
7	--					
8	--					
9	--					
10	--					
		0	= Total Cover			
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>	
1	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	60	Y	FACW	Total % Cover of:	
2	<i>Urtica dioica</i> -- <i>Stinging Nettle</i>	10	N	FAC	OBL species	0 x 1 = 0
3	<i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	10	N	FACW	FACW species	80 x 2 = 160
4	<i>Solidago gigantea</i> -- <i>Late Goldenrod</i>	10	N	FACW	FAC species	10 x 3 = 30
5	<i>Arctium minus</i> -- <i>Lesser Burdock</i>	10	N	FACU	FACU species	10 x 4 = 40
6	--				UPL species	0 x 5 = 0
7	--				Column totals	100 (A) 230 (B)
8	--				Prevalence Index = B/A =	2.30
9	--					
10	--					
11	--					
12	--					
13	--					
14	--					
15	--					
		100	= Total Cover			
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>	
1	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation	
2	--				<input checked="" type="checkbox"/> Dominance test is >50%	
3	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
4	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5	--				Problematic hydrophytic vegetation* (explain)	
		0	= Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
					<b>Definitions of Vegetation Strata:</b>	
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
					<b>Hydrophytic vegetation present?</b> <u>Y</u>	
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.						
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4						



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 10-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.07582525 Long.: -93.10177005 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Anoka loamy fine sand, 3 to 9 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 10</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**VEGETATION** - Use scientific names of plants

Sampling Point: 10-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	10	25
4	--				Woody Vine Stratum	10	25
5	--					0	0
6	--				<b>Dominance Test Worksheet</b>		
7	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>8</u> (A)		
8	--				Total Number of Dominant Species Across all Strata: <u>11</u> (B)		
9	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>72.73%</u> (A/B)		
10	--	0	= Total Cover		<b>Prevalence Index Worksheet</b>		
Sapling/Shrub Stratum Plot Size ( 15' Radius )					Total % Cover of:		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	25	Y	FAC	OBL species	<u>5</u>	x 1 = <u>5</u>
2	<i>Frangula alnus</i> -- <i>Glossy FALSE Buckthorn</i>	25	Y	FAC	FACW species	<u>5</u>	x 2 = <u>10</u>
3	--				FAC species	<u>75</u>	x 3 = <u>225</u>
4	--				FACU species	<u>15</u>	x 4 = <u>60</u>
5	--				UPL species	<u>0</u>	x 5 = <u>0</u>
6	--				Column totals	<u>100</u> (A)	<u>300</u> (B)
7	--				Prevalence Index = B/A = <u>3.00</u>		
8	--				<b>Hydrophytic Vegetation Indicators:</b>		
9	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation		
10	--				<input checked="" type="checkbox"/> Dominance test is >50%		
11	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
12	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
13	--				Problematic hydrophytic vegetation* (explain)		
14	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
15	--	50	= Total Cover		<b>Definitions of Vegetation Strata:</b>		
Herb Stratum Plot Size ( 5' Radius )					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
1	<i>Solanum dulcamara</i> -- <i>Climbing Nightshade</i>	10	Y	FAC	<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2	<i>Athyrium angustum</i> -- <i>Northern Lady Fern</i>	5	Y	FAC	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
3	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	5	Y	FACU	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
4	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	5	Y	FACW	<b>Hydrophytic vegetation present?</b> <u>Y</u>		
5	<i>Typha latifolia</i> -- <i>Broad-Leaf Cat-Tail</i>	5	Y	OBL			
6	<i>Viola sororia</i> -- <i>Hooded Blue Violet</i>	5	Y	FAC			
7	<i>Maianthemum stellatum</i> -- <i>Starry FALSE Solomon's-Sea</i>	5	Y	FAC			
8	<i>Quercus rubra</i> -- <i>Northern Red Oak</i>	5	Y	FACU			
9	<i>Quercus alba</i> -- <i>Northern White Oak</i>	5	Y	FACU			
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
16	--	50	= Total Cover				
Woody Vine Stratum Plot Size ( 30' Radius )							
1	--						
2	--						
3	--						
4	--						
5	--						
		0	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							

**SOIL**

**Sampling Point:** 10-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/1	100					Loamy Sand	
6-12	10YR 5/1	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric soil present?**   Y  

Remarks:

This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 11-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.07319968 Long.: -93.10089307 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Urban land-Zimmerman complex, 1 to 8 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 11</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 11-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		0 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	40	Y	FAC
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		40 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC
2	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	5	Y	FACU
3	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	5	Y	FACW
4	<i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	5	Y	FACW
5	<i>Osmunda claytoniana</i> -- <i>Interrupted Fern</i>	5	Y	FAC
6	<i>Osmunda spectabilis</i> -- <i>Royal Fern</i>	5	Y	OBL
7	<i>Solanum dulcamara</i> -- <i>Climbing Nightshade</i>	5	Y	FAC
8	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	5	Y	FACW
9	<i>Potentilla norvegica</i> -- <i>Norwegian Cinquefoil</i>	5	Y	FAC
10	<i>Iris versicolor</i> -- <i>Harlequin Blueflag</i>	5	Y	OBL
11	<i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i>	5	Y	OBL
12	<i>Carex stricta</i> -- <i>Uptight Sedge</i>	5	Y	OBL
13	--			
14	--			
15	--			
		65 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
		0 = Total Cover		

**50/20 Thresholds**

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	8	20
Herb Stratum	13	33
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across all Strata: 13 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 92.31% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>20</u> x 1 =	<u>20</u>
FACW species	<u>15</u> x 2 =	<u>30</u>
FAC species	<u>65</u> x 3 =	<u>195</u>
FACU species	<u>5</u> x 4 =	<u>20</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>105</u> (A)	<u>265</u> (B)
Prevalence Index = B/A =	<u>2.52</u>	

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4





This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 12-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.07278078 Long.: -93.0955324 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Mahtomedi loamy sand, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 12</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3)      _____ Roots (C3) _____ Algal Mat or Crust (B4)      _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5)      _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial      _____ Soils (C6) Imagery (B7)      _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave      _____ Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>3</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION - Use scientific names of plants**

**Sampling Point:** 12-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>																																																																																							
1	--				Tree Stratum	20%	50%																																																																																					
2	--				Sapling/Shrub Stratum	6	15																																																																																					
3	--				Herb Stratum	22	55																																																																																					
4	--				Woody Vine Stratum	0	0																																																																																					
5	--				<b>Dominance Test Worksheet</b>																																																																																							
6	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)																																																																																							
7	--				Total Number of Dominant Species Across all Strata: <u>5</u> (B)																																																																																							
8	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)																																																																																							
9	--				<b>Prevalence Index Worksheet</b>																																																																																							
10	--	0 = Total Cover			Total % Cover of:																																																																																							
					OBL species <u>70</u> x 1 = <u>70</u>																																																																																							
					FACW species <u>50</u> x 2 = <u>100</u>																																																																																							
					FAC species <u>10</u> x 3 = <u>30</u>																																																																																							
					FACU species <u>10</u> x 4 = <u>40</u>																																																																																							
					UPL species <u>0</u> x 5 = <u>0</u>																																																																																							
					Column totals <u>140</u> (A) <u>240</u> (B)																																																																																							
					Prevalence Index = B/A = <u>1.71</u>																																																																																							
					<b>Hydrophytic Vegetation Indicators:</b>																																																																																							
					<input type="checkbox"/> Rapid test for hydrophytic vegetation																																																																																							
					<input checked="" type="checkbox"/> Dominance test is >50%																																																																																							
					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*																																																																																							
					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)																																																																																							
					Problematic hydrophytic vegetation* (explain)																																																																																							
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																																																																							
					<b>Definitions of Vegetation Strata:</b>																																																																																							
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.																																																																																							
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.																																																																																							
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.																																																																																							
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.																																																																																							
					<b>Hydrophytic vegetation present?</b> <u>Y</u>																																																																																							
					<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Sapling/Shrub Stratum</th> <th style="width:30%;">Plot Size ( 15' Radius )</th> <th style="width:15%;">Absolute % Cover</th> <th style="width:15%;">Dominant Species</th> <th style="width:10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><i>Salix interior</i> -- <i>Sandbar Willow</i></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2</td> <td><i>Rhamnus cathartica</i> -- <i>European Buckthorn</i></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3</td> <td><i>Alnus incana</i> -- <i>Speckled Alder</i></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>4</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">30 = Total Cover</td> <td></td> <td></td> </tr> </tbody> </table>			Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status	1	<i>Salix interior</i> -- <i>Sandbar Willow</i>	10	Y	FACW	2	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC	3	<i>Alnus incana</i> -- <i>Speckled Alder</i>	10	Y	FACW	4	--				5	--				6	--				7	--				8	--				9	--				10	--						30 = Total Cover																											
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status																																																																																								
1	<i>Salix interior</i> -- <i>Sandbar Willow</i>	10	Y	FACW																																																																																								
2	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC																																																																																								
3	<i>Alnus incana</i> -- <i>Speckled Alder</i>	10	Y	FACW																																																																																								
4	--																																																																																											
5	--																																																																																											
6	--																																																																																											
7	--																																																																																											
8	--																																																																																											
9	--																																																																																											
10	--																																																																																											
		30 = Total Cover																																																																																										
					<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Herb Stratum</th> <th style="width:30%;">Plot Size ( 5' Radius )</th> <th style="width:15%;">Absolute % Cover</th> <th style="width:15%;">Dominant Species</th> <th style="width:10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><i>Typha latifolia</i> -- <i>Broad-Leaf Cat-Tail</i></td> <td style="text-align: center;">40</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>2</td> <td><i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3</td> <td><i>Salix interior</i> -- <i>Sandbar Willow</i></td> <td style="text-align: center;">10</td> <td style="text-align: center;">N</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>4</td> <td><i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>5</td> <td><i>Asclepias incarnata</i> -- <i>Swamp Milkweed</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>6</td> <td><i>Carex lacustris</i> -- <i>Lakebank Sedge</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>7</td> <td><i>Geranium maculatum</i> -- <i>Spotted Crane's-Bill</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>8</td> <td><i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>9</td> <td><i>Persicaria sagittata</i> -- <i>Arrow-Leaf Tearthumb</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>10</td> <td><i>Carex hystericina</i> -- <i>Porcupine Sedge</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>11</td> <td><i>Iris virginica</i> -- <i>Virginia Blueflag</i></td> <td style="text-align: center;">5</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>12</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>13</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>15</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">110 = Total Cover</td> <td></td> <td></td> </tr> </tbody> </table>			Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status	1	<i>Typha latifolia</i> -- <i>Broad-Leaf Cat-Tail</i>	40	Y	OBL	2	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	20	Y	FACW	3	<i>Salix interior</i> -- <i>Sandbar Willow</i>	10	N	FACW	4	<i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i>	5	N	OBL	5	<i>Asclepias incarnata</i> -- <i>Swamp Milkweed</i>	5	N	OBL	6	<i>Carex lacustris</i> -- <i>Lakebank Sedge</i>	5	N	OBL	7	<i>Geranium maculatum</i> -- <i>Spotted Crane's-Bill</i>	5	N	FACU	8	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	5	N	FACU	9	<i>Persicaria sagittata</i> -- <i>Arrow-Leaf Tearthumb</i>	5	N	OBL	10	<i>Carex hystericina</i> -- <i>Porcupine Sedge</i>	5	N	OBL	11	<i>Iris virginica</i> -- <i>Virginia Blueflag</i>	5	N	OBL	12	--				13	--				14	--				15	--						110 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status																																																																																								
1	<i>Typha latifolia</i> -- <i>Broad-Leaf Cat-Tail</i>	40	Y	OBL																																																																																								
2	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	20	Y	FACW																																																																																								
3	<i>Salix interior</i> -- <i>Sandbar Willow</i>	10	N	FACW																																																																																								
4	<i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i>	5	N	OBL																																																																																								
5	<i>Asclepias incarnata</i> -- <i>Swamp Milkweed</i>	5	N	OBL																																																																																								
6	<i>Carex lacustris</i> -- <i>Lakebank Sedge</i>	5	N	OBL																																																																																								
7	<i>Geranium maculatum</i> -- <i>Spotted Crane's-Bill</i>	5	N	FACU																																																																																								
8	<i>Parthenocissus inserta</i> -- <i>Thicket-Creeper</i>	5	N	FACU																																																																																								
9	<i>Persicaria sagittata</i> -- <i>Arrow-Leaf Tearthumb</i>	5	N	OBL																																																																																								
10	<i>Carex hystericina</i> -- <i>Porcupine Sedge</i>	5	N	OBL																																																																																								
11	<i>Iris virginica</i> -- <i>Virginia Blueflag</i>	5	N	OBL																																																																																								
12	--																																																																																											
13	--																																																																																											
14	--																																																																																											
15	--																																																																																											
		110 = Total Cover																																																																																										
					<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Woody Vine Stratum</th> <th style="width:30%;">Plot Size ( 30' Radius )</th> <th style="width:15%;">Absolute % Cover</th> <th style="width:15%;">Dominant Species</th> <th style="width:10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>--</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">0 = Total Cover</td> <td></td> <td></td> </tr> </tbody> </table>			Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	1	--				2	--				3	--				4	--				5	--						0 = Total Cover																																																				
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																																																																																								
1	--																																																																																											
2	--																																																																																											
3	--																																																																																											
4	--																																																																																											
5	--																																																																																											
		0 = Total Cover																																																																																										
Remarks: (Include photo numbers here or on a separate sheet)																																																																																												
Duckweed present in the open water portion of the wetland.																																																																																												
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4																																																																																												





This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 13-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.07128142 Long.: -93.09902374 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udifluvents NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 13</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present?    Yes _____ No <u>X</u> Depth (inches): _____ Water table present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>2</u> (includes capillary fringe)
		<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 13-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		
1	---	---	---	---	<b>50/20 Thresholds</b>	
2	---	---	---	---	Tree Stratum	20% 50%
3	---	---	---	---	Sapling/Shrub Stratum	0 0
4	---	---	---	---	Herb Stratum	7 18
5	---	---	---	---	Woody Vine Stratum	20 50
6	---	---	---	---		0 0
7	---	---	---	---	<b>Dominance Test Worksheet</b>	
8	---	---	---	---	Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)	
9	---	---	---	---	Total Number of Dominant Species Across all Strata: <u>5</u> (B)	
10	---	---	---	---	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
		0 = Total Cover			<b>Prevalence Index Worksheet</b>	
<b>Sapling/Shrub Stratum</b> Plot Size ( 15' Radius )					Total % Cover of:	
1	<i>Salix interior</i> -- Sandbar Willow	20	Y	FACW	OBL species	<u>25</u> x 1 = <u>25</u>
2	<i>Fraxinus pennsylvanica</i> -- Green Ash	10	Y	FACW	FACW species	<u>80</u> x 2 = <u>160</u>
3	<i>Rhamnus cathartica</i> -- European Buckthorn	5	N	FAC	FAC species	<u>10</u> x 3 = <u>30</u>
4	---	---	---	---	FACU species	<u>15</u> x 4 = <u>60</u>
5	---	---	---	---	UPL species	<u>5</u> x 5 = <u>25</u>
6	---	---	---	---	Column totals	<u>135</u> (A) <u>300</u> (B)
7	---	---	---	---	Prevalence Index = B/A =	<u>2.22</u>
8	---	---	---	---	<b>Hydrophytic Vegetation Indicators:</b>	
9	---	---	---	---	<input type="checkbox"/> Rapid test for hydrophytic vegetation	
10	---	---	---	---	<input checked="" type="checkbox"/> Dominance test is >50%	
11	---	---	---	---	<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
12	---	---	---	---	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
13	---	---	---	---	Problematic hydrophytic vegetation* (explain)	
14	---	---	---	---	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
15	---	---	---	---	<b>Definitions of Vegetation Strata:</b>	
		35 = Total Cover			<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> Plot Size ( 5' Radius )					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
1	<i>Phalaris arundinacea</i> -- Reed Canary Grass	30	Y	FACW	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2	<i>Solidago gigantea</i> -- Late Goldenrod	15	Y	FACW	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
3	<i>Carex pellita</i> -- Woolly Sedge	10	Y	OBL		
4	<i>Eleocharis acicularis</i> -- Needle Spike-Rush	5	N	OBL		
5	<i>Eupatorium perfoliatum</i> -- Common Boneset	5	N	FACW		
6	<i>Glyceria canadensis</i> -- Rattlesnake Manna Grass	5	N	OBL		
7	<i>Phleum pratense</i> -- Common Timothy	5	N	FACU		
8	<i>Medicago sativa</i> -- Alfalfa	5	N	UPL		
9	<i>Medicago lupulina</i> -- Black Medick	5	N	FAC		
10	<i>Lotus corniculatus</i> -- Garden Bird's-Foot-Trefoil	5	N	FACU		
11	<i>Fragaria virginiana</i> -- Virginia Strawberry	5	N	FACU		
12	<i>Scirpus atrovirens</i> -- Dark-Green Bulrush	5	N	OBL		
13	---	---	---	---		
14	---	---	---	---		
15	---	---	---	---		
		100 = Total Cover				
<b>Woody Vine Stratum</b> Plot Size ( 30' Radius )					<b>Hydrophytic vegetation present?</b> <u>Y</u>	
1	---	---	---	---		
2	---	---	---	---		
3	---	---	---	---		
4	---	---	---	---		
5	---	---	---	---		
		0 = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.						
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4						



This page intentionally left blank



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 14-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.07116955 Long.: -93.09950494 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udifluvents NWI Classification: PEM1A  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 14</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>12</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**SOIL**

**Sampling Point:** 14-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/1	100					Loamy Sand	
6-16	10YR 5/1	95	10YR 4/6	5	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u>  Y  </u>
--	-----------------------------------

Remarks:

This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 15-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.06526031 Long.: -93.09980062 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 1 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 15</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 15-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Populus deltoides</i> -- <i>Eastern Cottonwood</i>	10	Y	FAC	<b>50/20 Thresholds</b> <table style="width:100%; border:none;"> <tr> <td style="width:60%;"></td> <td style="width:20%;">20%</td> <td style="width:20%;">50%</td> </tr> <tr> <td>Tree Stratum</td> <td>4</td> <td>10</td> </tr> <tr> <td>Sapling/Shrub Stratum</td> <td>4</td> <td>10</td> </tr> <tr> <td>Herb Stratum</td> <td>6</td> <td>15</td> </tr> <tr> <td>Woody Vine Stratum</td> <td>0</td> <td>0</td> </tr> </table>			20%	50%	Tree Stratum	4	10	Sapling/Shrub Stratum	4	10	Herb Stratum	6	15	Woody Vine Stratum	0	0
	20%	50%																			
Tree Stratum	4	10																			
Sapling/Shrub Stratum	4	10																			
Herb Stratum	6	15																			
Woody Vine Stratum	0	0																			
2	<i>Pinus resinosa</i> -- <i>Red Pine</i>	5	Y	FACU																	
3	<i>Quercus rubra</i> -- <i>Northern Red Oak</i>	5	Y	FACU																	
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10	--																				
		20 = Total Cover																			
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across all Strata: <u>9</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)																
2	--																				
3	--																				
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10	--																				
		20 = Total Cover																			
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Persicaria amphibia</i> -- <i>Water Smartweed</i>	10	Y	OBL	<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>70</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.86</u>																
2	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	5	Y	FACW																	
3	<i>Solanum dulcamara</i> -- <i>Climbing Nightshade</i>	5	Y	FAC																	
4	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	5	Y	FAC																	
5	<i>Cirsium vulgare</i> -- <i>Bull Thistle</i>	5	Y	FACU																	
6	--																				
7	--																				
8	--																				
9	--																				
10	--																				
11	--																				
12	--																				
13	--																				
14	--																				
15	--																				
		30 = Total Cover																			
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	--				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																
2	--																				
3	--																				
4	--																				
5	--																				
		0 = Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.					<b>Definitions of Vegetation Strata:</b> <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.																
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							<b>Hydrophytic vegetation present?</b> <u>Y</u>														



**SOIL**

**Sampling Point:** 15-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 2/1	100					Muck	
2-10	10YR 2/1	95	10YR 4/6	5	C	M	Loamy Sand	
10-16	10YR 5/1	90	10YR 5/8	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

**Indicators for Problematic Hydric Soils:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric soil present?**   Y  

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 16-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.0655726 Long.: -93.09751527 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Braham loamy fine sand, 6 to 15 percent slopes NWI Classification: PSS1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 16</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 16-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds	
Plot Size ( 30' Radius )							20%	50%
1	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	25	Y	FACW	9	23
2	<i>Populus deltoides</i>	--	<i>Eastern Cottonwood</i>	10	Y	FAC	10	25
3	<i>Quercus rubra</i>	--	<i>Northern Red Oak</i>	10	Y	FACU	6	15
4		--					0	0
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				45	=	Total Cover		
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
Plot Size ( 15' Radius )							Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)	
1	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	30	Y	FACW	Total Number of Dominant Species Across all Strata: <u>6</u> (B)	
2	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	20	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>83.33%</u> (A/B)	
3		--						
4		--						
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				50	=	Total Cover		
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
Plot Size ( 5' Radius )							Total % Cover of:	
1	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	15	Y	FAC	OBL species	<u>0</u> x 1 = <u>0</u>
2	<i>Potentilla norvegica</i>	--	<i>Norwegian Cinquefoil</i>	5	N	FAC	FACW species	<u>60</u> x 2 = <u>120</u>
3	<i>Impatiens capensis</i>	--	<i>Spotted Touch-Me-Not</i>	5	N	FACW	FAC species	<u>55</u> x 3 = <u>165</u>
4	<i>Toxicodendron rydbergii</i>	--	<i>Western Poison Ivy</i>	5	N	FAC	FACU species	<u>10</u> x 4 = <u>40</u>
5		--					UPL species	<u>0</u> x 5 = <u>0</u>
6		--					Column totals	<u>125</u> (A) <u>325</u> (B)
7		--					Prevalence Index = B/A =	<u>2.60</u>
8		--						
9		--						
10		--						
11		--						
12		--						
13		--						
14		--						
15		--						
				30	=	Total Cover		
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
Plot Size ( 30' Radius )							<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1		--					Definitions of Vegetation Strata:	
2		--					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
3		--					<b>Hydrophytic vegetation present?</b> <u>Y</u>	
4		--						
5		--						
				0	=	Total Cover		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.								
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4								

**SOIL**

**Sampling Point:** 16-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 2/1	100					Muck	
2-6	10YR 2/1	100					Loamy Sand	
6-12	10YR 5/2	90	10YR 5/8	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u>  Y  </u>
--	-----------------------------------

Remarks:

This page intentionally left blank



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 17-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.06424959 Long.: -93.0986186 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 1 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 17</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)              _____ Marl Deposits (B15) _____ Water Marks (B1)        _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)    _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3)            _____ Roots (C3) _____ Algal Mat or Crust (B4)        _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5)            _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial    _____ Soils (C6) Imagery (B7)                            _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave    _____ Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>2</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	





This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 18-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.0626769 Long.: -93.0972555 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 1 to 6 percent slopes NWI Classification: PFO1A  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation       , soil       , or hydrology        significantly disturbed? Are "normal  
 Are vegetation       , soil       , or hydrology        naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>      </u> <u>Y</u> Hydric soil present? <u>      </u> <u>Y</u> Indicators of wetland hydrology present? <u>      </u> <u>Y</u>	<p align="center"><b>Is the sampled area within a wetland?</b> <u>      </u> <u>Y</u></p> If yes, optional wetland site ID: <u>      </u> <u>Wetland 18</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present?    Yes <u>      </u> No <u>      </u> <u>X</u> Depth (inches): <u>      </u> Water table present?    Yes <u>      </u> No <u>      </u> <u>X</u> Depth (inches): <u>      </u> Saturation present?    Yes <u>      </u> <u>X</u> No <u>      </u> Depth (inches): <u>      </u> <u>12</u> (includes capillary fringe)
		<p align="center"><b>Indicators of wetland hydrology present?</b> <u>      </u> <u>Y</u></p>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 18-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		20%	50%	
1 <i>Quercus macrocarpa</i> -- <i>Burr Oak</i>	5	Y	FACU	Tree Stratum	1	3	
2				Sapling/Shrub Stratum	4	10	
3				Herb Stratum	2	6	
4				Woody Vine Stratum	0	0	
5				<b>Dominance Test Worksheet</b>			
6				Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)			
7				Total Number of Dominant Species Across all Strata: <u>6</u> (B)			
8				Percent of Dominant Species that are OBL, FACW, or FAC: <u>83.33%</u> (A/B)			
9				<b>Prevalence Index Worksheet</b>			
10	5 = Total Cover			Total % Cover of:			
				OBL species <u>4</u> x 1 = <u>4</u>			
				FACW species <u>7</u> x 2 = <u>14</u>			
				FAC species <u>20</u> x 3 = <u>60</u>			
				FACU species <u>5</u> x 4 = <u>20</u>			
				UPL species <u>0</u> x 5 = <u>0</u>			
				Column totals <u>36</u> (A) <u>98</u> (B)			
				Prevalence Index = B/A = <u>2.72</u>			
Sapling/Shrub Stratum					<b>Hydrophytic Vegetation Indicators:</b>		
Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status		Rapid test for hydrophytic vegetation		
1 <i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	<input checked="" type="checkbox"/>	Dominance test is >50%		
2				<input checked="" type="checkbox"/>	Prevalence index is ≤3.0*		
3					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
4					Problematic hydrophytic vegetation* (explain)		
5					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
6					<b>Definitions of Vegetation Strata:</b>		
7					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
8					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
9					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
10					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
11					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
12							
13							
14							
15	20 = Total Cover						
Herb Stratum							
Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status				
1 <i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	5	Y	FACW				
2 <i>Carex hystericina</i> -- <i>Porcupine Sedge</i>	2	Y	OBL				
3 <i>Iris versicolor</i> -- <i>Harlequin Blueflag</i>	2	Y	OBL				
4 <i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	2	Y	FACW				
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	11 = Total Cover						
Woody Vine Stratum							
Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status				
1							
2							
3							
4							
5							
	0 = Total Cover						
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



**SOIL**

**Sampling Point:** 18-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 2/2	100					Loamy Sand	
10-20	10YR 4/1	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 18-2w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.06278133 Long.: -93.0962878 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Seelyeville muck NWI Classification: PFO1A  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 18</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	<b>Field Observations:</b> Surface water present?    Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> Water table present?      Yes <u>  X  </u> No <u>      </u> Depth (inches): <u>  0  </u> Saturation present?        Yes <u>  X  </u> No <u>      </u> Depth (inches): <u>  0  </u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>  Y  </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:			





This page intentionally left blank



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 18-3w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.05157438 Long.: -93.08692954 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Dundas fine sandy loam NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 18</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		





This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 19-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.06407294 Long.: -93.09487441 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 19</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	<b>Field Observations:</b> Surface water present?    Yes _____ No <u>X</u> Depth (inches): _____ Water table present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation present?        Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:			

**VEGETATION** - Use scientific names of plants

Sampling Point: 19-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		0 = Total Cover		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	30	Y	FAC
2	--			
3	--			
4	--			
5	--			
6	--			
7	--			
8	--			
9	--			
10	--			
		30 = Total Cover		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Leersia virginica</i> -- <i>White Grass</i>	20	Y	FACW
2	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	20	Y	FACW
3	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	20	Y	FACW
4	<i>Carex scoparia</i> -- <i>Pointed Broom Sedge</i>	10	N	FACW
5	<i>Athyrium angustum</i> -- <i>Northern Lady Fern</i>	10	N	FAC
6	<i>Urtica dioica</i> -- <i>Stinging Nettle</i>	10	N	FAC
7	<i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	5	N	FACW
8	<i>Carex stipata</i> -- <i>Stalk-Grain Sedge</i>	5	N	OBL
9	--			
10	--			
11	--			
12	--			
13	--			
14	--			
15	--			
		100 = Total Cover		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status
1	--			
2	--			
3	--			
4	--			
5	--			
		0 = Total Cover		

**50/20 Thresholds**

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	6	15
Herb Stratum	20	50
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>5</u> x 1 =	<u>5</u>
FACW species	<u>75</u> x 2 =	<u>150</u>
FAC species	<u>50</u> x 3 =	<u>150</u>
FACU species	<u>0</u> x 4 =	<u>0</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>130</u> (A)	<u>305</u> (B)
Prevalence Index = B/A =	<u>2.35</u>	

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

Remarks: (Include photo numbers here or on a separate sheet)  
 Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4





This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/15/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 20-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.06438541 Long.: -93.09286351 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Isanti loamy fine sand, depressional NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 20</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 20-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds		
Plot Size ( 30' Radius )							20%	50%	
1	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	25	Y	FACW	7	18	
2	<i>Salix nigra</i>	--	<i>Black Willow</i>	10	Y	OBL	1	3	
3		--					20	50	
4		--					1	3	
5		--							
6		--							
7		--							
8		--							
9		--							
10		--							
				35	= Total Cover				
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
Plot Size ( 15' Radius )							Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)		
1	<i>Salix eriocephala</i>	--	<i>Missouri Willow</i>	5	Y	FACW	Total Number of Dominant Species Across all Strata: <u>8</u> (B)		
2		--					Percent of Dominant Species that are OBL, FACW, or FAC: <u>87.50%</u> (A/B)		
3		--							
4		--							
5		--							
6		--							
7		--							
8		--							
9		--							
10		--							
				5	= Total Cover				
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet		
Plot Size ( 5' Radius )							Total % Cover of:		
1	<i>Typha angustifolia</i>	--	<i>Narrow-Leaf Cat-Tail</i>	15	Y	OBL	OBL species	<u>55</u> x 1 =	<u>55</u>
2	<i>Onoclea sensibilis</i>	--	<i>Sensitive Fern</i>	15	Y	FACW	FACW species	<u>60</u> x 2 =	<u>120</u>
3	<i>Carex lacustris</i>	--	<i>Lakebank Sedge</i>	15	Y	OBL	FAC species	<u>10</u> x 3 =	<u>30</u>
4	<i>Vicia americana</i>	--	<i>American Purple Vetch</i>	15	Y	FACU	FACU species	<u>20</u> x 4 =	<u>80</u>
5	<i>Phalaris arundinacea</i>	--	<i>Reed Canary Grass</i>	10	N	FACW	UPL species	<u>0</u> x 5 =	<u>0</u>
6	<i>Carex hystericina</i>	--	<i>Porcupine Sedge</i>	10	N	OBL	Column totals	<u>145</u> (A)	<u>285</u> (B)
7	<i>Parthenocissus inserta</i>	--	<i>Thicket-Creeper</i>	5	N	FACU	Prevalence Index = B/A =	<u>1.97</u>	
8	<i>Persicaria lapathifolia</i>	--	<i>Dock-Leaf Smartweed</i>	5	N	FACW			
9	<i>Lemna minor</i>	--	<i>Common Duckweed</i>	5	N	OBL			
10	<i>Equisetum arvense</i>	--	<i>Field Horsetail</i>	5	N	FAC			
11		--							
12		--							
13		--							
14		--							
15		--							
				100	= Total Cover				
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )							<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1	<i>Vitis riparia</i>	--	<i>River-Bank Grape</i>	5	Y	FAC	Definitions of Vegetation Strata:		
2		--					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
3		--					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
4		--							
5		--							
				5	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.									
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4									



This page intentionally left blank



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 21-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.0636379 Long.: -93.09242204 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Ronneby fine sandy loam NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 21</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply)	<b>Secondary Indicators</b> (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 21-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>	
1	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	Tree Stratum	20% 8 50% 20
2	<i>Populus deltoides</i> -- <i>Eastern Cottonwood</i>	10	Y	FAC	Sapling/Shrub Stratum	10 25
3	<i>Ulmus americana</i> -- <i>American Elm</i>	10	Y	FACW	Herb Stratum	22 55
4	<i>Quercus rubra</i> -- <i>Northern Red Oak</i>	10	Y	FACU	Woody Vine Stratum	0 0
5	--					
6	--					
7	--					
8	--					
9	--					
10	--					
		40 = Total Cover				
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	50	Y	FAC		
2	--					
3	--					
4	--					
5	--					
6	--					
7	--					
8	--					
9	--					
10	--					
		50 = Total Cover				
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status		
1	<i>Leersia virginica</i> -- <i>White Grass</i>	60	Y	FACW		
2	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	20	N	FACW		
3	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	N	FACW		
4	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	10	N	FACW		
5	<i>Calamagrostis canadensis</i> -- <i>Bluejoint</i>	10	N	OBL		
6	--					
7	--					
8	--					
9	--					
10	--					
11	--					
12	--					
13	--					
14	--					
15	--					
		110 = Total Cover				
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		
1	--					
2	--					
3	--					
4	--					
5	--					
		0 = Total Cover				

**50/20 Thresholds**

	20%	50%
Tree Stratum	8	20
Sapling/Shrub Stratum	10	25
Herb Stratum	22	55
Woody Vine Stratum	0	0

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 83.33% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

OBL species	<u>10</u> x 1 =	<u>10</u>
FACW species	<u>120</u> x 2 =	<u>240</u>
FAC species	<u>60</u> x 3 =	<u>180</u>
FACU species	<u>10</u> x 4 =	<u>40</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>200</u> (A)	<u>470</u> (B)
Prevalence Index = B/A =	<u>2.35</u>	

**Hydrophytic Vegetation Indicators:**

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation\* (explain)

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

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** - All woody vines greater than 3.28 ft in height.

**Hydrophytic vegetation present?** Y

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

Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
 U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 21-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/2	100					Sandy Loam	
6-12	10YR 4/2	90	7.5YR 5/8	10	C	M	Sandy Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 22-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 5 Lat.: 45.06174262 Long.: -93.09391703 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Water NWI Classification: PFO1A  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 22</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply)	<b>Secondary Indicators</b> (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>3</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 22-1w

Tree Stratum						50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	20%	50%		
1	<i>Populus deltoides</i> -- <i>Eastern Cottonwood</i>	10	Y	FAC	8	20		
2	<i>Ulmus americana</i> -- <i>American Elm</i>	10	Y	FACW	3	8		
3	<i>Quercus macrocarpa</i> -- <i>Burr Oak</i>	10	Y	FACU	10	25		
4	<i>Quercus rubra</i> -- <i>Northern Red Oak</i>	10	Y	FACU	0	0		
5	--							
6	--							
7	--							
8	--							
9	--							
10	--							
		40	= Total Cover					
Sapling/Shrub Stratum						Dominance Test Worksheet		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>8</u> (A)			
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC	Total Number of Dominant Species Across all Strata: <u>10</u> (B)			
2	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	5	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)			
3	--							
4	--							
5	--							
6	--							
7	--							
8	--							
9	--							
10	--							
		15	= Total Cover					
Herb Stratum						Prevalence Index Worksheet		
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:			
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC	OBL species <u>30</u> x 1 = <u>30</u>			
2	<i>Carex stricta</i> -- <i>Uptight Sedge</i>	10	Y	OBL	FACW species <u>20</u> x 2 = <u>40</u>			
3	<i>Iris versicolor</i> -- <i>Harlequin Blueflag</i>	10	Y	OBL	FAC species <u>30</u> x 3 = <u>90</u>			
4	<i>Iris pseudacorus</i> -- <i>Pale-Yellow Iris</i>	10	Y	OBL	FACU species <u>25</u> x 4 = <u>100</u>			
5	<i>Maianthemum canadense</i> -- <i>FALSE Lily-of-the-Valley</i>	5	N	FACU	UPL species <u>0</u> x 5 = <u>0</u>			
6	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	5	N	FACW	Column totals <u>105</u> (A) <u>260</u> (B)			
7	--				Prevalence Index = B/A = <u>2.48</u>			
8	--							
9	--							
10	--							
11	--							
12	--							
13	--							
14	--							
15	--							
		50	= Total Cover					
Woody Vine Stratum						Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation			
1	--				<input checked="" type="checkbox"/> Dominance test is >50%			
2	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
3	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
4	--				Problematic hydrophytic vegetation* (explain)			
5	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
		0	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet)						Definitions of Vegetation Strata:		
Duckweed present in the open water portion of the wetland.						<p><b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p><b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</p> <p><b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p><b>Woody vines</b> - All woody vines greater than 3.28 ft in height.</p>		
Note: This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4						Hydrophytic vegetation present? <u>Y</u>		





This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 23-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.0618631 Long.: -93.09251086 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Duluth silt loam, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 23</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 23-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	1	3
4	--				Woody Vine Stratum	20	50
5	--					0	0
6	--						
7	--						
8	--						
9	--						
10	--						
		<u>0</u> = Total Cover			<b>Dominance Test Worksheet</b>		
					Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)		
					Total Number of Dominant Species Across all Strata: <u>3</u> (B)		
					Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	5	Y	FAC	Total % Cover of:		
2	--				OBL species	<u>25</u> x 1 =	<u>25</u>
3	--				FACW species	<u>75</u> x 2 =	<u>150</u>
4	--				FAC species	<u>5</u> x 3 =	<u>15</u>
5	--				FACU species	<u>0</u> x 4 =	<u>0</u>
6	--				UPL species	<u>0</u> x 5 =	<u>0</u>
7	--				Column totals	<u>105</u> (A)	<u>190</u> (B)
8	--				Prevalence Index = B/A =	<u>1.81</u>	
9	--				<b>Hydrophytic Vegetation Indicators:</b>		
10	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation		
11	--				<input checked="" type="checkbox"/> Dominance test is >50%		
12	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
13	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
14	--				<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
15	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
		<u>5</u> = Total Cover			<b>Definitions of Vegetation Strata:</b>		
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic vegetation present?</b> <u>Y</u>		
1	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	60	Y	FACW			
2	<i>Persicaria sagittata</i> -- <i>Arrow-Leaf Tearthumb</i>	20	Y	OBL			
3	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	10	N	FACW			
4	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	5	N	FACW			
5	<i>Carex lacustris</i> -- <i>Lakebank Sedge</i>	5	N	OBL			
6	--						
7	--						
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
		<u>100</u> = Total Cover					
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status			
1	--						
2	--						
3	--						
4	--						
5	--						
		<u>0</u> = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 23-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 2/2	100					Muck	
2-6	10YR 3/2	100					Silty Loam	
6-12	10YR 5/1	100					Silty Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <input checked="" type="checkbox"/> Y
--	---

Remarks:

This page intentionally left blank



**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 24-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.059971 Long.: -93.103373 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Aquolls and histosols, ponded NWI Classification: PEM1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 24</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3)      _____ Roots (C3) _____ Algal Mat or Crust (B4)      _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5)      _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial      _____ Soils (C6) Imagery (B7)      _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave      _____ Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
Field Observations: Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>3</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 24-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	6	15
4	--				Woody Vine Stratum	19	48
5	--					0	0
6	--				<b>Dominance Test Worksheet</b>		
7	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)		
8	--				Total Number of Dominant Species Across all Strata: <u>3</u> (B)		
9	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
10	--	0	= Total Cover		<b>Prevalence Index Worksheet</b>		
Sapling/Shrub Stratum Plot Size ( 15' Radius )					Total % Cover of:		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	OBL species	<u>95</u> x 1 =	<u>95</u>
2	<i>Cornus alba</i> -- <i>Red Osier</i>	10	Y	FACW	FACW species	<u>10</u> x 2 =	<u>20</u>
3	--				FAC species	<u>20</u> x 3 =	<u>60</u>
4	--				FACU species	<u>0</u> x 4 =	<u>0</u>
5	--				UPL species	<u>0</u> x 5 =	<u>0</u>
6	--				Column totals	<u>125</u> (A)	<u>175</u> (B)
7	--				Prevalence Index = B/A =	<u>1.40</u>	
8	--				<b>Hydrophytic Vegetation Indicators:</b>		
9	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation		
10	--				<input checked="" type="checkbox"/> Dominance test is >50%		
11	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
12	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
13	--				Problematic hydrophytic vegetation* (explain)		
14	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
15	--	30	= Total Cover		<b>Definitions of Vegetation Strata:</b>		
Herb Stratum Plot Size ( 5' Radius )					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
1	<i>Typha spp.</i> -- <i>Cattails</i>	95	Y	OBL	<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2	--				<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
3	--				<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
4	--				<b>Hydrophytic vegetation present?</b> <u>Y</u>		
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--	95	= Total Cover				
Woody Vine Stratum Plot Size ( 30' Radius )							
1	--						
2	--						
3	--						
4	--						
5	--						
6	--						
7	--						
8	--						
9	--						
10	--	0	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							

**SOIL**

**Sampling Point:** 24-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 2/2	100					Muck	
4-20	10YR 2/2	100					Loam	
20-26	10YR 6/1	100					Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric soil present?   Y  

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 24-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S19  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.061181 Long.: -93.102609 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Aquolls and histosols, ponded NWI Classification: PSS1B  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 24</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 24-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	---	---	---	---	Tree Stratum	20%	50%
2	---	---	---	---	Sapling/Shrub Stratum	0	0
3	---	---	---	---	Herb Stratum	10	25
4	---	---	---	---	Woody Vine Stratum	6	15
5	---	---	---	---		0	0
6	---	---	---	---			
7	---	---	---	---			
8	---	---	---	---			
9	---	---	---	---			
10	---	---	---	---			
		0	= Total Cover				
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>		
1	<i>Frangula alnus</i> -- <i>Glossy FALSE Buckthorn</i>	20	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A)		
2	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	10	Y	FAC	Total Number of Dominant Species Across all Strata: <u>6</u> (B)		
3	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
4	<i>Cornus alba</i> -- <i>Red Osier</i>	10	Y	FACW			
5	---	---	---	---			
6	---	---	---	---			
7	---	---	---	---			
8	---	---	---	---			
9	---	---	---	---			
10	---	---	---	---			
		50	= Total Cover				
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Prevalence Index Worksheet</b>		
1	<i>Typha spp.</i> -- <i>Cattails</i>	20	Y	OBL	Total % Cover of:		
2	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	Y	FACW	OBL species	<u>20</u> x 1 =	<u>20</u>
3	---	---	---	---	FACW species	<u>30</u> x 2 =	<u>60</u>
4	---	---	---	---	FAC species	<u>30</u> x 3 =	<u>90</u>
5	---	---	---	---	FACU species	<u>0</u> x 4 =	<u>0</u>
6	---	---	---	---	UPL species	<u>0</u> x 5 =	<u>0</u>
7	---	---	---	---	Column totals	<u>80</u> (A)	<u>170</u> (B)
8	---	---	---	---	Prevalence Index = B/A =	<u>2.13</u>	
9	---	---	---	---			
10	---	---	---	---			
11	---	---	---	---			
12	---	---	---	---			
13	---	---	---	---			
14	---	---	---	---			
15	---	---	---	---			
		30	= Total Cover				
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>		
1	---	---	---	---	<input type="checkbox"/> Rapid test for hydrophytic vegetation		
2	---	---	---	---	<input checked="" type="checkbox"/> Dominance test is >50%		
3	---	---	---	---	<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
4	---	---	---	---	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
5	---	---	---	---	Problematic hydrophytic vegetation* (explain)		
		0	= Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
					<b>Definitions of Vegetation Strata:</b>		
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
					<b>Hydrophytic vegetation present?</b> <u>Y</u>		

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



**SOIL**

**Sampling Point:** 24-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 2/2	100					Muck	
2-10	10YR 2/2	100					Loam	
10-16	10YR 6/1	100					Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric soil present?   Y  

Remarks:

This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 25-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 3 Lat.: 45.06111927 Long.: -93.09234237 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Mahtomedi loamy sand, 6 to 12 percent slopes NWI Classification: PFO1A  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 25</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 25-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds	
Plot Size ( 30' Radius )							20%	50%
1	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	10	Y	FACW	8	20
2	<i>Populus deltoides</i>	--	<i>Eastern Cottonwood</i>	10	Y	FAC	10	25
3	<i>Ulmus americana</i>	--	<i>American Elm</i>	10	Y	FACW	28	70
4	<i>Quercus rubra</i>	--	<i>Northern Red Oak</i>	10	Y	FACU	0	0
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				40	=	Total Cover		
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
Plot Size ( 15' Radius )							Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)	
1	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	50	Y	FAC	Total Number of Dominant Species Across all Strata: <u>8</u> (B)	
2		--					Percent of Dominant Species that are OBL, FACW, or FAC: <u>87.50%</u> (A/B)	
3		--						
4		--						
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				50	=	Total Cover		
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
Plot Size ( 5' Radius )							Total % Cover of:	
1	<i>Laportea canadensis</i>	--	<i>Canadian Wood-Nettle</i>	30	Y	FACW	OBL species	<u>5</u> x 1 = <u>5</u>
2	<i>Carex tenera</i>	--	<i>Quill Sedge</i>	30	Y	FAC	FACW species	<u>75</u> x 2 = <u>150</u>
3	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	25	Y	FAC	FAC species	<u>140</u> x 3 = <u>420</u>
4	<i>Carex radiata</i>	--	<i>Eastern Star Sedge</i>	20	N	FAC	FACU species	<u>10</u> x 4 = <u>40</u>
5	<i>Impatiens capensis</i>	--	<i>Spotted Touch-Me-Not</i>	10	N	FACW	UPL species	<u>0</u> x 5 = <u>0</u>
6	<i>Leersia virginica</i>	--	<i>White Grass</i>	5	N	FACW	Column totals	<u>230</u> (A) <u>615</u> (B)
7	<i>Glyceria striata</i>	--	<i>Fowl Manna Grass</i>	5	N	OBL	Prevalence Index = B/A =	<u>2.67</u>
8	<i>Solanum dulcamara</i>	--	<i>Climbing Nightshade</i>	5	N	FAC		
9	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	5	N	FACW		
10	<i>Phalaris arundinacea</i>	--	<i>Reed Canary Grass</i>	5	N	FACW		
11		--						
12		--						
13		--						
14		--						
15		--						
				140	=	Total Cover		
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
Plot Size ( 30' Radius )							<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1		--					<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
2		--					<b>Hydrophytic vegetation present?</b> <u>Y</u>	
3		--						
4		--						
5		--						
				0	=	Total Cover		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.								
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4								

**SOIL**

**Sampling Point:** 25-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/2	100					Loamy Sand	
6-12	10YR 4/1	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric soil present?**   Y  

Remarks:

This page intentionally left blank



## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 26-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.05965961 Long.: -93.09105685 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udifluvents NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 26</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		





This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 27-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.05845383 Long.: -93.09001448 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Mahtomedi loamy sand, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 27</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 27-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Populus deltoides</i> -- <i>Eastern Cottonwood</i>	20	Y	FAC	8	20	
2	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	10	25	
3	<i>Ulmus americana</i> -- <i>American Elm</i>	10	Y	FACW	7	18	
4	--				0	0	
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		40	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status			
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	40	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)		
2	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	Total Number of Dominant Species Across all Strata: <u>7</u> (B)		
3	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
4	--						
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		50	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	OBL species	<u>0</u> x 1 = <u>0</u>	
2	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	10	Y	FACW	FACW species	<u>45</u> x 2 = <u>90</u>	
3	<i>Leersia virginica</i> -- <i>White Grass</i>	5	N	FACW	FAC species	<u>80</u> x 3 = <u>240</u>	
4	--				FACU species	<u>0</u> x 4 = <u>0</u>	
5	--				UPL species	<u>0</u> x 5 = <u>0</u>	
6	--				Column totals	<u>125</u> (A) <u>330</u> (B)	
7	--				Prevalence Index = B/A =	<u>2.64</u>	
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
		35	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation		
1	--				<input checked="" type="checkbox"/> Dominance test is >50%		
2	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
3	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
4	--				Problematic hydrophytic vegetation* (explain)		
5	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
		0	= Total Cover				
Definitions of Vegetation Strata:					<p><b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p><b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</p> <p><b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p><b>Woody vines</b> - All woody vines greater than 3.28 ft in height.</p>		
Hydrophytic vegetation present?					<u>Y</u>		
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<p><b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List:                  U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4</p>							





This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 28-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.0583455 Long.: -93.08767041 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Hayden fine sandy loam, 2 to 6 percent slopes NWI Classification: PUBG  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 28</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 28-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Quercus macrocarpa</i> -- Burr Oak	20	Y	FACU	<b>50/20 Thresholds</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"></td> <td style="width:20%; text-align: center;">20%</td> <td style="width:20%; text-align: center;">50%</td> </tr> <tr> <td>Tree Stratum</td> <td style="text-align: center;">4</td> <td style="text-align: center;">10</td> </tr> <tr> <td>Sapling/Shrub Stratum</td> <td style="text-align: center;">8</td> <td style="text-align: center;">20</td> </tr> <tr> <td>Herb Stratum</td> <td style="text-align: center;">25</td> <td style="text-align: center;">63</td> </tr> <tr> <td>Woody Vine Stratum</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table>			20%	50%	Tree Stratum	4	10	Sapling/Shrub Stratum	8	20	Herb Stratum	25	63	Woody Vine Stratum	0	0
	20%	50%																			
Tree Stratum	4	10																			
Sapling/Shrub Stratum	8	20																			
Herb Stratum	25	63																			
Woody Vine Stratum	0	0																			
2	--																				
3	--																				
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10		20	= Total Cover		<b>Dominance Test Worksheet</b> Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>85.71%</u> (A/B)																
Sapling/Shrub Stratum	Plot Size ( 15' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Rhamnus cathartica</i> -- European Buckthorn	20	Y	FAC			<b>Prevalence Index Worksheet</b> Total % Cover of: OBL species <u>95</u> x 1 = <u>95</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>185</u> (A) <u>335</u> (B) Prevalence Index = B/A = <u>1.81</u>														
2	<i>Fraxinus pennsylvanica</i> -- Green Ash	20	Y	FACW																	
3	--																				
4	--																				
5	--																				
6	--																				
7	--																				
8	--																				
9	--																				
10		40	= Total Cover																		
Herb Stratum	Plot Size ( 5' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	<i>Leersia oryzoides</i> -- Rice Cut Grass	30	Y	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																
2	<i>Carex lacustris</i> -- Lakebank Sedge	25	Y	OBL																	
3	<i>Leersia virginica</i> -- White Grass	20	Y	FACW																	
4	<i>Carex hystericina</i> -- Porcupine Sedge	20	Y	OBL																	
5	<i>Laportea canadensis</i> -- Canadian Wood-Nettle	10	N	FACW																	
6	<i>Lemna minor</i> -- Common Duckweed	10	N	OBL																	
7	<i>Persicaria sagittata</i> -- Arrow-Leaf Tearthumb	10	N	OBL																	
8	--																				
9	--																				
10	--																				
11	--																				
12	--																				
13	--																				
14	--																				
15		125	= Total Cover																		
Woody Vine Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status																	
1	--				<b>Definitions of Vegetation Strata:</b> <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.																
2	--																				
3	--																				
4	--																				
5	--																				
		0	= Total Cover		<b>Hydrophytic vegetation present?</b> <u>Y</u>																

Remarks: (Include photo numbers here or on a separate sheet)  
 Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
 U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4

**SOIL**

**Sampling Point:** 28-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-16	10YR 2/2	100					Loamy Sand	
16-20	10YR 4/2	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 29-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.05777478 Long.: -93.09033685 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udifluvents NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 29</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>3</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	



**VEGETATION** - Use scientific names of plants

Sampling Point: 29-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		20%	50%	
1 <i>Ulmus americana</i> -- <i>American Elm</i>	10	Y	FACW	Tree Stratum	2	5	
2				Sapling/Shrub Stratum	4	10	
3				Herb Stratum	23	58	
4				Woody Vine Stratum	0	0	
5				<b>Dominance Test Worksheet</b>			
6				Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)			
7				Total Number of Dominant Species Across all Strata: <u>3</u> (B)			
8				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)			
9				<b>Prevalence Index Worksheet</b>			
10	10 = Total Cover			Total % Cover of:			
Sapling/Shrub Stratum					OBL species <u>80</u> x 1 = <u>80</u>		
Plot Size ( 15' Radius )					FACW species <u>40</u> x 2 = <u>80</u>		
Absolute % Cover					FAC species <u>25</u> x 3 = <u>75</u>		
Dominant Species					FACU species <u>0</u> x 4 = <u>0</u>		
Indicator Status					UPL species <u>0</u> x 5 = <u>0</u>		
1 <i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	Column totals <u>145</u> (A) <u>235</u> (B)			
2				Prevalence Index = B/A = <u>1.62</u>			
3				<b>Hydrophytic Vegetation Indicators:</b>			
4				<input type="checkbox"/> Rapid test for hydrophytic vegetation			
5				<input checked="" type="checkbox"/> Dominance test is >50%			
6				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
7				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
8				Problematic hydrophytic vegetation* (explain)			
9				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
10	20 = Total Cover			<b>Definitions of Vegetation Strata:</b>			
Herb Stratum					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
Plot Size ( 5' Radius )					Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Absolute % Cover					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
Dominant Species					Woody vines - All woody vines greater than 3.28 ft in height.		
Indicator Status					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
1 <i>Carex lacustris</i> -- <i>Lakebank Sedge</i>	70	Y	OBL				
2 <i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	N	FACW				
3 <i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	10	N	FACW				
4 <i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	10	N	FACW				
5 <i>Alisma triviale</i> -- <i>Northern Water-Plantain</i>	10	N	OBL				
6 <i>Solanum dulcamara</i> -- <i>Climbing Nightshade</i>	5	N	FAC				
7							
8							
9							
10							
11							
12							
13							
14							
15							
	115 = Total Cover						
Woody Vine Stratum							
Plot Size ( 30' Radius )							
Absolute % Cover							
Dominant Species							
Indicator Status							
1							
2							
3							
4							
5							
	0 = Total Cover						
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 30-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.05754893 Long.: -93.08904695 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Hayden fine sandy loam, 2 to 6 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 30</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>      </u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 30-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	27	68
4	--				Woody Vine Stratum	0	0
5	--				<b>Dominance Test Worksheet</b>		
6	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)		
7	--				Total Number of Dominant Species Across all Strata: <u>1</u> (B)		
8	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
9	--				<b>Prevalence Index Worksheet</b>		
10	--	0 = Total Cover			Total % Cover of:		
					OBL species <u>112</u> x 1 = <u>112</u>		
					FACW species <u>23</u> x 2 = <u>46</u>		
					FAC species <u>0</u> x 3 = <u>0</u>		
					FACU species <u>0</u> x 4 = <u>0</u>		
					UPL species <u>0</u> x 5 = <u>0</u>		
					Column totals <u>135</u> (A) <u>158</u> (B)		
					Prevalence Index = B/A = <u>1.17</u>		
					<b>Hydrophytic Vegetation Indicators:</b>		
					<input type="checkbox"/> Rapid test for hydrophytic vegetation		
					<input checked="" type="checkbox"/> Dominance test is >50%		
					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
					Problematic hydrophytic vegetation* (explain)		
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
					<b>Definitions of Vegetation Strata:</b>		
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
					<b>Herb Stratum</b> Plot Size ( 5' Radius )		
1	<i>Carex stricta</i> -- <i>Upright Sedge</i>	85	Y	OBL			
2	<i>Carex lasiocarpa</i> -- <i>Woolly-Fruit Sedge</i>	10	N	OBL			
3	<i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i>	10	N	OBL			
4	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	N	FACW			
5	<i>Leersia virginica</i> -- <i>White Grass</i>	5	N	FACW			
6	<i>Impatiens capensis</i> -- <i>Spotted Touch-Me-Not</i>	5	N	FACW			
7	<i>Persicaria sagittata</i> -- <i>Arrow-Leaf Tearthumb</i>	5	N	OBL			
8	<i>Laportea canadensis</i> -- <i>Canadian Wood-Nettle</i>	3	N	FACW			
9	<i>Calamagrostis canadensis</i> -- <i>Bluejoint</i>	2	N	OBL			
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
					135 = Total Cover		
					<b>Woody Vine Stratum</b> Plot Size ( 30' Radius )		
1	--						
2	--						
3	--						
4	--						
5	--						
					0 = Total Cover		
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							

**SOIL**

**Sampling Point:** 30-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-2	10YR 2/1	100					Muck	
2-8	10YR 2/1	100					Loamy Sand	
8-14	10YR 5/1	95	10YR 5/8	5	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank



**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 31-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 5 Lat.: 45.05525888 Long.: -93.08752457 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Hayden fine sandy loam, 6 to 12 percent slopes NWI Classification: PABG  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 31</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 31-1w

Tree Stratum						50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status		20%	50%	
1	<i>Acer negundo</i> -- <i>Ash-Leaf Maple</i>	10	Y	FAC	Tree Stratum	4	10	
2	<i>Quercus rubra</i> -- <i>Northern Red Oak</i>	10	Y	FACU	Sapling/Shrub Stratum	4	10	
3	--				Herb Stratum	16	40	
4	--				Woody Vine Stratum	0	0	
5	--				<b>Dominance Test Worksheet</b>			
6	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)			
7	--				Total Number of Dominant Species Across all Strata: <u>5</u> (B)			
8	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)			
9	--				<b>Prevalence Index Worksheet</b>			
10	--				Total % Cover of:			
					OBL species <u>10</u> x 1 = <u>10</u>			
					FACW species <u>65</u> x 2 = <u>130</u>			
					FAC species <u>35</u> x 3 = <u>105</u>			
					FACU species <u>10</u> x 4 = <u>40</u>			
					UPL species <u>0</u> x 5 = <u>0</u>			
					Column totals <u>120</u> (A) <u>285</u> (B)			
					Prevalence Index = B/A = <u>2.38</u>			
		<u>20</u> = Total Cover			<b>Hydrophytic Vegetation Indicators:</b>			
					<input type="checkbox"/> Rapid test for hydrophytic vegetation			
					<input checked="" type="checkbox"/> Dominance test is >50%			
					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
					Problematic hydrophytic vegetation* (explain)			
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
					<b>Definitions of Vegetation Strata:</b>			
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.			
					<b>Hydrophytic vegetation present?</b> <u>Y</u>			
		<u>20</u> = Total Cover						
Sapling/Shrub Stratum		Absolute % Cover	Dominant Species	Indicator Status				
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC				
2	--							
3	--							
4	--							
5	--							
6	--							
7	--							
8	--							
9	--							
10	--							
		<u>20</u> = Total Cover						
Herb Stratum		Absolute % Cover	Dominant Species	Indicator Status				
1	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	30	Y	FACW				
2	<i>Osmundastrum cinnamomeum</i> -- <i>Cinnamon Fern</i>	30	Y	FACW				
3	<i>Iris versicolor</i> -- <i>Harlequin Blueflag</i>	5	N	OBL				
4	<i>Athyrium angustum</i> -- <i>Northern Lady Fern</i>	5	N	FAC				
5	<i>Lemna minor</i> -- <i>Common Duckweed</i>	5	N	OBL				
6	<i>Onoclea sensibilis</i> -- <i>Sensitive Fern</i>	5	N	FACW				
7	--							
8	--							
9	--							
10	--							
11	--							
12	--							
13	--							
14	--							
15	--							
		<u>80</u> = Total Cover						
Woody Vine Stratum		Absolute % Cover	Dominant Species	Indicator Status				
1	--							
2	--							
3	--							
4	--							
5	--							
		<u>0</u> = Total Cover						
Remarks: (Include photo numbers here or on a separate sheet)								
Duckweed present in the open water portion of the wetland.								
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4								



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 32-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 5 Lat.: 45.05459638 Long.: -93.08801415 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Hayden fine sandy loam, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 32</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply)	<b>Secondary Indicators</b> (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 32-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	--				Tree Stratum	20%	50%
2	--				Sapling/Shrub Stratum	0	0
3	--				Herb Stratum	4	10
4	--				Woody Vine Stratum	16	40
5	--					0	0
6	--				<b>Dominance Test Worksheet</b>		
7	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
8	--				Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
9	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
10	--	0	= Total Cover		<b>Prevalence Index Worksheet</b>		
Sapling/Shrub Stratum Plot Size ( 15' Radius )					Total % Cover of:		
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	OBL species	<u>60</u>	x 1 = <u>60</u>
2	--				FACW species	<u>20</u>	x 2 = <u>40</u>
3	--				FAC species	<u>20</u>	x 3 = <u>60</u>
4	--				FACU species	<u>0</u>	x 4 = <u>0</u>
5	--				UPL species	<u>0</u>	x 5 = <u>0</u>
6	--				Column totals	<u>100</u> (A)	<u>160</u> (B)
7	--				Prevalence Index = B/A = <u>1.60</u>		
8	--				<b>Hydrophytic Vegetation Indicators:</b>		
9	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation		
10	--				<input checked="" type="checkbox"/> Dominance test is >50%		
11	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
12	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
13	--				Problematic hydrophytic vegetation* (explain)		
14	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
15	--				<b>Definitions of Vegetation Strata:</b>		
Herb Stratum Plot Size ( 5' Radius )					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
1	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	20	Y	FACW	<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
2	<i>Carex lacustris</i> -- <i>Lakebank Sedge</i>	20	Y	OBL	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
3	<i>Carex hystericina</i> -- <i>Porcupine Sedge</i>	20	Y	OBL	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
4	<i>Bidens cernua</i> -- <i>Nodding Burr-Marigold</i>	10	N	OBL	<b>Hydrophytic vegetation present?</b> <u>Y</u>		
5	<i>Persicaria punctata</i> -- <i>Dotted Smartweed</i>	10	N	OBL			
6	--						
7	--						
8	--						
9	--				Total Cover = 80		
10	--				Woody Vine Stratum Plot Size ( 30' Radius )		
1	--				1		
2	--				2		
3	--				3		
4	--				4		
5	--				5		
					Total Cover = 0		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							

**SOIL**

**Sampling Point:** 32-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 2/2	100					Sandy Loam	
10-20	10YR 5/1	90	10YR 4/6	10	C	M	Sandy Loam	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 33-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S29  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.05273347 Long.: -93.08484468 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Hayden fine sandy loam, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 33</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 33-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		20%	50%	
1 <i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	10	Y	FACW	Tree Stratum	4	10	
2 <i>Salix nigra</i> -- <i>Black Willow</i>	10	Y	OBL	Sapling/Shrub Stratum	0	0	
3				Herb Stratum	23	58	
4				Woody Vine Stratum	0	0	
5				<b>Dominance Test Worksheet</b>			
6				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)			
7				Total Number of Dominant Species Across all Strata: <u>4</u> (B)			
8				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)			
9				<b>Prevalence Index Worksheet</b>			
10	20 = Total Cover			Total % Cover of:			
Sapling/Shrub Stratum					OBL species <u>50</u> x 1 = <u>50</u>		
Plot Size ( 15' Radius )					FACW species <u>85</u> x 2 = <u>170</u>		
1				FAC species <u>0</u> x 3 = <u>0</u>			
2				FACU species <u>0</u> x 4 = <u>0</u>			
3				UPL species <u>0</u> x 5 = <u>0</u>			
4				Column totals <u>135</u> (A) <u>220</u> (B)			
5				Prevalence Index = B/A = <u>1.63</u>			
6				<b>Hydrophytic Vegetation Indicators:</b>			
7				<input type="checkbox"/> Rapid test for hydrophytic vegetation			
8				<input checked="" type="checkbox"/> Dominance test is >50%			
9				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*			
10				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)			
11				Problematic hydrophytic vegetation* (explain)			
12				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
13				<b>Definitions of Vegetation Strata:</b>			
14				<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
15				<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.			
Herb Stratum					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
Plot Size ( 5' Radius )					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
1				<b>Hydrophytic vegetation present?</b> <u>Y</u>			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	115 = Total Cover						
Woody Vine Stratum							
Plot Size ( 30' Radius )							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10	0 = Total Cover						
Remarks: (Include photo numbers here or on a separate sheet)							
Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 34-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.05092766 Long.: -93.09508819 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udorthents, wet substratum NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 34</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 34-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds	
1	<i>Ulmus americana</i>	--	<i>American Elm</i>	25	Y	FACW	20%	50%
2	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	25	Y	FACW	10	25
3		--					8	20
4		--					20	50
5		--					0	0
6		--						
7		--						
8		--						
9		--						
10		--						
				50	= Total Cover			
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet	
1	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	30	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)	
2	<i>Cornus racemosa</i>	--	<i>Gray Dogwood</i>	5	N	FAC	Total Number of Dominant Species Across all Strata: <u>7</u> (B)	
3	<i>Salix petiolaris</i>	--	<i>Meadow Willow</i>	5	N	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
4		--						
5		--						
6		--						
7		--						
8		--						
9		--						
10		--						
				40	= Total Cover			
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet	
1	<i>Leersia oryzoides</i>	--	<i>Rice Cut Grass</i>	25	Y	OBL	Total % Cover of:	
2	<i>Onoclea sensibilis</i>	--	<i>Sensitive Fern</i>	20	Y	FACW	OBL species <u>75</u> x 1 = <u>75</u>	
3	<i>Carex stricta</i>	--	<i>Uptight Sedge</i>	20	Y	OBL	FACW species <u>75</u> x 2 = <u>150</u>	
4	<i>Carex lacustris</i>	--	<i>Lakebank Sedge</i>	20	Y	OBL	FAC species <u>40</u> x 3 = <u>120</u>	
5	<i>Bidens cernua</i>	--	<i>Nodding Burr-Marigold</i>	10	N	OBL	FACU species <u>0</u> x 4 = <u>0</u>	
6	<i>Athyrium angustum</i>	--	<i>Northern Lady Fern</i>	5	N	FAC	UPL species <u>0</u> x 5 = <u>0</u>	
7		--					Column totals <u>190</u> (A) <u>345</u> (B)	
8		--					Prevalence Index = B/A = <u>1.82</u>	
9		--						
10		--						
11		--						
12		--						
13		--						
14		--						
15		--						
				100	= Total Cover			
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators:	
1		--					<input type="checkbox"/> Rapid test for hydrophytic vegetation	
2		--					<input checked="" type="checkbox"/> Dominance test is >50%	
3		--					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
4		--					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
5		--					Problematic hydrophytic vegetation* (explain)	
				0	= Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
							<b>Definitions of Vegetation Strata:</b>	
							<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
							<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
							<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
							<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
							<b>Hydrophytic vegetation present?</b> <u>Y</u>	
Remarks: (Include photo numbers here or on a separate sheet)								
Duckweed present in the open water portion of the wetland.								
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4								





This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 35-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S29  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.05159607 Long.: -93.08659693 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Dundas fine sandy loam NWI Classification: PFO1C  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 35</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?    Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 35-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Populus deltoides</i> -- <i>Eastern Cottonwood</i>	20	Y	FAC	8	20	
2	<i>Fraxinus pennsylvanica</i> -- <i>Green Ash</i>	20	Y	FACW	4	10	
3	--				20	50	
4	--				0	0	
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		40 = Total Cover					
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status			
1	<i>Rhamnus cathartica</i> -- <i>European Buckthorn</i>	20	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
2	--				Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
3	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
4	--						
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		20 = Total Cover					
Herb Stratum					Prevalence Index Worksheet		
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Lemna minor</i> -- <i>Common Duckweed</i>	70	Y	OBL	OBL species	<u>80</u> x 1 = <u>80</u>	
2	<i>Iris versicolor</i> -- <i>Harlequin Blueflag</i>	10	N	OBL	FACW species	<u>40</u> x 2 = <u>80</u>	
3	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	10	N	FACW	FAC species	<u>40</u> x 3 = <u>120</u>	
4	<i>Carex cristatella</i> -- <i>Crested Sedge</i>	10	N	FACW	FACU species	<u>0</u> x 4 = <u>0</u>	
5	--				UPL species	<u>0</u> x 5 = <u>0</u>	
6	--				Column totals	<u>160</u> (A) <u>280</u> (B)	
7	--				Prevalence Index = B/A =	<u>1.75</u>	
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
		100 = Total Cover					
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> Prevalence index is ≤3.0* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
1	--				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
2	--						
3	--						
4	--						
5	--						
		0 = Total Cover			<b>Hydrophytic vegetation present?</b> <u>Y</u>		
Remarks: (Include photo numbers here or on a separate sheet) Duckweed present in the open water portion of the wetland.							
<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4							

**SOIL**

**Sampling Point:** 35-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 2/2	100					Loamy Sand	
10-20	10YR 4/1	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 36-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 1 Lat.: 45.05050598 Long.: -93.08727893 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udorthents, wet substratum NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 36</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply)	<b>Secondary Indicators</b> (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>      </u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		



**VEGETATION - Use scientific names of plants**

**Sampling Point:** 36-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status	<b>50/20 Thresholds</b>		
1	<i>Acer negundo</i> -- <i>Ash-Leaf Maple</i>	40	Y	FAC	Tree Stratum	20% 8	50% 20
2	--				Sapling/Shrub Stratum	5	13
3	--				Herb Stratum	2	6
4	--				Woody Vine Stratum	0	0
5	--				<b>Dominance Test Worksheet</b>		
6	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
7	--				Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
8	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
9	--				<b>Prevalence Index Worksheet</b>		
10	--	40 = Total Cover			Total % Cover of:		
					OBL species <u>0</u> x 1 = <u>0</u>		
					FACW species <u>7</u> x 2 = <u>14</u>		
					FAC species <u>70</u> x 3 = <u>210</u>		
					FACU species <u>0</u> x 4 = <u>0</u>		
					UPL species <u>0</u> x 5 = <u>0</u>		
					Column totals <u>77</u> (A) <u>224</u> (B)		
					Prevalence Index = B/A = <u>2.91</u>		
					<b>Hydrophytic Vegetation Indicators:</b>		
					<input type="checkbox"/> Rapid test for hydrophytic vegetation		
					<input checked="" type="checkbox"/> Dominance test is >50%		
					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
					Problematic hydrophytic vegetation* (explain)		
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
					<b>Definitions of Vegetation Strata:</b>		
					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
					Remarks: (Include photo numbers here or on a separate sheet)		
					Duckweed present in the open water portion of the wetland.		
					<b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4		

**SOIL**

**Sampling Point:** 36-1w

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/1	100					Loamy Sand	
6-12	10YR 4/1	90	10YR 4/6	10	C	M	Loamy Sand	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)
- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	<b>Hydric soil present?</b> <u>  Y  </u>
--	--

Remarks:

This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 37-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S31  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.04847978 Long.: -93.09652084 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udorthents, wet substratum NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 37</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1)      _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)      _____ Marl Deposits (B15) _____ Water Marks (B1)      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)      _____ Oxidized Rhizospheres on Living _____ Drift Deposits (B3)      _____ Roots (C3) _____ Algal Mat or Crust (B4)      _____ Presence of Reduced Iron (C4) _____ Iron Deposits (B5)      _____ Recent Iron Reduction in Tilled _____ Inundation Visible on Aerial      _____ Soils (C6) Imagery (B7)      _____ Thin Muck Surface (C7) _____ Sparsely Vegetated Concave      _____ Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>2</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	





This page intentionally left blank



**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 38-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S32  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.04991861 Long.: -93.08284293 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Dundas fine sandy loam NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 38</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 38-1w

Tree Stratum				Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds		
Plot Size ( 30' Radius )							20%	50%	
1	<i>Fraxinus pennsylvanica</i>	--	<i>Green Ash</i>	40	Y	FACW	Tree Stratum	10	25
2	<i>Quercus alba</i>	--	<i>Northern White Oak</i>	10	Y	FACU	Sapling/Shrub Stratum	4	10
3		--					Herb Stratum	20	50
4		--					Woody Vine Stratum	0	0
5		--					<b>Dominance Test Worksheet</b>		
6		--					Number of Dominant Species that are OBL, FACW, or FAC: <u>9</u> (A)		
7		--					Total Number of Dominant Species Across all Strata: <u>10</u> (B)		
8		--					Percent of Dominant Species that are OBL, FACW, or FAC: <u>90.00%</u> (A/B)		
9		--					<b>Prevalence Index Worksheet</b>		
10		--		50		= Total Cover	Total % Cover of:		
Sapling/Shrub Stratum				Absolute % Cover	Dominant Species	Indicator Status	OBL species <u>35</u> x 1 = <u>35</u>		
Plot Size ( 15' Radius )							FACW species <u>65</u> x 2 = <u>130</u>		
1	<i>Rhamnus cathartica</i>	--	<i>European Buckthorn</i>	20	Y	FAC	FAC species <u>60</u> x 3 = <u>180</u>		
2		--					FACU species <u>10</u> x 4 = <u>40</u>		
3		--					UPL species <u>0</u> x 5 = <u>0</u>		
4		--					Column totals <u>170</u> (A) <u>385</u> (B)		
5		--					Prevalence Index = B/A = <u>2.26</u>		
6		--					<b>Hydrophytic Vegetation Indicators:</b>		
7		--					<input type="checkbox"/> Rapid test for hydrophytic vegetation		
8		--					<input checked="" type="checkbox"/> Dominance test is >50%		
9		--					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
10		--					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
11		--					Problematic hydrophytic vegetation* (explain)		
12		--					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
13		--					<b>Definitions of Vegetation Strata:</b>		
14		--					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
15		--					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
Herb Stratum				Absolute % Cover	Dominant Species	Indicator Status	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
Plot Size ( 5' Radius )							<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
1	<i>Carex lacustris</i>	--	<i>Lakebank Sedge</i>	30	Y	OBL	<b>Hydrophytic vegetation present?</b> <u>Y</u>		
2	<i>Urtica dioica</i>	--	<i>Stinging Nettle</i>	10	Y	FAC			
3	<i>Phalaris arundinacea</i>	--	<i>Reed Canary Grass</i>	10	Y	FACW			
4	<i>Athyrium angustum</i>	--	<i>Northern Lady Fern</i>	10	Y	FAC			
5	<i>Onoclea sensibilis</i>	--	<i>Sensitive Fern</i>	10	Y	FACW			
6	<i>Osmunda claytoniana</i>	--	<i>Interrupted Fern</i>	10	Y	FAC			
7	<i>Myosoton aquaticum</i>	--	<i>Giant-Chickweed</i>	10	Y	FAC			
8	<i>Persicaria punctata</i>	--	<i>Dotted Smartweed</i>	5	N	OBL			
9	<i>Bidens frondosa</i>	--	<i>Devil's-Pitchfork</i>	5	N	FACW			
10		--							
11		--							
12		--							
13		--							
14		--							
15		--							
Woody Vine Stratum				Absolute % Cover	Dominant Species	Indicator Status			
Plot Size ( 30' Radius )									
1		--							
2		--							
3		--							
4		--							
5		--							
				0		= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



This page intentionally left blank

**WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region**

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 39-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S31  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.04789942 Long.: -93.0970369 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udorthents, wet substratum NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 39</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

**HYDROLOGY**

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present?    Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> Water table present?      Yes <u>  X  </u> No <u>      </u> Depth (inches): <u>  2  </u> Saturation present?      Yes <u>  X  </u> No <u>      </u> Depth (inches): <u>  0  </u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>  Y  </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:			







This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 40-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S31  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.04780139 Long.: -93.09678895 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Udorthents, wet substratum NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 40</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present?    Yes <u>X</u> No _____    Depth (inches): <u>1</u> Water table present?      Yes <u>X</u> No _____    Depth (inches): <u>0</u> Saturation present?        Yes <u>X</u> No _____    Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

**VEGETATION** - Use scientific names of plants

Sampling Point: 40-1w

Tree Stratum	Plot Size ( 30' Radius )	Absolute % Cover	Dominant Species	Indicator Status		
1	--				<b>50/20 Thresholds</b>	
2	--				Tree Stratum	20% 50%
3	--				Sapling/Shrub Stratum	0 0
4	--				Herb Stratum	2 5
5	--				Woody Vine Stratum	20 50
6	--					0 0
7	--				<b>Dominance Test Worksheet</b>	
8	--				Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)	
9	--				Total Number of Dominant Species Across all Strata: <u>4</u> (B)	
10	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
		<u>0</u>	= Total Cover		<b>Prevalence Index Worksheet</b>	
<b>Sapling/Shrub Stratum</b>	<b>Plot Size ( 15' Radius )</b>	<b>Absolute % Cover</b>	<b>Dominant Species</b>	<b>Indicator Status</b>	Total % Cover of:	
1	<i>Salix interior</i> -- <i>Sandbar Willow</i>	10	Y	FACW	OBL species	<u>60</u> x 1 = <u>60</u>
2	--				FACW species	<u>50</u> x 2 = <u>100</u>
3	--				FAC species	<u>0</u> x 3 = <u>0</u>
4	--				FACU species	<u>0</u> x 4 = <u>0</u>
5	--				UPL species	<u>0</u> x 5 = <u>0</u>
6	--				Column totals	<u>110</u> (A) <u>160</u> (B)
7	--				Prevalence Index = B/A = <u>1.45</u>	
8	--				<b>Hydrophytic Vegetation Indicators:</b>	
9	--				<input type="checkbox"/> Rapid test for hydrophytic vegetation	
10	--				<input checked="" type="checkbox"/> Dominance test is >50%	
11	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*	
12	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
13	--				Problematic hydrophytic vegetation* (explain)	
14	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
15	--				<b>Definitions of Vegetation Strata:</b>	
		<u>10</u>	= Total Cover		<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b>	<b>Plot Size ( 5' Radius )</b>	<b>Absolute % Cover</b>	<b>Dominant Species</b>	<b>Indicator Status</b>	<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
1	<i>Typha angustifolia</i> -- <i>Narrow-Leaf Cat-Tail</i>	60	Y	OBL	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2	<i>Phalaris arundinacea</i> -- <i>Reed Canary Grass</i>	20	Y	FACW	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.	
3	<i>Solidago gigantea</i> -- <i>Late Goldenrod</i>	20	Y	FACW		
4	--					
5	--					
6	--					
7	--					
8	--					
9	--					
10	--					
11	--					
12	--					
13	--					
14	--					
15	--					
		<u>100</u>	= Total Cover			
<b>Woody Vine Stratum</b>	<b>Plot Size ( 30' Radius )</b>	<b>Absolute % Cover</b>	<b>Dominant Species</b>	<b>Indicator Status</b>		
1	--				<b>Hydrophytic vegetation present?</b> <u>Y</u>	
2	--					
3	--					
4	--					
5	--					
		<u>0</u>	= Total Cover			

Remarks: (Include photo numbers here or on a separate sheet)  
Duckweed present in the open water portion of the wetland.

**Note:** This data sheet has been adapted to use the 2018 National Wetland Plant List:  
U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4



This page intentionally left blank

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Vadnais/Sucker Park Wetland Assessment City/County: Vadnais Heights/Ramsey Sampling Date: 06/16/2020  
 Applicant/Owner: Vadnais Lake Area Water Management Organization State: MN Sampling Point: 41-1w  
 Investigator(s): Rebecca Beduhn, Erin Budrow, Bailey Nelson Section, Township, Range: T30 R22 S30  
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): Concave  
 Slope (%): 2 Lat.: 45.0470916 Long.: -93.07931163 Datum: UTM NAD 83 ZONE 15N  
 Soil Map Unit Name: Zimmerman fine sand, 6 to 12 percent slopes NWI Classification: None  
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ significantly disturbed? Are "normal  
 Are vegetation \_\_\_\_\_, soil \_\_\_\_\_, or hydrology \_\_\_\_\_ naturally problematic? circumstances" present? Yes  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	<b>Is the sampled area within a wetland?</b> <u>Y</u>  If yes, optional wetland site ID: <u>Wetland 41</u>
Remarks: (Explain alternative procedures here or in a separate report.)  	

### HYDROLOGY

<b>Primary Indicators</b> (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary Indicators</b> (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
<b>Field Observations:</b> Surface water present? Yes <u>      </u> No <u>      </u> Depth (inches): <u>      </u> Water table present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>4</u> Saturation present? Yes <u>X</u> No <u>      </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Indicators of wetland hydrology present?</b> <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:		

**VEGETATION** - Use scientific names of plants

Sampling Point: 41-1w

Tree Stratum					50/20 Thresholds		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Fraxinus pennsylvanica</i> -- Green Ash	10	Y	FACW	4	10	
2	<i>Ulmus americana</i> -- American Elm	10	Y	FACW	0	0	
3	--				3	8	
4	--				0	0	
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		20 = Total Cover					
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size ( 15' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)		
1	--				Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	--				Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
3	--						
4	--						
5	--						
6	--						
7	--						
8	--						
9	--						
10	--						
		0 = Total Cover					
Herb Stratum					Prevalence Index Worksheet		
Plot Size ( 5' Radius )		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Phalaris arundinacea</i> -- Reed Canary Grass	5	Y	FACW	OBL species	<u>0</u> x 1 = <u>0</u>	
2	<i>Carex cristatella</i> -- Crested Sedge	5	Y	FACW	FACW species	<u>35</u> x 2 = <u>70</u>	
3	<i>Fraxinus pennsylvanica</i> -- Green Ash	5	Y	FACW	FAC species	<u>0</u> x 3 = <u>0</u>	
4	--				FACU species	<u>0</u> x 4 = <u>0</u>	
5	--				UPL species	<u>0</u> x 5 = <u>0</u>	
6	--				Column totals	<u>35</u> (A) <u>70</u> (B)	
7	--				Prevalence Index = B/A =	<u>2.00</u>	
8	--						
9	--						
10	--						
11	--						
12	--						
13	--						
14	--						
15	--						
		15 = Total Cover					
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ( 30' Radius )		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation		
1	--				<input checked="" type="checkbox"/> Dominance test is >50%		
2	--				<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
3	--				Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
4	--				Problematic hydrophytic vegetation* (explain)		
5	--				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
		0 = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet)					Definitions of Vegetation Strata:		
Duckweed present in the open water portion of the wetland.					<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					<b>Sapling/shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.		
					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
					<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.		
					<b>Hydrophytic vegetation present?</b> <u>Y</u>		
<p><b>Note:</b> This data sheet has been adapted to use the 2018 National Wetland Plant List: U.S. Army Corps of Engineers 2018. National Wetland Plant List, version 3.4</p>							





This page intentionally left blank

**Appendix D – Climate Summary Worksheet**

# Minnesota State Climatology Office

## Precipitation Worksheet Using Gridded Database

**Precipitation data for target wetland location:**

county: **Ramsey** township number: **30N**  
 township name: **White Bear** range number: **22W**  
 nearest community: **Cardigan Junction** section number: **30**

**Aerial photograph or site visit date:**

**Monday, June 15, 2020**

**Score using 1981-2010 normal period**

values are in inches A 'R' following a monthly total indicates a provisional value derived from <a href="#">radar-based estimates</a> .	first prior month: <b>May 2020</b>	second prior month: <b>April 2020</b>	third prior month: <b>March 2020</b>
<b>estimated precipitation total for this location:</b>	<b>3.96R</b>	<b>1.30R</b>	<b>2.42R</b>
there is a 30% chance this location will have less than:	2.82	2.14	1.31
there is a 30% chance this location will have more than:	3.92	3.40	1.91
type of month: <b>dry normal wet</b>	<b>wet</b>	<b>dry</b>	<b>wet</b>
monthly score	<b>3 * 3 = 9</b>	<b>2 * 1 = 2</b>	<b>1 * 3 = 3</b>
<b>multi-month score:</b>			
6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		<b>14 (Normal)</b>	

**Other Resources:**

- [retrieve daily precipitation data](#)
- [view radar-based precipitation estimates](#)
- [view weekly precipitation maps](#)
- [Evaluating Antecedent Precipitation Conditions](#) (BWSR)