Wetland Delineation Report
Blue Line Light Rail Extension (LRT)

Twin Cities, MN

SEH No. Project No. HDRMN 131353
The procedures described in this report and the field methods used constitute an official wetland delineation in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and applicable Regional Supplement.

The field delineation was completed by Jeff Olson (WDCP #1089). The methodology meets the standards and criteria described in the manual, and conforms to the applicable standards and regulations in force at the time the fieldwork was completed. The results reflect conditions present at the time of the delineation.

I hereby certify that this report was prepared by me or under my direct supervision.

Prepared by: Jeff Olson, Senior Scientist
WDCP, No. 1089

Date: September 30, 2015
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1.0 Introduction

The purpose of this study was to investigate the project area, identify areas meeting the technical criteria for wetlands, delineate the jurisdictional extent of the wetland basins, and classify the wetland habitat for the proposed Blue Line Extension – Light Rail Transit (LRT). This field delineation, upon approval by state regulatory agencies and the Army Corps of Engineers, will be the basis on which wetland impacts from the proposed project will be determined.

This report describes the methodology and results of the field delineations performed in May and June, 2015. Figures are included at the end of the report. Figure 1 shows a General Location Map of the project area. Figure 2 is a multipage mapbook area of wetland investigation, depicting aerial imagery, updated National Wetland Inventory (NWI), Public Waters Inventory (PWI) and delineated wetland boundaries throughout the project area. Figure 3 is a multipage mapbook depicting area of wetland investigation, aerial imagery, delineated wetland boundaries, mapped SSURGO hydric soils, and LIDAR 2-foot contours. Appendix A contains wetland delineation forms. Appendix B contains ground photos of delineated wetlands. Appendix C contains a summary of climatic conditions in the period antecedent to the wetland delineation.

A separate wetland delineation report will be submitted covering the CSAH 103 (West Broadway Avenue) Reconstruction project area in Brooklyn Park, MN. The CSAH 103 (West Broadway Avenue) Reconstruction Project extends from several hundred feet north of 93rd Avenue North southward to several hundred feet south of Candlewood Drive North.

For purposes of this report and associated WCA processing, Wes Boll will be representing various WCA LGUs and issuing, with their input and on their behalf, Notices of Decision and approvals for wetlands delineated north of 36th Avenue North (City of Robbinsdale). Karen Wold will be representing relevant WCA LGUs south of 36th Ave North (City of Robbinsdale) and will issue Notices of Decision and approvals for this segment of the project. It should be noted that all relevant WCA LGUs within the BLRT Extension Project area retain their LGU status; however, delegating duties to two representatives streamlines the approval process.

1.1 Site Description

Generally, the project area is characterized as rural north of Highway 610 and urbanized south of Highway 610 and eastward to downtown Minneapolis. Land north of Highway 610 is a mosaic of agricultural fields, abandoned old fields, and manicured corporate campus.
The project area north of Highway 610 lies at the southern edge of the Anoka Sandplain. As such, existing plant communities are underlain by thick deposits of sand. The extent of wetlands in this area is diminishing over time as a result of sinking water tables.

The project area from approximately Candlewood Drive North on the City of Brooklyn Park south to approximately 36th Avenue North in the City of Robbinsdale is generally quite urbanized.

The large central portion of the project area from approximately 36th Ave North (City of Robbinsdale) south to Highway 55 (Cities of Golden Valley and Minneapolis) is characterized by abundant open land and parkland with a mosaic of forested habitat types and aquatic resources.

The portion of the project area from Theodore Wirth Park eastward into downtown Minneapolis along Highway 55 is highly urbanized with no natural habitat types present.

2.0 Wetland Delineation

2.1 Wetlands Definition

Wetlands are defined in federal Executive Order 11990 as follows:

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

According to U.S. Army Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region (USACE 2012) one positive indicator (except in certain situations) from each of three elements must be present in order to make a positive wetland determination, which are as follows:

- Greater than 50 percent dominance of hydrophytic plant species.
- Presence of hydric soil.
- The area is either permanently or periodically inundated, or soil is saturated to the surface during the growing season of the dominant vegetation.

2.2 Methodology

2.2.1 Resource Review

Topographic maps, the USDA Web Soil Survey (USDA 2014) for Hennepin County, MN; the DNR Public Water Inventory (PWI), the county hydric soils list for Hennepin County, and the updated National Wetland Inventory (NWI), were reviewed prior to visiting the site to locate potential wetland habitats. Figure 2 is a multipage mapbook depicting area of wetland investigation, color aerial imagery, updated NWI mapping, Public Water Inventory (PWI) map, and delineated wetland boundaries. Figure 3 is a multipage mapbook depicting area of wetland investigation, color aerial imagery, delineated wetland boundaries, mapped SSURGO soils and LIDAR 2-foot contours within the project area.

2.2.2 Field Procedures

The project site was examined on several dates in May and June, 2015 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
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 Midwest Region (USACE 2012).

Field notes, samples, and photographs were taken at representative locations in each wetland basin. One transect of two sampling pits (an upland sampling pit and a wetland sampling pit) was established perpendicular to the edge of all delineated wetlands in the project area. Sampling pits are labeled “SP X-1 up” for the upland sampling pit and “SP X-1 wet” for the wetland sampling pit. The respective wetland and upland plots for each wetland were documented on Wetland Determination Data Forms (Appendix A). Sampling pit locations are depicted in Figure 2 (24 sheets). Relevant photographs of the site and representative sample locations are included in Appendix B; all other photographs will be retained on file at SEH.

Flags were not placed at wetland boundaries for the Blue Line Extension (LRT). The location of the delineated wetland boundaries were collected with a sub-meter accuracy Global Positioning System (GPS) unit and mapped. The wetland edge is considered the highest extent of the wetland basin; areas above the boundary fail to meet the three required wetland parameters while areas below the edge meet the wetland parameters required by the field delineation methodology. The results of the delineation are shown on Figures 2 and 3. The sampling points noted identify where data was collected and are recorded on corresponding Wetland Determination Data Forms (see Appendix A).

2.3 Hydrophytic/Wetland Vegetation

Wetland plant species nomenclature follows the National Wetland Plant List (USACE 2014). Identification was aided when necessary with field guides for the region. Vegetation was sampled in nested circular plots: 5-ft radius for herbaceous species, 15-ft radius for shrubs, and 30-ft radius for trees and vines.

2.4 Hydric/Wetland Soils

Soils were observed for hydric soil characteristics. Soils were examined in cores taken with a soil probe. Soil profiles were observed at a depth necessary to confirm hydric soil characteristics. Typical soil profile depths are within 18-24 inches below ground surface to allow for: (1) observation of an adequate portion of the soil profile to determine presence/absence of hydric soil characteristics; (2) observation of hydrology including depth to the water table and saturated soils; and, (3) identification of disturbances (e.g., buried horizon, plow line, etc.). Where site conditions preclude observing soil profile depths at the typical 18-24 inches below ground surface or where observed hydric soil indicators are documented above or below 18-24 inches below ground surface, justification is provided. Soil color determinations were made using MUNSELL Soil Color Charts (Gretag-Macbeth 1994). Site soil characteristics were compared to those mapped and described in the Soil Survey for Hennepin County (USDA 2014). Hydric soil characteristics were compared to those identified in the Midwest Region Supplement (USACE 2012) and the most recent version of the Natural Resources Conservation Service (NRCS) publication Field Indicators of Hydric Soils in the United States, Version 7.0 (USDA 2010).
Hydric Soil Category rating (USDA 2014) was also reviewed for soils in the project area. Mapped soils within the project area and associated Hydric Soil Category Rating depicted in Figure 3.
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>NAME</th>
<th>HYDRIC STATUS RATING</th>
<th>% SLOPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1B</td>
<td>Anoka and Zimmerman soils, terrace</td>
<td>0% (not hydric)</td>
<td>2 - 6 %</td>
</tr>
<tr>
<td>D6A</td>
<td>Verndale sandy loam, acis substratum, 0-2% slopes</td>
<td>0% (not hydric)</td>
<td>0-2 %</td>
</tr>
<tr>
<td>D10A</td>
<td>Forada sandy loam</td>
<td>100%</td>
<td>0-2 % slopes</td>
</tr>
<tr>
<td>D17A</td>
<td>Duelm loamy sand</td>
<td>8% (not hydric)</td>
<td>0 – 2%</td>
</tr>
<tr>
<td>D20A</td>
<td>Isan sandy loam</td>
<td>95% (hydric)</td>
<td>0 – 2%</td>
</tr>
<tr>
<td>D21A</td>
<td>Isan sandy loam</td>
<td>100%</td>
<td>0-1 %</td>
</tr>
<tr>
<td>D25A</td>
<td>Soderville loamy fine sand, terrace</td>
<td>10% (not hydric)</td>
<td>0 – 3%</td>
</tr>
<tr>
<td>D30A</td>
<td>Seelyeville and Markey soils, depressional</td>
<td>100% (hydric)</td>
<td>0 – 1%</td>
</tr>
<tr>
<td>D31A</td>
<td>Urban Land – Duelm Complex</td>
<td>5%</td>
<td>0-2 %</td>
</tr>
<tr>
<td>D33B</td>
<td>Urban Land – Dorset Complex</td>
<td>0%</td>
<td>0-8 %</td>
</tr>
<tr>
<td>D64B</td>
<td>Urban Land – Hubbard Complex</td>
<td>0%</td>
<td>0-8 %</td>
</tr>
<tr>
<td>D67B</td>
<td>Hubbard loamy sand, Mississippi River Valley</td>
<td>3%</td>
<td>2-6 %</td>
</tr>
<tr>
<td>D67C</td>
<td>Hubbard loamy sand, Mississippi River</td>
<td>0%</td>
<td>6-12%</td>
</tr>
<tr>
<td>L28A</td>
<td>Sugarcreek fine sandy loam, occasionally flooded</td>
<td>90%</td>
<td>0-2%</td>
</tr>
<tr>
<td>L36A</td>
<td>Hamel – Overwash-Hamel Complex</td>
<td>45%</td>
<td>1-4 %</td>
</tr>
<tr>
<td>L50A</td>
<td>Houghton and Muskego Soils, depressional</td>
<td>100%</td>
<td>0-2 %</td>
</tr>
<tr>
<td>L52C</td>
<td>Urban Land – Lester Complex</td>
<td>0%</td>
<td>2-18 %</td>
</tr>
<tr>
<td>L54A</td>
<td>Urban land – Dundas Complex</td>
<td>0%</td>
<td>0-3%</td>
</tr>
<tr>
<td>SYMBOL</td>
<td>NAME</td>
<td>HYDRIC STATUS RATING</td>
<td>% SLOPES</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>----------------------</td>
<td>----------</td>
</tr>
<tr>
<td>U1A</td>
<td>Urban Land – Udorthents, wet substratum, complex</td>
<td>0%</td>
<td>0-2%</td>
</tr>
<tr>
<td>U2A</td>
<td>Udorthents, wet substratum</td>
<td>0% (not hydric)</td>
<td>0 – 2%</td>
</tr>
<tr>
<td>U4A</td>
<td>Urban Land – Udipsamments (cut and fill land) complex,</td>
<td>0%</td>
<td>0 - 2%</td>
</tr>
</tbody>
</table>

The above soils information is taken from the USDA Web Soil Survey for Hennepin County Minnesota.

2.5 Hydrology

Primary and secondary indicators of hydrology were identified in the field to determine the presence or absence of wetland hydrology and are listed in each wetland description. Subsurface wetland hydrology indicators were examined using the soil cores and/or soil pits as deep as 24 inches to confirm soil saturation in the upper 12 inches of the soil profile.

2.5.1 Wetland Classification

Wetland classification follows the methods described in *Wetlands and Deepwater Habitats of the United States* (Cowardin, et al. 1979) and Circular 39. Wetland classification is also provided following *Wetland Plants and Plant Communities of Minnesota & Wisconsin* (Eggers and Reed 2011).

3.0 Results

Antecedent precipitation data from the Minnesota Climatological Working Group (University of Minnesota) show the project area to have received a normal amount of precipitation. See Appendix C for additional information. All vegetation was identifiable, including all dominant species.

Forty wetland basins (1-17, 26-42, and 44-51) were delineated in and near the BLRT Extension Project. Other wetlands (18-25, and 43) are described in the Wetland Delineation Report prepared for the CSAH 103 (West Broadway Avenue) Reconstruction project. Characteristics of basins within the BLRT Extension Project are summarized in Table 2 and described in detail below.

### Table 2
Wetland Characteristics

<table>
<thead>
<tr>
<th>Wetland ID</th>
<th>Updated NWI Mapping</th>
<th>Hydric Soil Mapping</th>
<th>Field Verified Cowardin</th>
<th>Eggers &amp; Reed Class.</th>
<th>Circ. 39 Class.</th>
<th>Wetland Sheet Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>PEM1A</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>1</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W2</td>
<td>PEM1C</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W3</td>
<td>PEM1A</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>1</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W4</td>
<td>Not mapped</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas. flooded</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>Wetland ID</td>
<td>Updated NWI Mapping</td>
<td>Hydric Soil Mapping</td>
<td>Field Verified Cowardin</td>
<td>Eggers &amp; Reed Class.</td>
<td>Circ. 39 Class.</td>
<td>Wetland Sheet Number</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>-------------------------</td>
<td>-----------------------</td>
<td>----------------</td>
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<td>-------</td>
</tr>
<tr>
<td>W5</td>
<td>PFO1A</td>
<td>Yes</td>
<td>PFO1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W6</td>
<td>PFO1A</td>
<td>Yes</td>
<td>PFO1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W7</td>
<td>PEM1A</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W8</td>
<td>PFO1A</td>
<td>Yes</td>
<td>PFO1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W9</td>
<td>Not mapped</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W10</td>
<td>Not mapped</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Roadside ditch</td>
</tr>
<tr>
<td>W11</td>
<td>PEM1A</td>
<td>Partially</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
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<td>W12</td>
<td>Not mapped</td>
<td>Yes</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W13</td>
<td>PEM1A</td>
<td>Partially</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>2</td>
<td>Natural basin</td>
</tr>
<tr>
<td>W14</td>
<td>PEM1A</td>
<td>Yes</td>
<td>PUBGx</td>
<td>Deep Marsh</td>
<td>Type 4</td>
<td>3</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W15</td>
<td>Not mapped</td>
<td>Yes</td>
<td>PSS1A</td>
<td>Shrub Carr</td>
<td>Type 6</td>
<td>3</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W16</td>
<td>PUBGx/PEM1C</td>
<td>No</td>
<td>PUBGx</td>
<td>Deep Marsh</td>
<td>Type 4</td>
<td>4</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W17</td>
<td>Not mapped</td>
<td>No</td>
<td>PSS1A</td>
<td>Shrub Carr</td>
<td>Type 6</td>
<td>4</td>
<td>Excavated for stormwater management</td>
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<tr>
<td>W18 – W25 are part of the CSAH 103 Project</td>
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<td>W26</td>
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<td>No</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>8</td>
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<tr>
<td>W27</td>
<td>PEM1C</td>
<td>No</td>
<td>PEM1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>10</td>
<td>Excavated for stormwater management</td>
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<td>W28</td>
<td>PABGx/PEM1C</td>
<td>Yes</td>
<td>PFO1A</td>
<td>Seas, flooded basin</td>
<td>Type 1</td>
<td>11</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W29</td>
<td>PEM1C</td>
<td>Yes</td>
<td>PEM1C</td>
<td>Shallow Marsh</td>
<td>Type 3</td>
<td></td>
<td>Natural basin, likely excavated to augment stormwater management</td>
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<tr>
<td>Wetland ID</td>
<td>Updated NWI Mapping</td>
<td>Hydric Soil Mapping</td>
<td>Field Verified Cowardin</td>
<td>Eggers &amp; Reed Class.</td>
<td>Circ. 39 Class.</td>
<td>Wetland Sheet Number</td>
<td>Notes</td>
</tr>
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<td>------------</td>
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<tr>
<td>W30</td>
<td>PUBG/PEM1A</td>
<td>No</td>
<td>PUBGx</td>
<td>Open Water</td>
<td>Type 5</td>
<td>14</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W31</td>
<td>PSS1A</td>
<td>No</td>
<td>PSS1A</td>
<td>Shrub Carr</td>
<td>Type 6</td>
<td>16</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W32</td>
<td>PFO1A</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>17</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W33</td>
<td>PABG</td>
<td>No</td>
<td>PUBGx</td>
<td>Open Water</td>
<td>Type 5</td>
<td>17</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W34</td>
<td>PEM1F/PEM1F</td>
<td>Yes</td>
<td>PEM1F</td>
<td>Deep Marsh</td>
<td>Type 4</td>
<td>17</td>
<td>Natural basin, perhaps excavated to augment stormwater management</td>
</tr>
<tr>
<td>W35</td>
<td>PEM1F</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>17</td>
<td>Mostly a railroad ditch excavated for ballast</td>
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<tr>
<td>W36</td>
<td>PSS1A</td>
<td>No</td>
<td>PSS1A</td>
<td>Shrub Carr</td>
<td>Type 6</td>
<td>17</td>
<td>Mostly a wide railroad ditch excavated for ballast</td>
</tr>
<tr>
<td>W37</td>
<td>Not mapped</td>
<td>No</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>17</td>
<td>Railroad ditch</td>
</tr>
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<td>W38</td>
<td>PFO1A/PABG</td>
<td>No</td>
<td>PUBGx</td>
<td>Open Water</td>
<td>Type 5</td>
<td>18</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W39</td>
<td>PFO1A</td>
<td>No</td>
<td>PUBGx</td>
<td>Open Water</td>
<td>Type 5</td>
<td>18</td>
<td>Excavated for stormwater management</td>
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<td>W40</td>
<td>PFO1A</td>
<td>No</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>19</td>
<td>Railroad ditch</td>
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<td>W41</td>
<td>Not mapped</td>
<td>No</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>19</td>
<td>Railroad ditch</td>
</tr>
<tr>
<td>W42</td>
<td>Not mapped</td>
<td>No</td>
<td>PSS1A</td>
<td>Shrub Carr</td>
<td>Type 6</td>
<td>20</td>
<td>Railroad ditch</td>
</tr>
<tr>
<td>W43 is part of the CSAH 103 Project</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W44</td>
<td>PABG</td>
<td>No</td>
<td>PUBGx</td>
<td>Open Water</td>
<td>Type 5</td>
<td>16</td>
<td>Railroad ditch</td>
</tr>
<tr>
<td>W45</td>
<td>Not mapped</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>16</td>
<td>Excavated for stormwater management</td>
</tr>
<tr>
<td>W46</td>
<td>PFO1A</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>19</td>
<td>Partially natural basin, partially excavated for stormwater management</td>
</tr>
<tr>
<td>W47</td>
<td>PEM1C</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>19</td>
<td>Partially natural basin, partially excavated for stormwater management</td>
</tr>
<tr>
<td>W48</td>
<td>R2UBG</td>
<td>No</td>
<td>R2UBGx</td>
<td>Riverine</td>
<td>Type 4</td>
<td>20</td>
<td>Old backwater of</td>
</tr>
<tr>
<td>Wetland ID</td>
<td>Updated NWI Mapping</td>
<td>Hydric Soil Mapping</td>
<td>Field Verified Cowardin</td>
<td>Eggers &amp; Reed Class.</td>
<td>Circ. 39 Class.</td>
<td>Wetland Sheet Number</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>-------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>-------</td>
</tr>
<tr>
<td>W49</td>
<td>PFO1A</td>
<td>No</td>
<td>PFO1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>20</td>
<td>Railroad ditch</td>
</tr>
<tr>
<td>W50</td>
<td>PFO1A</td>
<td>No</td>
<td>PEM1A</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>19</td>
<td>Railroad ditch</td>
</tr>
<tr>
<td>W51</td>
<td>PEMA</td>
<td>Yes</td>
<td>PEMA</td>
<td>Seas. flooded basin</td>
<td>Type 1</td>
<td>3</td>
<td>Wetland Mitigation Bank for Target Corporation</td>
</tr>
</tbody>
</table>

**Wetlands 1-13**

These hydrologically isolated basins all are located north of Highway 610 and have been mapped by the updated NWI variously as PEM1A, PEM1C and PFO1A. These basins are underlain by hydric soils and have been hydrologically modified as a result of dwindling ground water over the past decades. Most of these basins are dominated by invasive plant species such as reed canary grass.

**Wetlands 14-17**

These basins are located north of and south of Highway 610 and have been excavated for stormwater management. Wetlands 14 and 15 were excavated in what is mapped as hydric soils. Wetlands 16 and 17 were excavated in non-hydric soils. The updated NWI mapped Wetland 14 as PEM1A, and Wetland 16 as PUBGx/ PEM1C and did not map Wetlands 15 and 17.

**Wetland 18 – 25 and 43**

These wetlands are described in the Wetland Delineation Report for the CSAH 103 (West Broadway) reconstruction project and are not included in this report.

**Wetland 26**

Wetland 26 is a small isolated roadside ditch located approximately 500 feet north of Brooklyn Boulevard on the west side of West Broadway Avenue. This ditch was not mapped by the updated NWI and it is not underlain by mapped hydric soils. It was excavated in uplands for the purpose of stormwater management.

**Wetlands 27 – 30**

Wetlands 27 – 30 are used for stormwater management and are located between Interstate 94 and Highway 100. Wetland 27 is mapped by the updated NWI as PEM1C and is not underlain by hydric soils. Wetland 28 is mapped by the NWI as PABGx/ PEM1C and is underlain by hydric soils. Wetland 29 is mapped by the NWI as PEM1C and is underlain by hydric soils. Wetland 30 is mapped by the NWI as PUBG/ PEM1A and is not underlain by hydric soils.
Wetland 31

Wetland 31 is a long linear ditch that extends along the west side of the existing BNSF railroad tracks in the City of Robbinsdale, roughly between Lowry Avenue North and 35th Avenue North. The updated NWI has mapped this basin as PSS1A/ PABG/ PEM1A and it is not underlain by mapped hydric soils. This railroad ditch was created long ago and the plant communities that have developed over time have matured into a functioning wetland mosaic.

Wetland 32, 33 and 45

This wetland complex lies within the City of Robbinsdale along the west side (Wetlands 32/33) and the east side (Wetland 45) of the BNSF railroad tracks. The updated NWI has mapped this complex as PUBG/ PFO1A/ PSS1C/ PEM1C/ PEM1F/ PABG. The southern tip of Wetland 32/45 is underlain with mapped hydric soil; however, the middle and northern portion of this complex is not mapped with hydric soils. Wetland 33 is not underlain with mapped hydric soils. Wetland 32 lies partly within Walter Sochacki Park. Wetland 33 is also known as Grimes Pond and is in part within South Halifax Park.

Wetland 34

Wetland 34 is located a considerable distance west of the BNSF railroad tracks partly within the City of Robbinsdale and partly within the City of Golden Valley. The updated NWI has mapped Wetland 34 as PABG, PEM1F, PEM1A, and PFO1A. Most of Wetland 34 is underlain with mapped hydric soils. Wetland 34, also known as Rice Lake, lies within Walter Sochacki Park.

Wetlands 35 and 36

Wetlands 35 and 36 lie within the City of Robbinsdale, roughly between 26th Avenue North and 29th Avenue North, on the west side (Wetland 35) and east side (Wetland 36) of the BNSF railroad tracks. Wetland 35 is mapped by the updated NWI as PEM1F and Wetland 36 is mapped as PSS1A. Wetland 35 and 36 are not mapped as being underlain by hydric soils. Wetlands 35 and 36 were excavated as ditches for stormwater management.

Wetland 37

Wetland 37 is a linear ditch along the west side of the BNSF railroad tracks and the east side Kewaunee Way in the City of Golden Valley. The updated NWI has not mapped this ditch as a wetland and the soil survey has not mapped hydric soils here. Wetland 37 was excavated in uplands for stormwater management.

Wetland 38 and 39

Wetlands 38 and 39 are located in the City of Golden Valley just north of Golden Valley Road on the west side (Wetland 38) and east side (Wetland 39) of the BNSF railroad tracks. The updated NWI has mapped these basins as PUBG, PABG and PFO1A. The soil survey has not mapped hydric soils in these basins. Wetland 38 lies within Mary Hills Park. Wetland 39 lies partly within Minneapolis Parks and Recreation Board land.

Wetlands 40 and 50

Wetlands 40 and 50 are a linear ditch along the east side of the existing BNSF railroad tracks, near 16th Avenue North, in the City of Golden Valley. The updated NWI has not
mapped this ditch as wetland. The soil survey did not map hydric soils in this ditch. Wetlands 40 and 50 were excavated in uplands for stormwater management.

**Wetland 41**

Wetland 41 is a linear ditch located along the east side of the BNSF railroad tracks, just north of Plymouth Avenue North, in the City of Golden Valley. Wetland 41 was not mapped as wetland by the updated NWI. The soil survey did not map hydric soils within Wetland 41. Wetland 41 was excavated in uplands for stormwater management.

**Wetlands 42 and 49**

Wetlands 42 and 49 are linear ditches that are located along the east side (Wetland 42) and the west side (Wetland 49) of the existing BNSF railroad tracks, partly within the City of Golden Valley and partly within the City of Minneapolis. These ditches are located near the intersection of Xerxes Avenue North and Oak Park Ave North. Wetland 42 was not mapped by the updated NWI. Wetland 49 is mapped by the NWI as PABGx and PFO1A. The soil survey did not map hydric soils within these ditches. These ditches were excavated in uplands for stormwater management.

**Wetlands 46 and 47**

Wetlands 46 and 47 are located along the west side of the BNSF railroad tracks, north and south of Plymouth Avenue North, in the City of Golden Valley. This wetland complex is adjacent to Bassett Creek and associated backwaters. The updated NWI has mapped this complex as PFO1A, PEM1A, PEM1C and riverine. The soil survey has not mapped hydric soils within this complex.

**Wetland 48**

Wetland 48 is located on the east and west sides of the existing BNSF railroad tracks, just north of Highway 55, in the City of Minneapolis. Wetland 48 is an old channel of Bassett Creek. Wetland 48 is mapped by the updated NWI as riverine. The soil survey has mapped Wetland 48 as non-hydric. Wetland 48, now used for stormwater management, enters a large culvert which flows south under Highway 55.

**Wetland 51**

Wetland 51 is located on the Target Corporation campus north of Highway 610. Much of Wetland 51 is underlain by hydric soils. The updated NWI has mapped Wetland 51 as PEM1A. Wetland 51 is a wetland mitigation bank created in 2004 by the Target Corporation to compensate for wetlands impacted during construction of the campus. Several feet of soil were removed from Wetland 51 in order for it to have adequate wetland hydrology.

### 4.0 Regulatory Considerations

Basins excavated in uplands for the purpose of storing or conveying stormwater would typically be outside of the scope of the Minnesota Wetland Conservation Act (WCA). These basins would not typically be jurisdictional per the WCA.

Basins with no inlets or outlets are isolated hydrologically on the landscape. If an Approved Jurisdictional Determination (JD) is sought from the US Army Corps of Engineers (Corps), then the Corps would typically not have jurisdiction over isolated basins. If a Preliminary JD
is sought from the Corps, then the Corps would have jurisdiction over all wetlands whether they are isolated or not.

Wetlands in the project area may be regulated by agencies at the local, regional, state, and federal levels including the USACE and the EPA at the federal level.

Construction plans that propose any direct alteration or indirect impact to wetlands or watercourses within the project area will require permits from the appropriate regulatory agencies. Violation of wetland regulations can result in substantial civil and/or criminal penalties.
5.0 Bibliography


List of Figures

Figure 1 – General Location Map

Figure 2 – Mapbook: NWI, PWI, Delineated Boundaries, Aerial Imagery

Figure 3 – Mapbook: Hydric Soils SSURGO Map, LIDAR 2-foot contours, Delineated Boundaries, Aerial Imagery
Figure 2 - Delineated Wetlands

Page 4

METRO Blue Line Extension

Legend
- Blue Line Extension Stations
- Blue Line Extension
- Area of Wetland Investigation
- Wetland Impacts
- Wetland Sample Point
- Delineated Wetland
- Wetland Impacts

Legend
- Blue Line Extension Station
- Blue Line Extension
- Area of Wetland Investigation
- Wetland Impacts
- Wetland Sample Point
- Delineated Wetland

Projected: Hennepin County NAD83
Source: Hennepin County, Metro Transit, LewisDOT, Lewis, HDR Engineering Inc., and SEH Inc.
Figure 2 - Delineated Wetlands

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METRO Blue Line Extension

DRAFT
Figure 2 - Delineated Wetlands

Projection: Hennepin County NAD83
Source: Hennepin County, State Transit, LIDST, Henn, HDR Engineering Inc., and SEH Inc.
Figure 2 - Delineated Wetlands
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METRO Blue Line Extension
Figure 3 - Hydric Soils

Legend
- Blue Line Stations
- Blue Line Alignment
- Area of Hydric and nonhydric
- Wetland Impact Footprint
- Wetland Sampling Point
- Delineated Wetland
- City Boundary
- Preliminary Construction Limits
- Metro Blue Line Extension
- Public Water Wetland
- Public Water Basin
- Stormwater Inlet
- Parcel

Hydric Soils (SSURGO)
- Hydric (100%)
- Predominantly Hydric (66 to 99%)
- Partially Hydric (33 to 65%)
- Predominantly nonhydric (1 to 32%)
- Nonhydric (0 to 1%)

Contours
- PWI Stream
- OMF Facility
- Corridor
- Preliminary Construction Limits Along BNSF
- Area of Wetland Investigation
- Wetland Sample Point
- Wetland Impact Footprint

Projection: Hennepin County NAD83
Source: Hennepin County, MnDOT, MNDNR, HDR Engineering Inc., SEH Inc., and USDA

METRO Blue Line Extension

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Figure 3 - Hydric Soils

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METRO Blue Line Extension
Figure 3 - Hydric Soils

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnWNR, HDR Engineering Inc., SEH Inc., and USDA.
Figure 3 - Hydric Soils

Legend
- Black Line Stations
- Blue Line Alignment
- Area of Potential Investigation
- Limited Impact Footprint
- BNSF Survey Point
- Delineated Wetland
- City Boundary
- Potential Construction Limits Using BMPs
- Centerline
- High Quality
- HHS Designated (2015)
- Public Stabilization
- Public Stabilization
- Priority Areas
- Watershed
- Hydric Areas (100%)
- Predominantly Hydric (66 to 99%)
- Predominantly nonhydric (1 to 32%)
- Predominantly nonhydric (0 to 1%)
- Nonhydric (0 to 1%)

Hydric Soils (SSURGO)
- Public Water Wetland
- NWI Updated (2015)
- OMF Facility Corridor
- Preliminary Construction Limits Along BNSF
- City Boundary
- Delineated Wetland
- Wetland Sample Point
- Wetland Impact Footprint
- Area of Wetland Investigation
- Blue Line Alignment
- Blue Line Stations

Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA

Projection: Hennepin County NAD83

9/28/2015

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Figure 3 - Hydric Soils

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METRO Blue Line Extension

Legend
- Blue Line Stations
- Blue Line Alignment
- Area of Wetland Investigation
- Wetland Impact Footprint
- Wetland Sample Point
- Delineated Wetland
- City Boundary
- Preliminary Construction Limits Along BNSF Corridor
- OMF Facility
- NWI Updated (2015)
- Public Water Basin
- Public Water Wetland
- PW Stream
- Contours

Hydric Soils (2008)
- Hydric (100%)
- Predominantly Hydric (66 to 99%)
- Partially Hydric (33 to 65%)
- Predominantly Nonhydric (1 to 32%)
- Nonhydric (0 to 1%)
- Forest

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnWRL, HDR Engineering Inc., SEH Inc., and USDA.

0 300 600 Feet

9/28/2015
Figure 3 - Hydric Soils

Legend
- Blue Line Stations
- Blue Line Alignment
- Area of Wetland investigation
- Wetland Impact Footprint
- Wetland Sample Point
- Delineated Wetland
- Area of Wetland Impact
- Wetland Impact Footprint
- Area of Wetland Investigation
- Blue Line Alignment
- Blue Line Stations

Legend
- Hydric (100%)
- Predominantly Hydric (66 to 99%)
- Partially Hydric (33 to 65%)
- Predominantly nonhydric (1 to 32%)
- Nonhydric (0 to 1%)
- Contours
- PWI Stream
- Public Water Basin
- Public Water Wetland
- NWI Updated (2015)
- OMF Facility
- Corridor
- Preliminary Construction Limits Along BNSF
- City Boundary
- OMF Facility
- Corridor
- PWI Stream
- Public Water Basin
- Public Water Wetland
- NWI Updated (2015)
- City Boundary
- Delineated Wetland
- Area of Wetland Impact
- Area of Wetland Investigation
- Blue Line Alignment
- Blue Line Stations

Source: Hennepin County, Metro Transit, MnDOT, HEC, SEH, and USDA.

Projection: Hennepin County NAD83

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METRO Blue Line Extension
Figure 3 - Hydric Soils

Legend
- Blue Line Stations
- Blue Line Alignment
- Area of Wetland investigation
- Wetland Impact Footprint
- Contours
- OMF Facility
- Corridor
- Preliminary Construction Limits Along BNSF
- City Boundary
- Delineated Wetland
- Wetland Sample Point
- Wetland Impact Footprint
- Area of Wetland Investigation
- Blue Line Alignment
- Blue Line Stations

Hydric Soils (SSURGO)
- Hydric (100%)
- Predominantly Hydric (66 to 99%)
- Predominantly nonhydric (1 to 32%)
- Nonhydric (0 to 1%)
- Forest

Sources:
- Hennepin County
- Metro Transit
- Minnesota Department of Transportation
- Minnesota Pollution Control Agency
- Minnesota Department of Natural Resources
- Minnesota Department of Agriculture

Projection: Hennepin County NAD83
Scale: Hennepin County
Metrorail
MSTT, KEO, HDR Engineering Inc.,
Seibert Inc., and USDA

DRAFT

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METRO Blue Line Extension
Figure 3 - Hydric Soils

Legend:
- Blue Line Stations
- Blue Line Alignment
- Area of Wetland Investigation
- Wetland Impact Footprint
- Wetland Sample Point
- Delineated Wetland
- City Boundary
- Preliminary Construction Limits Along BNSF Corridor
- Wright County
- HWI Database (2015)
- Public Water Basin
- Public Water Wetland
- PWL Drainage
- Wetland Impact

Hydric Soils Breakdown:
- Hydric (100%)
- Predominantly Hydric (66 to 99%)
- Partially Hydric (33 to 65%)
- Predominantly Nonhydric (1 to 32%)
- Nonhydric (0 to 1%)
- Parcel

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnWHR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 BLRT Hydric Soils 11x17D mapper.png

9/28/2015

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Appendix A

Wetland Determination Data Forms
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site Blue Line**

**Applicant/Owner:** Met Council  
**City/County:** Brooklyn Park/ Henn  
**Investigator(s):** Jeff Olson, Rebecca Beduhn  
**Landform (hillslope, terrace, etc.):** hillslope  
**Slope (%):** 0-1  
**Local relief (concave, convex, none):** concave  
**Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes**

| Are climatic/hydrologic conditions of the site typical for this time of the year? | Y (If no, explain in remarks) |
| Are vegetation , soil significantly disturbed? |  |
| Are vegetation , soil naturally problematic? |  |

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** Y  
- **Hydric soil present?** Y  
- **Indicators of wetland hydrology present?** N  

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>Species</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Acer negundo</em> -- Ash-Leaf Maple</td>
<td>10</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

**Total Cover for Trees** = 10

#### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Species</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Lonicera tatarica</em> -- Twinsisters</td>
<td>2</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
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<tr>
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<td>--</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Total Cover for Saplings/Shrubs** = 2

#### Herb stratum

<table>
<thead>
<tr>
<th>Species</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Phalaris arundinacea</em> -- Reed Canary Grass</td>
<td>90</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td><em>Verbascum blattaria</em> -- White Moth Mullein</td>
<td>2</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>3</td>
<td><em>Agrimonia rostellata</em> -- Beaked Grooveburr</td>
<td>2</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
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<td>9</td>
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</tr>
<tr>
<td>10</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Total Cover for Herbs** = 94

#### Woody vine stratum

<table>
<thead>
<tr>
<th>Species</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

**Total Cover for Woody Vines** = 0

### Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
- Total Number of Dominant Species Across all Strata: 2 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>OBL species</th>
<th>Total % Cover</th>
<th>FACW species</th>
<th>Total % Cover</th>
<th>FACU species</th>
<th>Total % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>90</td>
<td>2</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

**Column totals** = 106 (A) 234 (B)

**Prevalence Index** = B/A = 2.21

### Hydrophytic Vegetation Indicators:

- **Rapid test for hydrophytic vegetation**
  - X Dominance test is >50%
  - X Prevalence index is ≤3.0*

- **Morphological adaptations** (provide supporting data in Remarks or on a separate sheet)

- **Problematic hydrophytic vegetation** (explain)

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>9-12</td>
<td>N-25</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>clayey sapric muck</td>
<td></td>
</tr>
<tr>
<td>12-28</td>
<td>2.5Y5/1</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>clayey fine sand</td>
<td></td>
</tr>
</tbody>
</table>

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

Hydric Soil Indicators:
- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):
Type: [ ]
Depth (inches): [ ]

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:

- Surface water present? Yes [ ] No [X] Depth (inches): [ ]
- Water table present? Yes [ ] No [X] Depth (inches): [ ]
- Saturation present? Yes [ ] No [X] Depth (inches): [ ]

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Does not meet criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line: ___________________________ City/County: Brooklyn Park/ Henn
Applicant/Owner: Met Council Sampling Date: May 12, 2015
Investigator(s): Jeff Olson, Rebecca Beduhn
Landform (hillslope, terrace, etc.): depression
Slope (%): 0-1
Local relief (concave, convex, none): concave
Slope (%): 0-1 Lat: 45.1409
Long: 93.3834 Datum: 
Section, Township, Range: s6, 119n, 21w
Soil Map Unit Name D21A - Isan sandy loam depressional , 0-1% slopes
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation , soil significantly disturbed? 
Are vegetation , soil naturally problematic? 
SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y
Is the sampled area within a wetland? Y
If yes, optional wetland site ID: 
Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus tremuloides -- Quaking Aspen</td>
<td>25</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Acer negundo -- Ash-Leaf Maple</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum (Plot size: 15' Radius )</td>
<td>35 =Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum (Plot size: 5' Radius )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>90</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Rubus allegheniensis -- Allegheny Blackberry</td>
<td>5</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
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<td></td>
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<tr>
<td>7</td>
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</tr>
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<td>8</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum (Plot size: 30' Radius )</td>
<td>95 =Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<tr>
<td>3</td>
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<td>6</td>
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</tr>
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<td>7</td>
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</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across all Strata: 3 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:
OBL species 0 x 1 = 0
FACW species 90 x 2 = 180
FACU species 5 x 4 = 20
FAC species 35 x 3 = 105
UPL species 0 x 5 = 0
Column totals 130 (A) 305 (B)
Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance test is >50%
X 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

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>15-18</td>
<td>N-25</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>clayey sapric muck</td>
<td></td>
</tr>
<tr>
<td>18-28</td>
<td>2.5Y5/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fine sand</td>
<td></td>
</tr>
</tbody>
</table>

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

### Hydric Soil Indicators:
- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):
Type:  
Depth (inches):  
Remarks:  
Hydric soil present?  Y

### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>Geomorphic Position (D2)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Observations:
- Surface water present? Yes  No  X Depth (inches):  >24 inches
- Water table present? Yes  No  X Depth (inches):  >24 inches
- Saturation present? Yes  No  X Depth (inches):  >24 inches

Indicators of wetland hydrology present?  Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology. Hummocky.
WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site Blue Line</th>
<th>City/County:</th>
<th>Sampling Date:</th>
<th>Applicant/Owner:</th>
<th>State:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brooklyn Park/ Henn</td>
<td>May 12, 2015</td>
<td>Met Council</td>
<td>MN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investigator(s):</th>
<th>Section, Township, Range:</th>
<th>Landform (hillslope, terrace, etc.):</th>
<th>Local relief (concave, convex, none):</th>
<th>Slope (%):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeff Olson, Rebecca Beduhn</td>
<td>s5, 119n, 21w</td>
<td>hillslope</td>
<td>concave</td>
<td>0-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Soil Map Unit Name</th>
<th>Lat:</th>
<th>Long:</th>
<th>NWI Classification:</th>
<th>Datum:</th>
</tr>
</thead>
<tbody>
<tr>
<td>D30A - Seeleyville and Markey mucks, depressional 0-1% slopes</td>
<td>45.1392</td>
<td>93.3762</td>
<td>PFO1A/ PEM1C</td>
<td></td>
</tr>
</tbody>
</table>

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Is the sampled area within a wetland?</th>
</tr>
</thead>
</table>

If yes, optional wetland site ID: 

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>Rapid test for hydrophytic vegetation</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>Problematic hydrophytic vegetation* (explain)</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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhamnus cathartica</td>
<td>--</td>
<td>European Buckthorn</td>
<td>5</td>
<td>Y</td>
<td>FAC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phalaris arundinacea</td>
<td>--</td>
<td>Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>Leonurus cardiaca</td>
<td>--</td>
<td>motherwort</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>Alliaria petiolata</td>
<td>--</td>
<td>Garlic-Mustard</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>Galium aparine</td>
<td>--</td>
<td>Sticky-Willy</td>
<td>15</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>Solidago gigantea</td>
<td>--</td>
<td>Late Goldenrod</td>
<td>5</td>
<td>N</td>
<td>FACW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation present?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam with organic matters</td>
</tr>
<tr>
<td>20-30</td>
<td>2.5Y 5/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fine sand</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

Type: 

Depth (inches): 

Hydric soil present?  N

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**

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

**Field Observations:**

- Surface water present? Yes  No  X  Depth (inches): >30inches
- Water table present? Yes  No  X  Depth (inches): >30inches
- Saturation present? Yes  No  X  Depth (inches): >30inches

Indicators of wetland hydrology present?  N

Remarks:

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Does not meet criteria for wetland hydrology.  Gopher mounds observed.
WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site</th>
<th>Blue Line LRT</th>
<th>City/County:</th>
<th>Brooklyn Park/ Henn</th>
<th>Sampling Date:</th>
<th>May 12, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant/Owner</td>
<td>Met Council</td>
<td>State:</td>
<td>MN</td>
<td>Sampling Point:</td>
<td>sp2-1wet</td>
</tr>
<tr>
<td>Investigator(s):</td>
<td>Jeff Olson, Rebecca Beduhn</td>
<td>Section, Township, Range:</td>
<td>s5, 119n, 21w</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landform (hillslope, terrace, etc.):</td>
<td>depression</td>
<td>Local relief (concave, convex, none):</td>
<td>concave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slope (%):</td>
<td>0-1</td>
<td>Lat:</td>
<td>45.1392</td>
<td>Long:</td>
<td>93.3762</td>
</tr>
<tr>
<td>Soil Map Unit Name D30A - Seeleyville and Markey mucks depressive-hydric, 0-1% slopes</td>
<td></td>
<td>NWI Classification:</td>
<td>PFO1A/ PEM1C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks) Y (If needed, explain any answers in remarks.)

Are vegetation, soil significantly disturbed? Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: ________________

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Tree Stratum (Plot size: 30’ Radius)

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>---</td>
<td>---</td>
<td>---</td>
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<tr>
<td>3</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Sapling/Shrub stratum (Plot size: 15’ Radius)

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea -- Reed Canary Grass</td>
<td>90</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td>Urtica dioica -- Stinging Nettle</td>
<td>10</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>7</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Herb stratum (Plot size: 5’ Radius)

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Woody vine stratum (Plot size: 30’ Radius)

<table>
<thead>
<tr>
<th>Remarks: (Include photo numbers here or on a separate sheet)</th>
</tr>
</thead>
</table>

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:
OBL species 0 x 1 = 0
FACW species 100 x 2 = 200
FAC species 0 x 3 = 0
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0
Column totals 100 (A) 200 (B)
Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*
Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
Problematic hydrophytic vegetation* (explain)

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

US Army Corps of Engineers Midwest Region
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20</td>
<td>N/2.5</td>
<td>100</td>
<td>sapric muck</td>
</tr>
<tr>
<td>20-22</td>
<td>2.5Y 6/4</td>
<td>100</td>
<td>loamy coarse sand</td>
</tr>
<tr>
<td>22-36</td>
<td>2.5Y 5/3</td>
<td>100</td>
<td>fine sand</td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- X Histosol (A1)
- X Histic Epipedon (A2)
- X Black Histic (A3)
- X Hydrogen Sulfide (A4)
- X Stratified Layers (A5)
- X 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 
- Hydric soil present? Y

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? Yes No X Depth (inches): >36inches
- Water table present? Yes No X Depth (inches): >36inches
- Saturation present? Yes No X Depth (inches): >36inches

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology.

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line:  
Applicant/Owner: Met Council

City/County: Brooklyn Park/ Henn  
State: MN  
Sampling Date: May 20, 2015

Investigator(s): Jeff Olson  
Section, Township, Range: s6, 119n, 21w

Landform (hillslope, terrace, etc.): terrace  
Local relief (concave, convex, none): concave

Slope (%): 0-1  
Lat: 45.1386  
Long: 93.3886  
Datum:

Soil Map Unit Name D30A - Seeleyville and Markey mucks depressional, 0-1% slope  
NWI Classification: PEM1A

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

Are vegetation, soil significantly disturbed? 
Are vegetation, soil naturally problematic?  
Yes

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>N</td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
</table>
| 1  
*Populus tremuloides* -- Quaking Aspen | 70 | Y | FAC |
| 2  
*Prunus serotina* -- Black Cherry | 10 | N | FACU |
| 3 |
| 4 |
| 5 |

80 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum: (Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
</table>
| 1  
*Rhamnus cathartica* -- *European Buckthorn* | 30 | Y | FAC |
| 2 |
| 3 |
| 4 |
| 5 |

30 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum: (Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
</table>
| 1  
*Galium aparine* -- cleavers | 15 | FACW |
| 2  
*Fragaria virginiana* -- strawberry | 10 | FACU |
| 3  
*Rubus allegheniensis* -- raspberry | 10 | FACU |
| 4  
*Parthenocissus quinquefolia* -- virginia creeper | 10 | FACU |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |

45 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum: (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| OBL species | 0 x 1 = 0 |
| FACW species | 15 x 2 = 30 |
| FAC species | 100 x 3 = 300 |
| FACU species | 40 x 4 = 160 |
| UPL species | 0 x 5 = 0 |

Column totals: 155 (A) 490 (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: 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

Hydrophytic vegetation present? Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>N/2.5</td>
<td>Sandy muck</td>
</tr>
</tbody>
</table>

#### SOIL

**Type:** C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

#### Restrictive Layer (if observed):

- **Type:**
- **Depth (inches):**
- **Remarks:**

**Hydric soil present?** N

#### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

#### Field Observations:

- **Surface water present?** Yes  No  X  Depth (inches): >24 inches
- **Water table present?** Yes  No  X  Depth (inches): >24 inches
- **Saturation present?** Yes  No  X  Depth (inches): >24 inches

**Indicators of wetland hydrology present?** N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Does not meet criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line: Allis-Chalmers Dam
City/County: Milwaukee
Applicant/Owner: Met Council
State: WI
Investigator(s): Jeff Olson, Rebecca Beduhn
Section, Township, Range: 36N, 119W, 21W
Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): 0-1
Lat.: 45.1386
Long.: 93.3866
Datum: WGS 84
Soil Map Unit Name: D30A - Seeleyville and Markey Mucks depressional, 0-1% slopes
NWI Classification: PEM1A

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

- Hydrophytic vegetation present? Y
- Hydric soil present? Y
- Indicators of wetland hydrology present? Y
- Is the sampled area within a wetland? Y

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Stratum Type</th>
<th>Plot Size</th>
<th>Species</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>15' Radius</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>5' Radius</td>
<td>Phalaris arundinacea</td>
<td>70</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rubus allegheniensis</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urtica dioica</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
- Total Number of Dominant Species Across all Strata: 2 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 100 x 2 = 200
  - FAC species: 0 x 3 = 0
  - FACU species: 0 x 4 = 0
  - UPL species: 0 x 5 = 0
- Column totals: 100 (A) 200 (B)
- Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation: X
- Prevalence index: ≤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

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>N/2.5</td>
<td>100 Sandy Gleyed Matrix (S4)</td>
<td>sandy muck</td>
</tr>
<tr>
<td>16-30</td>
<td>N/2.5</td>
<td>100 Depleted Matrix (F3)</td>
<td>mucky sand</td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
<th>Hydric soil present?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Depth (inches):
- >30 inches
- >30 inches

**Indicators of wetland hydrology present?** Y

**Remarks:**

Meets criteria for wetland hydrology. Hummocky.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line:
Applicant/Owner: Met Council
Investigator(s): Jeff Olson

City/County: Brooklyn Park/ Henn
State: MN
Section, Township, Range: s6, 119n, 21w
Sampling Date: May 20, 2015
Sampling Point: sp3-1wet2

Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): 0-1

Lat: 45.1386
Long: 93.3886
Datum: 

Soil Map Unit Name D30A - Seeleyville and Markey mucks, 0-1% slopes
NWI Classification: PEM1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y

Are vegetation, soil significantly disturbed? Y
Are vegetation, soil naturally problematic? Y

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y
Remarks: (If needed, explain any answers in remarks.)

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

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>95</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Urtica dioica</td>
<td>Stinging Nettle</td>
<td>5</td>
<td>N</td>
<td>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>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

= Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1
Total Number of Dominant Species Across all Strata: 1
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation
X: Dominance test is >50%
X: 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

Hydrophytic vegetation present? Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist)</td>
<td>%</td>
</tr>
<tr>
<td>0-24</td>
<td>N/2.5</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- **X** Histosol (A1)
- **—** Histic Epipedon (A2)
- **—** Black Histic (A3)
- **—** Hydrogen Sulfide (A4)
- **—** Stratified Layers (A5)
- **—** 2 cm Muck (A10)
- **—** Depleted Below Dark Surface (A11)
- **—** Thick Dark Surface (A12)
- **—** Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- **Coast Prairie Redox** (A16) (LRR K, L, R)
- **—** Dark Surface (S7) (LRR K, L)
- **—** 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- **—** Iron-Manganese Masses (F12) (LRR K, L, R)
- **—** Very Shallow Dark Surface (TF12)
- **—** Other (explain in remarks)

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
<th>&gt;24 inches</th>
<th>Indicators of wetland hydrology present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td>&gt;24 inches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td>&gt;24 inches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Indicates capillary fringe)

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology. Hummocky.

US Army Corps of Engineers  Midwest Region
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site Blue Line**

**Applicant/Owner:** Hennepin Co.

**Investigator(s):** Jeff Olson

**Landform (hillslope, terrace, etc.):** terrace

**Slope (%):** three

**Latitude:** 45.1305

**Local relief (concave, convex, none):** concave

**Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes**

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

**Are vegetation, soil significantly disturbed?**

**Are vegetation, soil naturally problematic?**

**SUMMARY OF FINDINGS**

**Hydrophytic vegetation present?** Y

**Hydric soil present?** Y

**Indicators of wetland hydrology present?** N

**Is the sampled area within a wetland?** N

**Remarks:** (Explain alternative procedures here or in a separate report.)

#### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Quercus rubra -- Northern Red Oak</td>
<td>10</td>
<td>Y</td>
<td>FACU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Populus tremuloides -- Quaking Aspen</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Acer negundo -- Ash-Leaf Maple</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>50 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum: (Plot size: 15' Radius )</th>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 7 (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10 = Total Cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 71.43% (A/B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poa pratensis -- Kentucky Blue Grass</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Onoclea sensibilis -- Sensitive Fern</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Phalaris arundinacea -- Reed Canary Grass</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Rhamnus cathartica -- European Buckthorn</td>
<td>10</td>
<td>N</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 0 (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

| Total Number of Dominant Species Across all Strata: 7 |

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 105 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>0 x 1 = 0</td>
</tr>
<tr>
<td>FACW species</td>
<td>25 x 2 = 50</td>
</tr>
<tr>
<td>FAC species</td>
<td>70 x 3 = 210</td>
</tr>
<tr>
<td>FACU species</td>
<td>10 x 4 = 40</td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
</tr>
<tr>
<td>Column totals</td>
<td>300 (B)</td>
</tr>
</tbody>
</table>

**Prevalence Index = B/A = 2.86**

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X - Dominance test is ≥50%
  - X - 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
  - Hydrophytic vegetation present? Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### Profile Description:

*Describe to the depth needed to document the indicator or confirm the absence of indicators.*

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist) %</th>
<th>Redox Features Color (moist) %</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>10YR 2/2 100</td>
<td></td>
<td></td>
<td></td>
<td>loam</td>
<td>high in organics</td>
</tr>
<tr>
<td>1-9</td>
<td>10YR 2/3 100</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>9-18</td>
<td>10YR 4/3 95</td>
<td>7.5YR 4/6 5</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

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

- Type:
- Depth (inches):
- Remarks:

### Hydric soil present?  Y

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
<tr>
<td>Aquatic Fauna (B13)</td>
<td></td>
</tr>
<tr>
<td>True Aquatic Plants (B14)</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide Odor (C1)</td>
<td></td>
</tr>
<tr>
<td>Oxidized Rhizospheres on Living Roots (C3)</td>
<td></td>
</tr>
<tr>
<td>Presence of Reduced Iron (C4)</td>
<td></td>
</tr>
<tr>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
<td></td>
</tr>
<tr>
<td>Thin Muck Surface (C7)</td>
<td></td>
</tr>
<tr>
<td>Gauge or Well Data (D9)</td>
<td></td>
</tr>
<tr>
<td>Other (Explain in Remarks)</td>
<td></td>
</tr>
</tbody>
</table>

**Field Observations:**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface water present?</td>
<td></td>
<td>X</td>
<td>&gt;18 inches</td>
</tr>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td></td>
<td></td>
<td>&gt;18 inches</td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present?**  N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line: City/County: Investigators:
Applicant/Owner: State: Sampling Point: Jeff Olson
City/County: Brooklyn Park/ Henn Co. Agent: sp4-1wet
State: MN Sampling Date: May 13, 2015
Sampling Point:

Investigator(s): Jeff Olson
Applicant/Owner: Hennepin Co.

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Depth of saturated groundwater:

Slope (%): depression
Depth: 45.1305 Long: 93.3715 Datum:

Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes
NWI Classification: not mapped

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus tremuloides -- Quaking Aspen</td>
<td>25</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 --</td>
<td>10</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3 --</td>
<td>10</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td>10</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>55</td>
<td>=Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td>10</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 --</td>
<td></td>
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</tr>
<tr>
<td>9 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 --</td>
<td>10</td>
<td>=Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>70</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Onoclea sensibilis -- Sensitive Fern</td>
<td>15</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>3 Populus tremuloides -- Quaking Aspen</td>
<td>15</td>
<td>N</td>
<td>FAC</td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 --</td>
<td>100</td>
<td>=Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td>0</td>
</tr>
</tbody>
</table>

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:
OBL species 0 x 1 = 0
FACW species 85 x 2 = 170
FAC species 40 x 3 = 120
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0
Column totals 125 (A) 290 (B)
Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation
Dominance test is >50%
X 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

Hydrophytic vegetation present? Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>peat</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-9</td>
<td>10YR 3/2</td>
<td>90</td>
<td>7.5YR 4/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>loam</td>
<td>high in organics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-22</td>
<td>10YR 4/2</td>
<td>85</td>
<td>7.5YR 4/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10YR 6/2</td>
<td>5</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Striped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type:
- Depth (inches):
- Remarks:

**Hydric soil present?** Y

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)

- Secondary Indicators (minimum of two required)
  - Surface Soil Cracks (B6)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Stunted or Stressed Plants (D1)
  - FAC-Neutral Test (D5)

<table>
<thead>
<tr>
<th>Field Observations:</th>
<th>Surface water present?</th>
<th>No</th>
<th>X</th>
<th>Depth (inches):</th>
<th>18 inches</th>
<th>Indicators of wetland hydrology present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water table present?</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
<td>18 inches</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Saturation present?</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
<td>11 inches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site Blue Line</th>
<th>City/County:</th>
<th>Sampling Date:</th>
<th>Investigator(s):</th>
<th>Sampling Point:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jeff Olson</td>
<td>sp5-1up</td>
</tr>
<tr>
<td>Applicant/Owner:</td>
<td></td>
<td></td>
<td>Hennepin Co.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Landform (hillslope, terrace, etc.):</th>
<th>Slope (%):</th>
<th>Local relief (concave, convex, none):</th>
<th>Soil Map Unit Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>hillslope</td>
<td>three</td>
<td>concave</td>
<td>D25A - Soderville loamy fine sand terrace, 0-3% slopes</td>
</tr>
<tr>
<td></td>
<td>Lat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45.1372</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>93.3793</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are climatic/hydrologic conditions of the site typical for this time of the year?</th>
<th>Are vegetation, soil significantly disturbed?</th>
<th>Are vegetation, soil naturally problematic?</th>
<th>Are &quot;normal circumstances&quot; present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUMMARY OF FINDINGS</th>
<th>Hydrophytic vegetation present?</th>
<th>Hydric soil present?</th>
<th>Indicators of wetland hydrology present?</th>
<th>Is the sampled area within a wetland?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

<table>
<thead>
<tr>
<th>VEGETATION -- Use scientific names of plants.</th>
</tr>
</thead>
</table>

**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: **0 x 1 = 0**
  - FACW species: **20 x 2 = 40**
  - FAC species: **55 x 3 = 165**
  - FACU species: **40 x 4 = 160**
  - UPL species: **0 x 5 = 0**
- Column totals: **115 (A) 365 (B)**
- Prevalence Index = B/A = **3.17**

**Hydrophytic Vegetation Indicators:**
- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>10YR 3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>24-30</td>
<td>10YR 4/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):
Type: _____________________________
Depth (inches): _____________________

Remarks: __________________________

Hydric soil present? N

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

Field Observations:
- Surface water present? Yes No X Depth (inches): >30 inches
- Water table present? Yes No X Depth (inches): >30 inches
- Saturation present? Yes No X Depth (inches): >30 inches

Indicators of wetland hydrology present? N

Remarks: __________________________

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: __________________________
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line

City/County: Brooklyn Park/ Henn Co.  Sampling Date: May 13, 2015

Applicant/Owner: Hennepin Co.

State: MN  Sampling Point: sp5-1wet

Investigator(s): Jeff Olson

Section, Township, Range: S8, 119n, 21w

Landform (hillslope, terrace, etc.): depression  Slope (%): three

Local relief (concave, convex, none): concave

Slope: 45.1372  Lat: 93.3793  Long: Datum:

Soil Map Unit Name D25A - Soderville loamy fine sand terrace, 0-3% slope

Are climatic/hydrologic conditions of the site typical for this time of the year? Y

(If no, explain in remarks)

Are vegetation, soil significantly disturbed? Y

Are vegetation, soil naturally problematic? Y

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y

Hydric soil present? Y

Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y

If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus tremuloides</td>
<td>-- Quaking Aspen</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>20 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>0 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
<td>45</td>
</tr>
<tr>
<td>2 Rhamnus cathartica</td>
<td>-- European Buckthorn</td>
<td>20</td>
</tr>
<tr>
<td>3 Carex lurida</td>
<td>-- Sallow Sedge</td>
<td>10</td>
</tr>
<tr>
<td>4 Solidago altissima</td>
<td>-- Tall Goldenrod</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>(Plot size: 30' Radius)</td>
<td>80 = Total Cover</td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

| 0 = Total Cover |

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>10YR 2/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>2-18</td>
<td>10YR 2/2</td>
<td>70</td>
<td>7.5YR 4/6</td>
<td>20</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>10YR 4/2</td>
<td>80</td>
<td>7.5YR 5/6</td>
<td>20</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Depth (inches):</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches): 18 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches): 18 inches</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches): 18 inches</td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line
Applicant/Owner: Hennepin Co.
City/County: Brooklyn Park/ Henn Co.
State: MN
Sampling Date: May 13, 2015
Investigator(s): Jeff Olson
Landform (hillslope, terrace, etc.): terrace
Local relief (concave, convex, none): concave
Slope (%): three
Lat: 45.1369
Long: 93.3785
Datum:

Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slope

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

Are vegetation, soil significantly disturbed? N

Are vegetation, soil naturally problematic? N

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? N
Is the sampled area within a wetland? N
Indicators of wetland hydrology present? N

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

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Populus tremuloides</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Onoclea sensibilis</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Rhamnus cathartica</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3 Poa pratensis</td>
<td>15</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>4 Phalaris arundinacea</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

65 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

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 0 x 1 = 0
FACW species 30 x 2 = 60
FAC species 55 x 3 = 165
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0
Column totals 85 (A) 225 (B)
Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:
X: Dominance test is >50%
X: 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

Hydrophytic vegetation present? Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-13</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td>loam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-20</td>
<td>10YR 3/3</td>
<td>100</td>
<td></td>
<td>sandy loam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

- Type: [ ]
- Depth (inches): [ ]

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present?** [ ]

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

City/County: Brooklyn Park/ Henn Co.  Sampling Date: May 13, 2015
State: MN  Holiday Point: sp6-wet

Project/Site Blue Line:  Applicant/Owner: Hennepin Co.
Investigator(s): Jeff Olson
Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): three  Lat: 45.1369  Long: 93.3785
Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slope

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present?  Y
Hydric soil present?  Y
Indicators of wetland hydrology present?  Y

Is the sampled area within a wetland?  Y
If yes, optional wetland site ID: ______________________

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Table: Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus deltoides</td>
<td>Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

20 = Total Cover

Table: Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum: (Plot size: 15’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus alnifolia</td>
<td>Alder-Leaf Buckthorn</td>
<td>10</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 = Total Cover

Table: Herb stratum (Plot size: 5’ Radius )

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>40</td>
</tr>
<tr>
<td>2 Onoclea sensibilis</td>
<td>Sensitive Fern</td>
<td>20</td>
</tr>
<tr>
<td>3 Pilea pumila</td>
<td>Canadian Clearweed</td>
<td>10</td>
</tr>
<tr>
<td>4 Populus tremuloides</td>
<td>Quaking Aspen</td>
<td>10</td>
</tr>
<tr>
<td>5 Rhamnus alnifolia</td>
<td>Alder-Leaf Buckthorn</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

90 = Total Cover

Table: Woody vine stratum (Plot size: 30’ Radius )

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

Hydrophytic Vegetation Indicators:
- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>peat</td>
<td></td>
</tr>
<tr>
<td>10-14</td>
<td>10YR 3/2</td>
<td>85</td>
<td>7.5YR 4/6</td>
<td>15</td>
<td>C</td>
<td>PL</td>
<td>loam</td>
<td>high in organics</td>
</tr>
<tr>
<td>14-20</td>
<td>10YR 4/1</td>
<td>85</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10YR 6/1</td>
<td>5</td>
<td>D</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Hydric Soil Indicators:
- Histosol (A1)
- Histic Epipedon (A2)
- Black Historic (A3)
- Hydrogen Sulfide Odor (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

#### Restrictive Layer (if observed):
Type: [ ]
Depth (inches): [ ]

#### Hydric soil present? [Y]

#### Remarks:

### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>X High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>X Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>X</td>
<td>No</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>X</td>
<td>No</td>
</tr>
</tbody>
</table>

Depth (inches):
- 11 inches
- 7 inches

Indicators of wetland hydrology present? [Y]

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**SUMMARY OF FINDINGS**

- Hydrophytic vegetation present? **Y**
- Hydric soil present? **N**
- Indicators of wetland hydrology present? **Y**

**Is the sampled area within a wetland?** **N**

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

---

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size: )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Acer negundo</td>
<td>-- Ash-Leaf Maple</td>
<td>20 Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Prunus serotina</td>
<td>-- Black Cherry</td>
<td>15 Y</td>
<td>FACU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rhamnus cathartica</td>
<td>-- European Buckthorn</td>
<td>50 Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rhamnus cathartica</td>
<td>-- European Buckthorn</td>
<td>20 Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Alliaria petiolata</td>
<td>-- garlic mustard</td>
<td>15 Y</td>
<td>FACU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine stratum</th>
<th>(Plot size: )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Woody vine</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2. Woody vine</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
- Total Number of Dominant Species Across all Strata: 5 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 60.00% (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 0 x 2 = 0
  - FAC species: 90 x 3 = 270
  - FACU species: 30 x 4 = 120
  - UPL species: 0 x 5 = 0
- Column totals: 120 (A) 390 (B)
- Prevalence Index = B/A = 3.25

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation: X
- 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

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

**Sampling Point:** sp7-1up

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>N/2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mucky loam</td>
<td></td>
</tr>
<tr>
<td>8-18</td>
<td>10YR 3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>10YR 4/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy clay loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)  (LRR K, L, R)
- Dark Surface (S7)  (LRR K, L)
- 5 cm Mucky Peat or Peat (S3)  (LRR K, L, R)
- Iron-Manganese Masses (F12)  (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

#### Restrictive Layer (if observed):
- Type: ________________________________  
- Depth (inches): ________________________________  

#### Hydric soil present?  N

#### Remarks: ________________________________

### HYDROLOGY

#### Wetland Hydrology Indicators:
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- Secondary Indicators (minimum of two required)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

#### Field Observations:
- Surface water present? Yes  No  X  Depth (inches): >24inches  
- Water table present? Yes  No  X  Depth (inches): >24inches  
- Saturation present? Yes  No  X  Depth (inches): >24inches

#### Indicators of wetland hydrology present?  Y

#### Remarks:
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Does not meet criteria for wetland hydrology.

---

US Army Corps of Engineers  Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site Blue Line**

**Applicant/Owner:** Met Council

**City/County:** Brooklyn Park/ Henn

**Investigator(s):** Jeff Olson, Rebecca Beduhn

**Sampling Date:** May 12, 2015

**Landform (hillslope, terrace, etc.):** depression

**Local relief (concave, convex, none):** concave

**Slope (%):**

<table>
<thead>
<tr>
<th>0-1</th>
<th>Lat:</th>
<th>Long:</th>
<th>Datum:</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.1359</td>
<td></td>
<td>93.3784</td>
<td></td>
</tr>
</tbody>
</table>

**Soil Map Unit Name D21A - Istan sandy lam depressional, 0-1% slope**

**NWI Classification:** PEM1A

**Section, Township, Range:**

| s8, 119n, 21w |

---

**SUMMARY OF FINDINGS**

**Hydrophytic vegetation present?**

- Y

**Hydric soil present?**

- Y

**Indicators of wetland hydrology present?**

- Y

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

**Vegetation -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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</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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td>3</td>
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<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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea -- Reed Canary Grass</td>
<td>100</td>
<td>Y</td>
<td>FACW</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>
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<td></td>
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<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>7</td>
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<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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

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

**Dominance Test Worksheet**

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (A)</td>
</tr>
</tbody>
</table>

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
</tr>
<tr>
<td>FACW species</td>
</tr>
<tr>
<td>UPL species</td>
</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**

- X: Dominance test >50%
- X: Prevalence index ≤3.0*

**Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)**

**Problematic hydrophytic vegetation**

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18</td>
<td></td>
<td>N/2.5</td>
<td>95</td>
<td></td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td></td>
<td>2.5Y 3/1</td>
<td>85</td>
<td></td>
<td>10YR 3/6</td>
<td>15</td>
<td>C</td>
<td>PL</td>
<td>samdy clay loam</td>
<td></td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Hydric soil present?** Y

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Remarks:</th>
</tr>
</thead>
</table>

**Remarks:**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X Depth (inches):</th>
<th>&gt;22inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td>&gt;22inches</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td>&gt;22inches</td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Meets criteria for wetland hydrology. Hummocky.
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site Blue Line**

---

**City/County:** Brooklyn Park/ Henn

**Applicant/Owner:** Met Council

**Sampling Date:** May 12, 2015

---

**Investigator(s):** Jeff Olson, Rebecca Beduhn

---

**Landform (hillslope, terrace, etc.):** hillslope

**Slope (%):** 0-1

---

**Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes**

---

**NWI Classification:** PFO1A

---

**Section, Township, Range:** s8.t119n, 21w

**Long:** 93.3813

---

**Remarks:** (If needed, explain any answers in remarks.)

---

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** Y
- **Hydric soil present?** N
- **Indicators of wetland hydrology present?** N
- **Is the sampled area within a wetland?** N

---

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size: )</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tree stratum (30' Radius)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Acer negundo -- Ash-Leaf Maple</td>
<td>50</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Populus tremuloides -- Quaking Aspen</td>
<td>15</td>
<td>Y</td>
<td>FAC</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><strong>Total Cover:</strong> 65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sapling/Shrub stratum (15' Radius)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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>
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<td></td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Cover:</strong> 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Herb stratum (5' Radius)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Pilea pumila -- Canadian Clearweed</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 Acer negundo -- Ash-Leaf Maple</td>
<td>10</td>
<td>Y</td>
<td>FAC</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><strong>Total Cover:</strong> 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Woody vine stratum (30' Radius)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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><strong>Total Cover:</strong> 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Number of Dominant Species that are OBL, FACW, or FAC:

- Total Number of Dominant Species Across all Strata:
  - 4

- Percent of Dominant Species that are OBL, FACW, or FAC:
  - 75.00% (A/B)

---

### Prevalence Index Worksheet

- **Total % Cover of:**
  - OBL species $0 \times 1 = 0$
  - FACW species $30 \times 2 = 60$
  - FAC species $65 \times 3 = 195$
  - FACU species $0 \times 4 = 0$
  - UPL species $0 \times 5 = 0$

- Column totals $95$ (A) $255$ (B)

- **Prevalence Index = B/A = 2.68**

---

### Hydrophytic Vegetation Indicators:

- **Rapid test for hydrophytic vegetation**
  - X Dominance test is >50%
  - X 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

---

### Remarks:

- Include photo numbers here or on a separate sheet

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:


---

US Army Corps of Engineers

Midwest Region
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fine sandy loam</td>
<td></td>
</tr>
<tr>
<td>10-24</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy fine sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

Restrictive Layer (if observed):
- Type: _____________________
- Depth (inches): __________
- Hydric soil present? N
- Remarks: ___________________

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

Field Observations:
- Surface water present? Yes  No  X  Depth (inches): >24inches
- Water table present? Yes  No  X  Depth (inches): >24inches
- Saturation present? Yes  No  X  Depth (inches): >24inches
- (includes capillary fringe)

Indicators of wetland hydrology present? N
- Remarks: ___________________

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Meets criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line
Applicant/Owner: Met Council

City/County: Brooklyn Park/ Henn
State: MN

Sampling Date: May 12, 2015
Sampling Point: sp8-1wet

Investigator(s): Jeff Olson, Rebecca Beduhn

Section, Township, Range: s8, 119n, 21w
Local relief (concave, convex, none): concave

Landform (hillslope, terrace, etc.): depression
Slope (%): 0-1
Latitude: 45.1359
Longitude: 93.3813

Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes

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? (If needed, explain any answers in remarks.)

Are vegetation ______, soil ______, or hydrology ______ naturally problematic? Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y

Hydric soil present? Y

Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y

If yes, optional wetland site ID: ________________________

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acer negundo</td>
<td>Ash-Leaf Maple</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<tr>
<td>3</td>
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<td>5</td>
<td>--</td>
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<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

30 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<tr>
<td>2</td>
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<td>5</td>
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<td>--</td>
<td>--</td>
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</tbody>
</table>

30 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>75</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Alliaria petiolata</td>
<td>garlic mustard</td>
<td>10</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>3 Solidago gigantea</td>
<td>Late Goldenrod</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>4 Circaeaa canadensis</td>
<td>Broad-Leaf Enchanter's-I</td>
<td>5</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
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<td>--</td>
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<td>--</td>
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<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

100 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

0 = Total Cover

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

X: Dominance test is >50%
X: 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

Hydrophytic vegetation present? Y

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

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:
OBL species 0 x 1 = 0
FACW species 85 x 2 = 170
FAC species 30 x 3 = 90
FACU species 15 x 4 = 60
UPL species 0 x 5 = 0

Column totals 130 (A) 320 (B)

Prevalence Index = B/A = 2.46

US Amy Corps of Engineers
Midwest Region
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>10-13</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>clayey muck</td>
<td></td>
</tr>
<tr>
<td>13-24</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mucky sand</td>
<td></td>
</tr>
</tbody>
</table>

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

** Hydric Soil Indicators: **

- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

** Indicators for Problematic Hydric Soils: **

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

** Restrictive Layer (if observed): **

Type: __________________________

Depth (inches): __________________________

Remarks: __________________________

** HYDROLOGY **

** Wetland Hydrology Indicators: **

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

** Secondary Indicators (minimum of two required) **

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

** Field Observations: **

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface water present?</td>
<td></td>
<td></td>
<td>&gt;24inches</td>
</tr>
<tr>
<td>Water table present?</td>
<td></td>
<td></td>
<td>&gt;24inches</td>
</tr>
<tr>
<td>Saturation present? (includes capillary fringe)</td>
<td></td>
<td></td>
<td>&gt;24inches</td>
</tr>
</tbody>
</table>

** Indicators of wetland hydrology present? **

Y

Remarks: __________________________

Meets criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT          City/County: Brooklyn Park/ Hennepin          Sampling Date: May 20, 2015
Applicant/Owner: Met Council          State: MN          Sampling Point: sp9-1up
Investigator(s): Jeff Olson          Section, Township, Range: s8, 119n, 21w
Landform (hillslope, terrace, etc.): hillslope          Long: 93.3803          Datum: 
Slope (%): 2-Jan          Lat: 45.136          NWI Classification: not mapped
Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic? Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Sapling/Shrub stratum: (Plot size: 15' Radius )

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solidago canadensis -- Canadian Goldenrod</td>
<td>40</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>2</td>
<td>Phalaris arundinacea -- Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td>Barbarea vulgaris -- Garden Yellow-Rocket</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>4</td>
<td>Poa pratensis -- Kentucky Blue Grass</td>
<td>10</td>
<td>N</td>
<td>FAC</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<td>10</td>
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</tr>
</tbody>
</table>

Woody vine stratum: (Plot size: 30' Radius )

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>muck</td>
<td></td>
</tr>
<tr>
<td>3-11</td>
<td>10 YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>gravelly loam</td>
<td></td>
</tr>
<tr>
<td>11-24</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fine sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (A10)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

**Restrictive Layer (if observed):**
- Type: ___________________________
- Depth (inches): _________________
- Hydric soil present? N
- Remarks: _________________________

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Algal Mat or Crust (B4)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes No X Depth (inches): >24 inches
- Water table present? Yes No X Depth (inches): >24 inches
- Saturation present? Yes No X Depth (inches): >24 inches
- Remarks: _________________________

**Indicators of wetland hydrology present? N**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _________________________

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Brooklyn Park/ Hennepin  State: MN  Sampling: May 20, 2015
Applicant/Owner: Met Council  Sampling Point: sp9-1wet
Investigator(s): Jeff Olson
Landform (hillslope, terrace, etc.): swale  Section, Township, Range: s8, 119n, 21w
Local relief (concave, convex, none): concave
Slope (%): 2-50%  Lat: 45.136  Long: 93.3803
Land Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?
SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrophytic vegetation present?</td>
<td>Y</td>
</tr>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

If yes, optional wetland site ID: ___________________________

Remarks: (Explain alternative procedures here or in a separate report.)

Conditions at the time of the field delineation were wetter than normal. See Appendix C.

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>3</td>
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<td>4</td>
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</tr>
<tr>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover: 0%

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

Total Cover: 0%

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>80 Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 Urtica dioica</td>
<td>Stinging Nettle</td>
<td>15 N</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>3 Barbarea vulgaris</td>
<td>Garden Yellow-Rocket</td>
<td>5 N</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>4</td>
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<td></td>
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<tr>
<td>10</td>
<td>10</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Total Cover: 100%

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover: 0%

<table>
<thead>
<tr>
<th>Dominance Test Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)</td>
</tr>
<tr>
<td>Total Number of Dominant Species Across all Strata: 1 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevalence Index Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total % Cover of:</td>
</tr>
<tr>
<td>OBL species 0 x 1 = 0</td>
</tr>
<tr>
<td>FACW species 95 x 2 = 190</td>
</tr>
<tr>
<td>FAC species 5 x 3 = 15</td>
</tr>
<tr>
<td>FACU species 0 x 4 = 0</td>
</tr>
<tr>
<td>UPL species 0 x 5 = 0</td>
</tr>
<tr>
<td>Column totals 100 (A) 205 (B)</td>
</tr>
<tr>
<td>Prevalence Index = B/A = 2.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid test for hydrophytic vegetation</td>
</tr>
<tr>
<td>X Dominance test is &gt;50%</td>
</tr>
<tr>
<td>X Prevalence index is ≤3.0*</td>
</tr>
<tr>
<td>Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)</td>
</tr>
<tr>
<td>Problematic hydrophytic vegetation* (explain)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
## Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>N/2.5</td>
<td>muck</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-20</td>
<td>10YR 2/1 80</td>
<td>7.5YR 5/6 10 C PL</td>
<td>sandy clay</td>
<td>high in organic matter</td>
</tr>
</tbody>
</table>

**Type:** C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

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

### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
</tr>
</tbody>
</table>

### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators** (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators** (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxygen Reduction on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

**Field Observations:**
- Surface water present? Yes
- Water table present? No
- Saturation present? No
- (includes capillary fringe)

<table>
<thead>
<tr>
<th>Depth (inches):</th>
<th>Indicators of wetland hydrology present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;24 inches</td>
<td>Y</td>
</tr>
</tbody>
</table>

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:

**US Army Corps of Engineers**
Midwest Region
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site:** Blue Line LRT  
**Applicant/Owner:** Met Council

**Investigator(s):** Jeff Olson

**Landform (hillslope, terrace, etc.):** swale  
**Slope (%):** 2-20

**Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes**

| Are climatic/hydrologic conditions of the site typical for this time of the year? | (If no, explain in remarks) |
| Are vegetation, soil significantly disturbed? | (If no, explain in remarks) |
| Are vegetation, soil naturally problematic? | (If no, explain in remarks) |

### SUMMARY OF FINDINGS

| Hydrophytic vegetation present? | N |
| Hydric soil present? | N |
| Indicators of wetland hydrology present? | N |

**Is the sampled area within a wetland?** N

**Remarks:** (If needed, explain any answers in remarks.)

**Conditions at the time of the field delineation were wetter than normal. See Appendix C.**

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
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<td>2</td>
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<td>5</td>
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</tr>
</tbody>
</table>

**Sapling/Shrub stratum** (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>(Plot size: 15' Radius)</th>
<th>0 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
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<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
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</tr>
</tbody>
</table>

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bromus inermis</td>
<td>Smooth Brome</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Barbarea vulgaris</td>
<td>Garden Yellow-Rocket</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Asclepias syriaca</td>
<td>Common Milkweed</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>10</td>
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</tbody>
</table>

**Woody vine stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>(Plot size: 30' Radius)</th>
<th>60 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
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<tr>
<td>2</td>
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</tbody>
</table>

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

### Note:

This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):

- Type:
- Depth (inches):
- Remarks:

#### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? Yes No
- Water table present? Yes No
- Saturation present? Yes No

**Depth (inches):**

- >20 inches

**Indicators of wetland hydrology present?** N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers

Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
Applicant/Owner: Met Council  
Investigator(s): Jeff Olson  
Landform (hillslope, terrace, etc.): swale  
Local relief (concave, convex, none): concave  
Slope (%): 2-3 Jan  
Lat: 45.1355  
Long: 93.3797  

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)  
Are vegetation, soil significantly disturbed?  
Are vegetation, soil naturally problematic?  

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>Y</td>
</tr>
<tr>
<td>Remarks: (Explain alternative procedures here or in a separate report.)</td>
<td></td>
</tr>
</tbody>
</table>

**VEGETATION**

Use scientific names of plants:

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tr>
<tr>
<td>Snow/Grass stratum (Plot size: 15' Radius)</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Herb stratum (Plot size: 5' Radius)</td>
<td>1 Phalaris arundinacea - Reed Canary Grass</td>
<td>100</td>
<td>Y</td>
</tr>
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<td>2</td>
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<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum (Plot size: 30' Radius)</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)  
Total Number of Dominant Species Across all Strata: 1 (B)  
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100 x 1 = 0</td>
<td>100 x 2 = 200</td>
<td>0 x 3 = 0</td>
<td>0 x 4 = 0</td>
<td>0 x 5 = 0</td>
</tr>
<tr>
<td>Column totals</td>
<td>100 (A)</td>
<td>200 (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence Index</td>
<td>B/A = 2.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**  
Rapid test for hydrophytic vegetation  
X Dominance test is >50%  
X 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

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 2/2</td>
<td>%</td>
<td>Color (moist)</td>
<td>%</td>
</tr>
<tr>
<td>5-12</td>
<td>10YR 4/2</td>
<td>80</td>
<td>7.5YR 4/6</td>
<td>20</td>
</tr>
<tr>
<td>12-20</td>
<td>10YR 5/1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 
- Remarks:

**Hydric soil present?** Y

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

- Secondary Indicators (minimum of two required)
  - Surface Soil Cracks (B6)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Stunted or Stressed Plants (D1)
  - FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes
- Water table present? Yes
- Saturation present? Yes (includes capillary fringe)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;20 inches</td>
<td>Indicators of wetland hydrology present? Y</td>
</tr>
</tbody>
</table>

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site Blue Line: Project/Site

City/County: Brooklyn Park/ Henn

Applicant/Owner: Met Council

State: MN

Investigator(s): Jeff Olson, Rebecca Beduhn

Section, Township, Range: s7, 119n, 21w

Landform (hillslope, terrace, etc.): Hillslope

Local relief (concave, convex, none): None

Slope (%): 0-1

Lat: 45.135

Long: 93.3822

Sampling Point: sp11-1up

Soil Map Unit Name: D21A - Isan sandy loam depressional, 0-1% slopes

Are climatic/hydrologic conditions of the site typical for this time of the year? **Y**

If no, explain in remarks.

Are vegetation, soil significantly disturbed? ****

If yes, optional wetland site ID:

Are vegetation, soil naturally problematic? ****

If yes, optional wetland site ID:

**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** **Y**

- **Hydric soil present?** **Y**

- **Indicators of wetland hydrology present?** **N**

- **Is the sampled area within a wetland?** **N**

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

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size: )</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>0</td>
<td></td>
<td><strong>= Total Cover</strong></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>15' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
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<td>2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>0</td>
<td></td>
<td><strong>= Total Cover</strong></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>5' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>90</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Urtica dioica</td>
<td>Stinging Nettle</td>
<td>5</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
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<td>5</td>
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<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>95</td>
<td></td>
<td><strong>= Total Cover</strong></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<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>0</td>
<td></td>
<td><strong>= Total Cover</strong></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: **1 (A)**

- Total Number of Dominant Species Across all Strata: **1 (B)**

- Percent of Dominant Species that are OBL, FACW, or FAC: **100.00% (A/B)**

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species **0 x 1 = 0**
  - FACW species **95 x 2 = 190**
  - FAC species **0 x 3 = 0**
  - FACU species **0 x 4 = 0**
  - UPL species **0 x 5 = 0**

- Column totals **95 (A) 190 (B)**

- Prevalence Index = B/A = **2.00**

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X Dominance test is >50%
  - X 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

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:


US Army Corps of Engineers

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>5-11</td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c. loam high organics</td>
<td></td>
</tr>
<tr>
<td>11-48</td>
<td>2.5Y 5/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

#### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
</tr>
</thead>
</table>

#### Hydrology

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

#### Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches): &gt;48 inches</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches): &gt;48 inches</td>
</tr>
</tbody>
</table>

#### Indicators of wetland hydrology present?

| N |

#### Remarks:

Does not meet criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line

Applicant/Owner: Met Council

Investigator(s): Jeff Olson, Rebecca Beduhn

Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave

Slope (%): 0-1
Lat: 45.135
Long: 93.3822

Soil Map Unit Name: D21A - Isan sandy loam depressional, 0-1% slopes

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

Are vegetation, soil significantly disturbed? (If needed, explain any answers in remarks.)

Are vegetation, soil naturally problematic? Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y

Hydric soil present? Y

Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y

If yes, optional wetland site ID: 

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

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Plot size: 30' Radius</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td></td>
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<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Plot size: 15' Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Plot size: 5' Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>90 Y FACW</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
</tr>
<tr>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td>7</td>
<td>--</td>
</tr>
<tr>
<td>8</td>
<td>--</td>
</tr>
<tr>
<td>9</td>
<td>--</td>
</tr>
<tr>
<td>10</td>
<td>--</td>
</tr>
</tbody>
</table>

90 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Plot size: 30' Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
</tbody>
</table>

0 = Total Cover

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

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:
OBL species 0 x 1 = 0
FACW species 90 x 2 = 180
FAC species 0 x 3 = 0
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0
Column totals 90 (A) 180 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation
X Dominance test is >50%
X Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
Problematic hydrophytic vegetation*

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

Hydrophytic vegetation present? Y

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
## Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>7.5YR 5/6</td>
<td>95</td>
<td>Sapric muck</td>
<td>Peaty clay</td>
<td></td>
</tr>
<tr>
<td>12-18</td>
<td>7.5YR 5/6</td>
<td>100</td>
<td>Clayey fine sand</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (T12)

### Hydric soil present? Y

### Restrictive Layer (if observed):

Type:  
Depth (inches):  
Remarks:

### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

#### Field Observations:

- Surface water present? Yes  No  X Depth (inches): >24 inches
- Water table present? Yes  No  X Depth (inches): >24 inches
- Saturation present? Yes  No  X Depth (inches): >24 inches

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology.
### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are climatic/hydrologic conditions of the site typical for this time of the year?</td>
<td>Y</td>
</tr>
<tr>
<td>Are vegetation, soil significantly disturbed?</td>
<td></td>
</tr>
<tr>
<td>Are vegetation, soil naturally problematic?</td>
<td>Y</td>
</tr>
<tr>
<td>Are &quot;normal circumstances&quot; present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Hydrophytic vegetation present?</td>
<td>Y</td>
</tr>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>N</td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION

**Tree Stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dominant Species</td>
<td>Indicator Status</td>
</tr>
</tbody>
</table>

**Sapling/Shrub stratum** (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dominant Species</td>
<td>Indicator Status</td>
</tr>
</tbody>
</table>

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dominant Species</td>
<td>Indicator Status</td>
</tr>
</tbody>
</table>

**Woody vine stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dominant Species</td>
<td>Indicator Status</td>
</tr>
</tbody>
</table>

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

### Note:
This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td>sandy clay loam</td>
<td>disturbed from earthmoving</td>
</tr>
<tr>
<td>12+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>cobble</td>
<td></td>
</tr>
</tbody>
</table>

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

### Hydric Soil Indicators:

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

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

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

### Restrictive Layer (if observed):

- Type: _____________________________
- Depth (inches): _________________

### Remarks:

- _____________________________

---

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? Yes ☑ No ☐ X Depth (inches): >12 inches
- Water table present? Yes ☑ No ☐ X Depth (inches): >12 inches
- Saturation present? Yes ☑ No ☐ X Depth (inches): >12 inches

**Indicators of wetland hydrology present?** N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

- _____________________________

---

**Remarks:**

- _____________________________

**US Army Corps of Engineers**

Midwest Region
Project/Site Blue Line: US Army Corps of Engineers - Midwest Region
Applicant/Owner: Met Council
Investigator(s): Jeff Olson
City/County: Brooklyn Park/Henn
State: MN
Sampling Date: May 13, 2015
Sampling Point: sp12-1wet
Section, Township, Range: s8, 119n, 21w
Local relief (concave, convex, none): concave
Soil Map Unit Name D20A - Isan sandy loam depressional, 0-2% slopes
NWI Classification: not mapped
Are climatic/hydrologic conditions of the site typical for this time of the year? Y
Are vegetation, soil significantly disturbed? (If needed, explain any answers in remarks.)
Are vegetation, soil naturally problematic? Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y
If yes, optional wetland site ID: __________
Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Urtica dioica</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
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</tr>
<tr>
<td>10</td>
<td></td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

= Total Cover

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

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:
OBL species 0 x 1 = 0
FACW species 60 x 2 = 120
FAC species 0 x 3 = 0
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0
Column totals 60 (A) 120 (B)
Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
Rapid test for hydrophytic vegetation
X Dominance test is >50%
X 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

Hydrophytic vegetation present? Y

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

US Army Corps of Engineers
Midwest Region
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist) %</td>
<td>Color (moist) %</td>
<td>Type*</td>
<td>Loc**</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

**Restrictive Layer (if observed):**
- Type: __________
- Depth (inches): __________

**Remarks:**
likely ponded for a long or very long duration during the growing season.

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

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

**Field Observations:**
- Surface water present? Yes ______ No ______
- Water table present? Yes ______ No ______
- Saturation present? Yes ______ No ______

- Depth (inches): __________

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
Meets criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line: Metropolitan Council
City/County: Brooklyn Park/ Henn Sampling Date: May 13, 2015
Applicant/Owner: Metropolitan Council State: MN Sampling Point: new w13 up
Investigator(s): Jeff Olson Section, Township, Range: s8, 119n, 21w
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave
Slope (%): 5- Apr Lat: 45.1345 Long: 93.38 Datum: 
Soil Map Unit Name: D20A - Isan sandy loam depressional, 0-2% slopes NWI Classification: PEM1A/ PFO1A
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks) Yes
Are vegetation, soil significantly disturbed? (If needed, explain any answers in remarks.)
Are vegetation, soil naturally problematic? Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? N
Hydric soil present? N
Indicators of wetland hydrology present? N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: 

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
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<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>5</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bromus inermis Smooth Brome</td>
<td>95 Y FACU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

95 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species 0 x 1 = 0
FACW species 0 x 2 = 0
FAC species 0 x 3 = 0
FACU species 95 x 4 = 380
UPL species 0 x 5 = 0
Column totals 95 (A) 380 (B)

Prevalence Index = B/A = 4.00

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

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>10YR 2/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>1-15</td>
<td>10YR 2/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sand with organics</td>
<td></td>
</tr>
<tr>
<td>15-25</td>
<td>10YR 4/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sand with organics</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Hydric soil present? N

Restrictive Layer (if observed):
Type: __________________________
Depth (inches): __________________________
Remarks: __________________________

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes No X Depth (inches): __________________________
Water table present? Yes No X Depth (inches): __________________________
Saturation present? Yes No X Depth (inches): __________________________
(includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line: [Blue Line]
City/County: Brooklyn Park/ Henn
Applicant/Owner: Met Council
State: MN
Sampling Date: May 13, 2015
Investigator(s): Jeff Olson
Section, Township, Range: s8, 119n, 21w
Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): 5-Apr Lat: 45.1345 Long: 93.38
Soil Map Unit Name D20A - Isan sandy loam depressional, 0-2% slopes
NWI Classification: PEM1A/ PFO1A
Are climatic/hydrologic conditions of the site typical for this time of the year? Y
( If no, explain in remarks)
Are vegetation, soil significantly disturbed? Y
Are vegetation, soil naturally problematic? Y
Are "normal circumstances" present? Yes
(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
<td>If yes, optional wetland site ID:</td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

### Tree Stratum

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Herb stratum

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
</tr>
<tr>
<td>2</td>
<td>Urtica dioica</td>
<td>Stinging Nettle</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Woody vine stratum

<table>
<thead>
<tr>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
- Total Number of Dominant Species Across all Strata: 2 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

- Total % Cover of:
  - OBL species 0 x 1 = 0
  - FACW species 100 x 2 = 200
  - FAC species 0 x 3 = 0
  - FACU species 0 x 4 = 0
  - UPL species 0 x 5 = 0
  - Column totals 100 (A) 200 (B)
  - Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25</td>
<td>N/2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>25-36</td>
<td>10YR 3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sand with organics</td>
<td></td>
</tr>
</tbody>
</table>

Hydric Soil Indicators:
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

Restrictive Layer (if observed):
Type: ____________________________
Depth (inches): ____________________

Hydric soil present? Y

Remarks: __________________________

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

Field Observations:
- Surface water present? Yes No X Depth (inches): ______
- Water table present? Yes No X Depth (inches): ______
- Saturation present? Yes No X Depth (inches): ______

Indicators of wetland hydrology present? Y

Remarks:
Meets criteria for wetland hydrology.

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site Blue Line LRT</th>
<th>City/County: Brooklyn Park/ Hennepin</th>
<th>Sampling Date: May 20, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant/Owner: Met Council</td>
<td>State: MN</td>
<td>Sampling Point: sp14-1up</td>
</tr>
<tr>
<td>Investigator(s): Jeff Olson</td>
<td>Section, Township, Range: s8, 119n, 21w</td>
<td></td>
</tr>
<tr>
<td>Landform (hillslope, terrace, etc.): hillslope</td>
<td>Local relief (concave, convex, none): concave</td>
<td></td>
</tr>
<tr>
<td>Slope (%): 2-2</td>
<td>Long: 93.3765</td>
<td></td>
</tr>
<tr>
<td>Soil Unit Name D21A - Isan sandy loam depressional, 0-1% slopes</td>
<td>Datum:</td>
<td></td>
</tr>
<tr>
<td>Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)</td>
<td>NWI Classification: PEM1A</td>
<td></td>
</tr>
<tr>
<td>Are vegetation, soil significantly disturbed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are vegetation, soil naturally problematic?</td>
<td>Are &quot;normal circumstances&quot; present? Yes</td>
<td></td>
</tr>
</tbody>
</table>

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>N</td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus deltoides -- Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
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<td></td>
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<tr>
<td>4</td>
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</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Salix interior -- Sandbar Willow</td>
<td>25</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Panicum virgatum -- Wand Panic Grass</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Schizachyrium scoparium -- Little False Bluestem</td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>3 Fragaria virginiana -- Virginia Strawberry</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
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<td></td>
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<tr>
<td>7</td>
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<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remarks (Include photo numbers here or on a separate sheet)</th>
</tr>
</thead>
</table>

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X 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

Hydrophytic vegetation present? Y
**SOIL**  

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no borehole - highly disturbed</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (inches):</td>
</tr>
<tr>
<td>Remarks:</td>
</tr>
</tbody>
</table>

**Hydric soil present?**  

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
</tr>
</tbody>
</table>

( includes capillary fringe)

**Indicators of wetland hydrology present?**  

**Remarks:**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
## WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site</th>
<th>Blue Line LRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>City/County</td>
<td>Brooklyn Park/ Hennepin</td>
</tr>
<tr>
<td>State</td>
<td>MN</td>
</tr>
<tr>
<td>Sampling Date</td>
<td>May 20, 2015</td>
</tr>
<tr>
<td>Applicant/Owner</td>
<td>Met Council</td>
</tr>
<tr>
<td>Investigator(s)</td>
<td>Jeff Olson</td>
</tr>
<tr>
<td>Landform (hillslope, terrace, etc.):</td>
<td>depression</td>
</tr>
<tr>
<td>Local relief (concave, convex, none):</td>
<td>concave</td>
</tr>
<tr>
<td>Slope (%):</td>
<td>0-1</td>
</tr>
<tr>
<td>Soil Map Unit Name D20A - Isan sandy loam depressional, 0-2% slopes</td>
<td>45.1334</td>
</tr>
<tr>
<td>Section, Township, Range:</td>
<td>s8, 119n, 21w</td>
</tr>
<tr>
<td>NWI Classification:</td>
<td>PEM1A</td>
</tr>
</tbody>
</table>

### SUMMARY OF FINDINGS

- Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
- Are vegetation, soil significantly disturbed?
- Are vegetation, soil naturally problematic?
- Are "normal circumstances" present? Yes

#### Hydrophytic Vegetation present? Y

#### Hydric soil present? Y

#### Indicators of wetland hydrology present? Y

#### Is the sampled area within a wetland? Y

#### Remarks: (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Plot size: 30' Radius</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus deltoides -- Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 --</td>
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<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Plot size: 15' Radius</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Salix interior -- Sandbar Willow</td>
<td>80</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td></td>
<td></td>
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<td>3 --</td>
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<td>5 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Herb stratum

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Plot size: 5' Radius</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 --</td>
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</tr>
<tr>
<td>10 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Woody vine stratum

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Plot size: 30' Radius</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

#### Prevalence Index Worksheet

- Total % Cover of:
  - OBL species | 0 x 1 = 0
  - FACW species | 80 x 2 = 160
  - FAC species | 20 x 3 = 60
  - FACU species | 0 x 4 = 0
  - UPL species | 0 x 5 = 0
- Column totals | 100 (A) 220 (B)
- Prevalence Index = B/A = 2.20

### Hydrophytic Vegetation Indicators:

- **Rapid test for hydrophytic vegetation**
  - X Dominance test is >50%
  - X Prevalence index is ≤3.0*
  - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
  - Problematic hydrophytic vegetation* (explain)

#### Hydrophytic vegetation present? Y

### Note:
This data sheet has been adapted to use the 2014 National Wetland Plant List:
## SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist) %</td>
<td>Color (moist) %</td>
<td>Type*</td>
<td>Loc**</td>
</tr>
<tr>
<td></td>
<td>no borehole - highly disturbed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

- Type:  
- Depth (inches):  
- Remarks: Ponded for a long or very long duration during the growing season.

### Hydric soil present?  Y

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

<table>
<thead>
<tr>
<th>X</th>
<th>Surface Water (A1)</th>
<th>Aquatic Fauna (B13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Water Table (A2)</td>
<td>True Aquatic Plants (B14)</td>
<td></td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Hydrogen Sulfide Odor (C1)</td>
<td></td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Oxidized Rhizospheres on Living Roots (C3)</td>
<td></td>
</tr>
</tbody>
</table>

**Secondary Indicators (minimum of two required)**

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

#### Field Observations:

- Surface water present? Yes  X  No  Depth (inches): 3 inches
- Water table present? Yes  X  No  Depth (inches): Surface
- Saturation present? Yes  X  No  Depth (inches): Surface
- Includes capillary fringe

#### Indicators of wetland hydrology present?  Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Adventitious roots on sandbar willow.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT
Applicant/Owner: Met Council
Investigator(s): Jeff Olson

City/County: Brooklyn Park/ Hennepin
State: MN
Section, Township, Range: s8, 119n, 21w
Local relief (concave, convex, none): concave

Sampling Date: May 13, 2015
Long: 93.374
Datum:

Soil Map Unit Name D21A - Isan sandy loam depressional, 0-1% slopes
NWI Classification: not mapped

Landform (hillslope, terrace, etc.): hillslope
Slope (%): 0-1
Lat: 45.1324

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

Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?
Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? N
Hydric soil present? N
Indicators of wetland hydrology present? N

Is the sampled area within a wetland? N

Remarks: (Explain alternative procedures here or in a separate report.)

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

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' Radius ) Absolute % Cover Dominance Test Worksheet

1 -- --
2 -- --
3 -- --
4 -- --
5 -- --

0 = Total Cover

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:
OBL species 0 x 1 = 0
FACW species 0 x 2 = 0
FAC species 0 x 3 = 0
FACU species 100 x 4 = 400
UPL species 0 x 5 = 0
Column totals 100 (A) 400 (B)

Prevalence Index = B/A = 4.00

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

Hydrophytic vegetation present? N

Bromus inermis Smooth Brome
Asclepias syriaca Common Milkweed
Melilotus officinalis Yellow Sweet-Clover

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

US Amy Corps of Engineers
Midwest Region
### Hydric Soil Indicators:

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>Redox Features Color (moist)</th>
<th>Type*</th>
<th>Location**</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR3/2</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td>sandy loam</td>
</tr>
<tr>
<td>6-16</td>
<td>10YR 3/3</td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td>sandy loam</td>
</tr>
<tr>
<td>16-22</td>
<td>10YR 4/3</td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
</tbody>
</table>

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

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):

**Type:**

<table>
<thead>
<tr>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Remarks:**

Ponded for a long or very long duration during the growing season.

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required):**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

#### Field Observations:

- **Surface water present?** Yes  No  X  Depth (inches): >22 inches
- **Water table present?** Yes  No  X  Depth (inches):  >22 inches
- **Saturation present?** Yes  No  X  Depth (inches): >22 inches

**Indicators of wetland hydrology present?** N

### Remarks:

Adventitious roots on sandbar willow.
**WETLAND DETERMINATION DATA FORM - Midwest Region**

- **Project/Site:** Blue Line LRT
- **City/County:** Minneapolis
- **Applicant/Owner:** Metropolitan Council
- **Sampling Date:** May 20, 2015
- **Investigator(s):** Jeff Olson
- **Landform:** Depression
- **Local relief:** Concave
- **Slope (%):** 0-1%
- **Lat:** 45.1324
- **Long:** 93.374
- **Section, Township, Range:** 8S, 119N, 21W
- **Soil Map Unit Name:** D21A
- **NWI Classification:** Not mapped

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** Y
- **Hydric soil present?** Y
- **Indicators of wetland hydrology present?** Y

**Is the sampled area within a wetland?** Y

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION

-- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total Cover</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Salp/Shrub stratum (Plot size: 15' Radius)**

| 1 | Salix interior -- Sandbar Willow | 40 | Y | FACW |
| 2 | --                              | -- | -- | --   |
| 3 | --                              | -- | -- | --   |
| 4 | --                              | -- | -- | --   |
| 5 | --                              | -- | -- | --   |
| **Total Cover**                      |                  |                  |                 |

**Herb stratum (Plot size: 5' Radius)**

| 1 | Phalaris arundinacea -- Reed Canary Grass | 55 | Y | FACW |
| 2 | Solidago altissima -- Tall Goldenrod    | 25 | Y | FACU |
| 3 | Rumex crispus -- Curly Dock             | 10 | N | FAC  |
| 4 | --                                      | -- | -- | --   |
| 5 | --                                      | -- | -- | --   |
| 6 | --                                      | -- | -- | --   |
| 7 | --                                      | -- | -- | --   |
| 8 | --                                      | -- | -- | --   |
| 9 | --                                      | -- | -- | --   |
| 10| --                                      | -- | -- | --   |
| **Total Cover**                      |                  |                  |                 |

**Woody vine stratum (Plot size: 30' Radius)**

| 1 | --                                      | -- | -- | --   |
| 2 | --                                      | -- | -- | --   |
| **Total Cover**                      |                  |                  |                 |

**Hydrophytic Vegetation Indicators:**

- **Rapid test for hydrophytic vegetation**
  - X: Dominance test is >50%
  - X: 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

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

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**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

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**US Army Corps of Engineers**

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 2/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
</tr>
<tr>
<td>4-12</td>
<td>10YR 4/2</td>
<td>95</td>
<td>7.5YR 4/6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
</tr>
<tr>
<td>12-20</td>
<td>10YR 4/1</td>
<td>90</td>
<td>10YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

** Indicators for Problematic Hydric Soils: **
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

** Restrictive Layer (if observed): **
- Type:_____________________
- Depth (inches):_____________________

** Remarks:**
- Ponded for a long or very long duration during the growing season.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes
- Water table present? Yes
- Saturation present? Yes

**Indicators of wetland hydrology present?** Y

**Remarks:**
- Adventitious roots on sandbar willow.
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**Applicant/Owner:** Hennepin Co.  
**Investigator(s):** Jeff Olson  
**Landform (hillslope, terrace, etc.):** depression  
**Slope (%):** three  
**Soil Map Unit Name:** D1B - Anoka and Zimmerman terrace, 2-6% slope  
**Are climatic/hydrologic conditions of the site typical for this time of the year?** Y  
**Are vegetation, soil significantly disturbed?**  
**Are vegetation, soil naturally problematic?**  

### SUMMARY OF FINDINGS

| Hydrophytic vegetation present? | N |  
| Hydric soil present? | N |  
| Indicators of wetland hydrology present? | N |  

**Is the sampled area within a wetland?** N

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Tree</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</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>
</tbody>
</table>

**Total Cover = 20**

#### Sapling/Shrub stratum (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Tree</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Populus tremuloides</em></td>
<td>35</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

**Total Cover = 35**

#### Herb stratum (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Tree</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Bromus inermis</em></td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>2</td>
<td><em>Poa pratensis</em></td>
<td>25</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>3</td>
<td><em>Solidago canadensis</em></td>
<td>15</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>4</td>
<td><em>Cirsium arvense</em></td>
<td>10</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>5</td>
<td><em>Solidago gigantea</em></td>
<td>5</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>6</td>
<td><em>Asclepias syriaca</em></td>
<td>5</td>
<td>N</td>
<td>FACU</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>
</tbody>
</table>

**Total Cover = 90**

#### Woody vine stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Tree</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

**Total Cover = 0**

### Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
- Total Number of Dominant Species Across all Strata: 4 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

### Prevalence Index Worksheet

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 5 x 2 = 10
  - FAC species: 60 x 3 = 180
  - FACU species: 60 x 4 = 240
  - UPL species: 0 x 5 = 0
- Column totals: 125 (A) 430 (B)
- Prevalence Index = B/A = 3.44

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - Dominance test is >50%
- 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

**Hydrophytic vegetation present?** N

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>2-8</td>
<td>10YR 4/3</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy clay loam</td>
<td></td>
</tr>
<tr>
<td>8-20</td>
<td>10YR 4/4</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy clay loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):
- Type:__________
- Depth (inches):__________
- Hydric soil present? N
- Remarks:__________

### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

#### Field Observations:

- Surface water present? Yes
- No X Depth (inches): >20 inches
- Water table present? Yes
- No X Depth (inches): >20 inches
- Saturation present? Yes
- No X Depth (inches): 14 inches
- Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed.

US Army Corps of Engineers
Midwest Region
Project/Site: Blue Line LRT  
Applicant/Owner: Hennepin Co.  
Investigator(s): Jeff Olson  
Landform (hillslope, terrace, etc.): depression  
Slope (%): 0-1  
Local relief (concave, convex, none): concave  
Soil Map Unit Name: D1B - Anoka and Zimmerman terrace, 2-6% slopes  
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)  
Are vegetation, soil significantly disturbed?  
Are vegetation, soil naturally problematic?  
SUMMARY OF FINDINGS
Hydrophytic vegetation present?  
Hydric soil present?  
Indicators of wetland hydrology present?  
Is the sampled area within a wetland?  
Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Tree Stratum  (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>20</td>
<td>Y</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>
</tbody>
</table>

Sapling/Shrub stratum: (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia</td>
<td>-- Sandbar Willow</td>
<td>35</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3 iris virginica</td>
<td>-- Virginia Blueflag</td>
<td>10</td>
<td>N</td>
<td>OBL</td>
</tr>
<tr>
<td>4 Solidago gigantea</td>
<td>-- Late Goldenrod</td>
<td>5</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Herb stratum: (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia</td>
<td>-- Narrow-Leaf Cat-Tail</td>
<td>30</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>2 Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3 iris virginica</td>
<td>-- Virginia Blueflag</td>
<td>10</td>
<td>N</td>
<td>OBL</td>
</tr>
<tr>
<td>4 Solidago gigantea</td>
<td>-- Late Goldenrod</td>
<td>5</td>
<td>N</td>
<td>FACW</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>
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</tr>
<tr>
<td>8</td>
<td></td>
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<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>
</tbody>
</table>

Woody vine stratum: (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**Profile Description:**  (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td>7.5YR 4/6</td>
<td>15</td>
<td>C</td>
<td>PL</td>
<td>mucky loam</td>
<td></td>
</tr>
<tr>
<td>6-15</td>
<td>10YR 5/2</td>
<td>80</td>
<td>15</td>
<td></td>
<td>7.5YR 5/8</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>15-20</td>
<td>10YR 5/1</td>
<td>95</td>
<td></td>
<td></td>
<td>7.5YR 5/8</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>sandy clay loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (T12)

**Restrictive Layer (if observed):**
Type: [ ]
Depth (inches): [ ]

Hydric soil present? [Y]

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

**Field Observations:**
- Surface water present? Yes [X] No [ ] Depth (inches): [8 inches]
- Water table present? Yes [X] No [ ] Depth (inches): [8 inches]
- Saturation present? Yes [X] No [ ] Depth (inches): [3 inches]

**Indicators of wetland hydrology present?** [Y]

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
- Wetland hydrology indicators observed.
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**City/County:** Brooklyn Park/ Henn Co.  
**Slope (%):** three  
**Investigator(s):** Rebecca Beduhn  
**Applicant/Owner:** Met Council  
**Section, Township, Range:** s8, 119n, 21w  
**Landform (hillslope, terrace, etc.):** depression  
**Investigator(s):** Rebecca Beduhn  
**Sampling Date:** May 18, 2015  
**Applicant/Owner:** Met Council  
**State:** MN  
**Soil Map Unit Name:** D1B - Anoka and Zimmerman terrace, 2-6% slopes  
**Local relief (concave, convex, none):** concave  
**Sampling Point:** sp17-1up  
**NWI Classification:** not mapped  
**Vegetation, soil:** significantly disturbed  
**Climate/hydrologic:** typical for this time of the year  
**Vegetation, soil:** naturally problematic  

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
</tr>
</tbody>
</table>

Is the sampled area within a wetland? **N**

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>20 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>10</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>10 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poa pratensis</td>
<td>50</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Solidago canadensis</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Asclepias syriaca</td>
<td>15</td>
<td>N</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Taraxacum officinale</td>
<td>5</td>
<td>N</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td>90 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>Redox Features Color (moist)</th>
<th>Redox Features %</th>
<th>Redox Features Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td>with rocks</td>
</tr>
<tr>
<td>4-8</td>
<td>10YR 3/3</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td>with rocks</td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 4/4</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>sandy clay loam</td>
<td>with rocks</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (inches):</td>
</tr>
</tbody>
</table>

#### Remarks:

**Hydric soil present?**

#### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)

**Secondary Indicators (minimum of two required)**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present?**

#### Remarks:

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Brooklyn Park/ Henn Co.  Sampling Date: May 18, 2015
Applicant/Owner: Met Council  State: MN  Sampling Point: sp17-1wet
Investigator(s): Rebecca Beduhn  Section, Township, Range: s8, 119n, 21w
Landform (hillslope, terrace, etc.): concave  Local relief (concave, convex, none): concave
Slope (%): zero  Lat: 45.1261  Long: 93.3772  Datum:

Soil Map Unit Name: D1B - Anoka and Zimmerman terrace, 2-6% slopes  NWI Classification: not mapped

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y  Are "normal circumstances" present? Yes
Hydric soil present? Y  Remarks: (Explain alternative procedures here or in a separate report.)
Indicators of wetland hydrology present? Y

If yes, optional wetland site ID:

Is the sampled area within a wetland? Y

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' Radius )  Absolute % Cover  Dominant Species  Indicator Status
1 -- 20 Y
2 --
3 --
4 --
5 --

= Total Cover

Sapling/Shrub stratum (Plot size: 15' Radius )
1 Salix interior -- Sandbar Willow 10 Y FACW
2 --
3 --
4 --
5 --

= Total Cover

Herb stratum (Plot size: 5' Radius )
1 Typha angustifolia -- Narrow-Leaf Cat-Tail 70 Y OBL
2 Phalaris arundinacea -- reed canary grass 20 Y FACW
3 Rumex crispus -- Curly Dock 10 N FAC
4 --
5 --
6 --
7 --
8 --
9 --
10 --

= Total Cover

Woody vine stratum (Plot size: 30' Radius )
1 --
2 --

= Total Cover

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:
OBL species 70 x 1 = 70
FACW species 30 x 2 = 60
FAC species 10 x 3 = 30
FACU species 0 x 4 = 0
UPL species 0 x 5 = 0

Column totals 110 (A) 160 (B)
Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation
X Dominance test is >50%
X 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

Hydrophytic vegetation present? Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>5-7</td>
<td>10YR 4/1</td>
<td>95</td>
<td>7.5YR 4/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td>with rocks</td>
</tr>
<tr>
<td>7-12</td>
<td>10YR 5/1</td>
<td>85</td>
<td>7.5YR 5/6</td>
<td>15</td>
<td>C</td>
<td>PL</td>
<td>sandy clay loam</td>
<td>with rocks</td>
</tr>
<tr>
<td>12+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>too rocky to sample - road fill?</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 
- Remarks: 
- Hydric soil present? 

**Hydrology**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes No Depth (inches): 4 inches
- Water table present? Yes No Depth (inches): 
- Saturation present? Yes No Depth (inches): surface

- Indicators of wetland hydrology present? 

**Remarks:**
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site** CSAH 103  
**City/County:** Brooklyn Park/ Henn Co.  
**State:** MN  
**Applicant/Owner:** Henn Co  
**Investigator(s):** Rebecca Beduhn  
**Landform (hillslope, terrace, etc.):** hillside  
**Local relief (concave, convex, none):** concave  
**Slope (%):** zero  
**Lat:** 45.1206  
**Long:** 93.3765  
**Section, Township, Range:** s17, 119n, 21w  
**Soil Map Unit Name D1B - Anoka and Zimmerman soils terrace, 2-6% slopes**  
**NWI Classification:** not mapped

**Notes:**  
This data sheet has been adapted to use the 2014 National Wetland Plant List:  

---

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

**VEGETATION** -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic Vegetation Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td>Rapid test for hydrophytic vegetation</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>Dominance test is &gt;50%</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>Prevalence index = 3.00</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>X: Prevalence index is ≤3.0*</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>20</td>
<td></td>
<td></td>
<td>Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>20 = Total Cover</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic Vegetation Indicators:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poa pratensis</td>
<td>80</td>
<td>Y</td>
<td>FAC</td>
<td>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</td>
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<tr>
<td>2</td>
<td>--</td>
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<tr>
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</tr>
<tr>
<td>9</td>
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<td></td>
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</tr>
<tr>
<td>10</td>
<td>--</td>
<td>80</td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Remarks: (Include photo numbers here or on a separate sheet) |  
Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:  
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>% Type* Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 3/3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>5-16</td>
<td>10YR 5/3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- sandy gleayed matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleayed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: ____________________________
- Depth (inches): ____________________
- Hydric soil present? N
- Remarks: ____________________________

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes No X Depth (inches): >16 in
- Water table present? Yes No X Depth (inches): >16 in
- Saturation present? Yes No X Depth (inches): >16 in
- (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: ____________________________

US Army Corps of Engineers

Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** CSAH 103  
**City/County:** Brooklyn Park/Henn Co.  
**State:** MN  
**Sampling Date:** May 18, 2015

**Applicant/Owner:** Henn Co  
**Investigator(s):** Rebecca Beduhn  
**Landform (hillslope, terrace, etc.):** depression  
**Local relief (concave, convex, none):** concave

**Slope (%):** zero  
**Lat:** 45.1206  
**Long:** 93.3765  
**Datum:**

**Soil Map Unit Name D1B - Anoka and Zimmerman soils terrace, 2-6% slopes**  
**NWI Classification:** not mapped

---

**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** Y  
- **Hydric soil present?** Y  
- **Indicators of wetland hydrology present?** Y

**Is the sampled area within a wetland?** Y

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</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>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tree Stratum Total Cover**  
20 = Total Cover

| Sapling/Shrub stratum (Plot size: 15' Radius) | |
|-----------------------------------------------|------------------|------------------|-----------------|
| 1                                             | --               |                  |                 |
| 2                                             | --               |                  |                 |
| 3                                             | --               |                  |                 |
| 4                                             | --               |                  |                 |
| 5                                             | --               |                  |                 |

**Sapling/Shrub stratum Total Cover**  
0 = Total Cover

| Herb stratum (Plot size: 5' Radius) | |
|------------------------------------|------------------|------------------|-----------------|
| 1 Typha angustifolia - Narrow-Leaf Cat-Tail | 60 | Y | OBL |
| 2 Carex stricta - tussock sedge | 20 | Y | OBL |
| 3 Phalaris arundinacea - Reed Canary Grass | 10 | N | FACW |
| 4 | -- | | |
| 5 | -- | | |
| 6 | -- | | |
| 7 | -- | | |
| 8 | -- | | |
| 9 | -- | | |
| 10 | -- | | |

**Herb stratum Total Cover**  
90 = Total Cover

| Woody vine stratum (Plot size: 30' Radius) | |
|-------------------------------------------|------------------|------------------|-----------------|
| 1 | -- | | |
| 2 | -- | | |

**Woody vine stratum Total Cover**  
0 = Total Cover

**Dominance Test Worksheet**

- **Number of Dominant Species that are OBL, FACW, or FAC:** 2 (A)  
- **Total Number of Dominant Species Across all Strata:** 3 (B)  
- **Percent of Dominant Species that are OBL, FACW, or FAC:** 66.67% (A/B)

**Prevalence Index Worksheet**

- **Total % Cover of:**  
  - OBL species **80** x 1 = **80**  
  - FACW species **10** x 2 = **20**  
  - FAC species **0** x 3 = **0**  
  - FACU species **0** x 4 = **0**  
  - UPL species **0** x 5 = **0**  
  - **Column totals 90 (A) 100 (B)**

**Prevalence Index**  
B/A = 1.11

**Hydrophytic Vegetation Indicators:**

- X Dominance test is >50%  
- X 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

**Hydrophytic vegetation present?** Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR 2/2</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-18</td>
<td>10YR 6/2</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):
- Type:
- Depth (inches): ________________________________
- Hydric soil present? Y
- Remarks:

HYDROLOGY

Wetland Hydrology Indicators:
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2) X
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- Secondary Indicators (minimum of two required)
  - Surface Soil Cracks (B6)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Clayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Stunted or Stressed Plants (D1)
  - FAC-Neutral Test (D5)

Field Observations:
- Surface water present? Yes No
- Water table present? Yes X No Depth (inches): 4 inches
- Saturation present? Yes X No Depth (inches): surface

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers
Midwest Region
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Applicant/Owner:** Met Council  
**Project/Site:** CSAH 103  
**Investigator(s):** Jeff Olson  
**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):** concave  
**Slope (%):** 2-Jan  
**Lat:** 45.1165  
**Long:** 93.3777  
**Section, Township, Range:** S17, T119N, R21W  
**Soil Map Unit Name:** D17A - DuElm loamy sand, 0-2% slopes  
**NWI Classification:** PEM1Ax  
**Sampling Date:** May 20, 2015  
**City/County:** Brooklyn Park/ Hennepin  
**State:** MN  
**Sampling Point:** new w21up  

#### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td>If yes, optional wetland site ID:</td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td>Remarks: (Explain alternative procedures here or in a separate report.)</td>
<td></td>
</tr>
</tbody>
</table>

#### VEGETATION -- Use scientific names of plants.

<table>
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<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
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</tr>
<tr>
<td>4</td>
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</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
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</thead>
<tbody>
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</tr>
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<td></td>
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</tr>
<tr>
<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Parthenocissus quinquefolia Virginia-Creeper</td>
<td>40</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>2 Cirsium arvense Canadian Thistle</td>
<td>40</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
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<td>7</td>
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<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>80</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
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<tr>
<td>4</td>
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<td></td>
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<td></td>
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<tr>
<td>5</td>
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<td>6</td>
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<td>7</td>
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<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>80</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
</tbody>
</table>

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

#### Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
- Total Number of Dominant Species Across all Strata: 2 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

#### Prevalence Index Worksheet

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 0 x 2 = 0
  - FAC species: 0 x 3 = 0
  - FACU species: 80 x 4 = 320
  - UPL species: 0 x 5 = 0
- Column totals: 80 (A) 320 (B)

- Prevalence Index = B/A = 4.00

#### 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

**Notes:** This data sheet has been adapted to use the 2014 National Wetland Plant List: Robert W. Lichvar and John T. Kartesz. 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC. (2014)
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>Redox Features Color (moist)</th>
<th>Redox Features %</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>10YR 3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>12-18</td>
<td>10YR 5/3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

#### Restrictive Layer (if observed):
- Type:
- Depth (inches):
- Remarks:

#### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Observations:
- Surface water present? Yes No X Depth (inches): (includes capillary fringe)
- Water table present? Yes No X Depth (inches): (includes capillary fringe)
- Saturation present? Yes No X Depth (inches): (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: CSAH 103
City/County: Brooklyn Park/Hennepin
Applicant/Owner: Met Council
State: MN
Investigator(s): Jeff Olson
Section, Township, Range: s17, 119, 21w
Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): 2-Jan Long: 45.1165 93.3777
Lat: Slope Map Unit Name: D17A - Duelm loamy sand. 0-2% slopes
NWI Classification: PEM1Ax
Are climatic/hydrologic conditions of the site typical for this time of the year?
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

Is the sampled area within a wetland? Y

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Dominant Species that are OBL, FACW, or FAC:</th>
<th>1 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata:</td>
<td>1 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)</td>
<td></td>
</tr>
</tbody>
</table>

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>OBL species</th>
<th>0 x 1 = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACW species</td>
<td>20 x 2 = 40</td>
</tr>
<tr>
<td>FAC species</td>
<td>0 x 3 = 0</td>
</tr>
<tr>
<td>FACU species</td>
<td>0 x 4 = 0</td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
</tr>
<tr>
<td>Column totals</td>
<td>20 (A) 40 (B)</td>
</tr>
<tr>
<td>Prevalence Index = B/A = 2.00</td>
<td></td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

<table>
<thead>
<tr>
<th>Rapid test for hydrophytic vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Dominance test is &gt;50%</td>
</tr>
<tr>
<td>X Prevalence index is ≤3.0*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problematic hydrophytic vegetation* (explain)</td>
</tr>
<tr>
<td>*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</td>
</tr>
</tbody>
</table>

### Woody vine stratum

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius)</th>
<th>20 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
<td>FACW</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Total Cover</td>
</tr>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/2</td>
<td>100</td>
<td>7.5YR 5/6</td>
<td>50</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 6/2</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>50</td>
<td>C</td>
<td>PL</td>
<td>sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Redox (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: ____________________________
- Depth (inches): ____________________
- Hydric soil present? **Y**
- Remarks: __________________________

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

<table>
<thead>
<tr>
<th>Field Observations:</th>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
<th>5 inches</th>
<th>Indicators of wetland hydrology present? <strong>Y</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td>5 inches</td>
<td></td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td>surface</td>
<td></td>
</tr>
</tbody>
</table>

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: __________________________

US Army Corps of Engineers  Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**City/County:** Brooklyn Park/ Henn Co.  
**State:** MN  
**Sampling Date:** May 18, 2015  
**Sampling Point:** sp26-up

**Applicant/Owner:** Hennepin Co.  
**Investigator(s):** Rebecca Beduhn  
**Landform (hillslope, terrace, etc.):** hillslope  
**Local relief (concave, convex, none):** concave

<table>
<thead>
<tr>
<th>Slope (%)</th>
<th>Lat:</th>
<th>Long:</th>
<th>Datum:</th>
<th>Soil Map Unit Name Urban land - not hydric</th>
<th>NWI Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>three</td>
<td></td>
<td></td>
<td></td>
<td>Not Mapping</td>
<td>Not mapped</td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>N</td>
</tr>
<tr>
<td>If yes, optional wetland site ID:</td>
<td></td>
</tr>
</tbody>
</table>

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
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<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Poa pratensis</td>
<td>Kentucky Blue Grass</td>
<td>90</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Taraxacum officinale</td>
<td>Common Dandelion</td>
<td>10</td>
<td>FACU</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**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

**Hydrophytic vegetation present?** N

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>4-12</td>
<td>10YR 3/3</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>12-18</td>
<td>10YR5/3</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Restrictive Layer (if observed):
Type: ___________________________
Depth (inches): __________________
Remarks: ________________________

Hydric soil present? __________

Hydrology

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)
- Other (Explain in Remarks)

Field Observations:

Surface water present? Yes __ No ______ X Depth (inches): __________
Water table present? Yes __ No X Depth (inches): >18 inches
Saturation present? Yes X No __ Depth (inches): 8 inches
(includes capillary fringe)

Indicators of wetland hydrology present? __________

Remarks:

Meets criteria for wetland hydrology.

US Army Corps of Engineers Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site Blue Line LRT**

**Applicant/Owner:** Hennepin Co.

**Investigator(s):** Rebecca Beduhn

**Landform (hillslope, terrace, etc.):** depression

**Slope (%):** three

---

**Hydrophytic vegetation present?**

**Hydric soil present?**

**Indicators of wetland hydrology present?**

**Is the sampled area within a wetland?**

---

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

**Vegetation -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>20 = Total Cover</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>35</td>
<td>Y</td>
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<td>2</td>
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<td></td>
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<td>35 = Total Cover</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia Narrow-Leaf Cat-Tail</td>
<td>40</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>2 Phalaris arundinacea Reed Canary Grass</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>3 Eleocharis obtusa Blunt Spike-Rush</td>
<td>5</td>
<td>N</td>
<td>OBL</td>
<td></td>
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<tr>
<td>4</td>
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<td>10</td>
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</tr>
<tr>
<td></td>
<td>65 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>9</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species: 2
- Total Number of Dominant Species Across all Strata: 4
- Percent of Dominant Species that are OBL, FACW, or FAC: 50.00%
- Prevalence Index = B/A = 1.31

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species: 45
  - FACW species: 20
  - FAC species: 0
  - FACU species: 0
  - UPL species: 0
- Column totals: 65 (A)
- Prevalence Index = B/A = 1.31

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - Dominance test is >50%
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist) %</th>
<th>Redox Features Color (moist) %</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 5/2</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
</tr>
</tbody>
</table>

**Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 
- Hydric soil present? Y

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes, No
- Water table present? Yes, No
- Saturation present? Yes, No
- (includes capillary fringe)

**Indicators of wetland hydrology present? Y**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

Meets criteria for wetland hydrology.
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site**: Blue Line LRT  
**City/County**: Brooklyn Park / Henn Co.  
**State**: MN  
**Sampling Date**: May 18, 2015  
**Sampling Point**: sp27-up

**Applicant/Owner**: Hennepin Co.  
**Investigator(s)**: Rebecca Beduhn  
**Landform** (hillslope, terrace, etc.): hillslope  
**Local relief** (concave, convex, none): concave  
**Slope (%)**: three  
**Soil Map Unit Name**: Urban Land - not hydric  
**NWI Classification**: PEM1C

**Are climatic/hydrologic conditions of the site typical for this time of the year?**  
**Are vegetation, soil significantly disturbed?**  
**Are vegetation, soil naturally problematic?**  
**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
</tr>
</tbody>
</table>

**Remarks**: (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

**Tree Stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Species/Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>20</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

**Sapling/Shrub stratum** (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Species/Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rhamnus cathartica</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2</td>
<td>Lonicera tatarica</td>
<td>10</td>
<td>Y</td>
<td>FACU</td>
</tr>
</tbody>
</table>

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Species/Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>60</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td>Solidago canadensis</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>3</td>
<td>Cirsium arvense</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
</tbody>
</table>

**Woody vine stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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

### Hydrophytic Vegetation Indicators:

- **Dominance Test Worksheet**
  - **Number of Dominant Species that are OBL, FACW, or FAC**: 2 (A)
  - **Total Number of Dominant Species Across all Strata**: 6 (B)
  - **Percent of Dominant Species that are OBL, FACW, or FAC**: 33.33% (A/B)

- **Prevalence Index Worksheet**
  - **Total % Cover of**:  
    - OBL species: 60 x 1 = 0  
    - FACW species: 60 x 2 = 120  
    - FAC species: 10 x 3 = 30  
    - FACU species: 50 x 4 = 200  
    - UPL species: 0 x 5 = 0  
  - **Column totals**: 120 (A) 350 (B)
  - **Prevalence Index**: B/A = 2.92

- **Hydrophytic Vegetation Indicator**
  - Rapid test for hydrophytic vegetation
    - Dominance test is >50%
  - **Morphological adaptations** (provide supporting data in Remarks or on a separate sheet)
  - **Problematic hydrophytic vegetation** (explain)

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

**Summary**

- **Vegetation**: Use scientific names of plants.
- **Remarks**: Include photo numbers here or on a separate sheet.

---

**Note**: This data sheet has been adapted to use the 2014 National Wetland Plant List:

---

**US Amy Corps of Engineers Midwest Region**
**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

Is the sampled area within a wetland? Y

Remarks: (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size)</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
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<tr>
<td>2</td>
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<tr>
<td>5</td>
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<td>20</td>
<td>=Total Cover</td>
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</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>15' Radius</td>
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<td></td>
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<tr>
<td>1</td>
<td>--</td>
<td>35</td>
<td>Y</td>
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<tr>
<td>5</td>
<td>--</td>
<td>35</td>
<td>=Total Cover</td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>5' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Typha angustifolia -- Narrow-Leaf Cat-Tail</td>
<td>80</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>2</td>
<td>Phalaris arundinacea -- Reed Canary Grass</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td>Urtica dioica -- Stinging Nettle</td>
<td>5</td>
<td>N</td>
<td>FACW</td>
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<tr>
<td>4</td>
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<tr>
<td>10</td>
<td>--</td>
<td>95</td>
<td>=Total Cover</td>
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</tr>
<tr>
<td>Woody vine stratum</td>
<td>30' Radius</td>
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<td></td>
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</tr>
<tr>
<td>1</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>=Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

**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

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

**Sampling Point:** sp27-1wet

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 6/2</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Redox (S5)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):
- Type: 
- Depth (inches): 
- Remarks:

#### Hydric soil present? Y

#### HYDROLOGY

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

#### Field Observations:
- Surface water present? Yes X No Depth (inches): >16 inches Indicators of wetland hydrology present? Y
- Water table present? Yes No Depth (inches): >16 inches
- Saturation present? Yes X No Depth (inches): 12 inches
- (includes capillary fringe)

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
- Meets criteria for wetland hydrology.

US Army Corps of Engineers Midwest Region
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 3/3</td>
<td>100</td>
<td></td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 4/3</td>
<td>100</td>
<td></td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Hydric soil present? N

Restrictive Layer (if observed):
Type: 
Depth (inches): 
Remarks:

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

Field Observations:
- Surface water present? Yes No X Depth (inches): >16 inches
- Water table present? Yes No X Depth (inches): >16 inches
- Saturation present? Yes No X Depth (inches): 13 inches

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Meets criteria for wetland hydrology.

US Army Corps of Engineers
Midwest Region
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site:** Blue Line LRT  
**City/County:** Brooklyn Park/ Hennepin  
**Applicant/Owner:** Met Council  
**Investigator(s):** Jeff Olson  
**Landform:** hillslope  
**Local relief:** concave  
**Slope (%):** >5  
**Section, Township, Range:**  
**Soil Map Unit:** D10A - Forada sandy loam, 0-2% slopes, hydric  
**NWI Classification:** PABGx PEM1C  
**Sampling Date:** May 21, 2015

**Remarks:** (Explain alternative procedures here or on a separate report.)

### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
<th></th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Salix fragilis -- Crack Willow</td>
<td>50</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Acer saccharinum -- Silver Maple</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>
</tbody>
</table>

**Total Cover** = 50

**Number of Dominant Species** that are OBL, FACW, or FAC: 1  
**Total Number of Dominant Species Across all Strata:** 4  
**Percent of Dominant Species** that are OBL, FACW, or FAC: 25.00%  
**Prevalence Index** = 3.44

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td>80</td>
<td>Y</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>
</tbody>
</table>

**Total Cover** = 80

### Herbarium

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Parthenocissus quinquefolia -- Virginia-Creeper</td>
<td>25</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>2 Arctium minus -- Lesser Burdock</td>
<td>15</td>
<td>Y</td>
<td>FACU</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>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>
</tbody>
</table>

**Total Cover** = 40

### Woody vine stratum

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td>0</td>
<td>Total Cover</td>
</tr>
<tr>
<td>2 --</td>
<td>0</td>
<td>Total Cover</td>
</tr>
</tbody>
</table>

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

### 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

### Note:

This data sheet has been adapted to use the 2014 National Wetland Plant List:  
### Profile Description:

(Describe to the depth needed to document the indicator or confirm the absence of indicators.

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>4-24</td>
<td>10YR 4/2</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>silt</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Redox (S5)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:

- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):

- Type:
- Depth (inches):
- Hydric soil present? Y
- Remarks:

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**

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

### Field Observations:

- Surface water present? Yes No X Depth (inches):
- Water table present? Yes No X Depth (inches):
- Saturation present? Yes No X Depth (inches):
- (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** Y
- **Hydric soil present?** Y
- **Indicators of wetland hydrology present?** Y

**Is the sampled area within a wetland?** Y

**Remarks:**

*If needed, explain any answers in remarks.*

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salix fragilis</td>
<td>25</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>Acer saccharinum</td>
<td>25</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>Lemna minor</td>
<td>10</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>Impatiens capensis</td>
<td>5</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>Parthenocissus quinquefolia</td>
<td>5</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

*Include photo numbers here or on a separate sheet.*

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site**: Blue Line LRT  
**Applicant/Owner**: Hennepin Co.  
**City/County**: Crystal/ Henn Co.  
**State**: MN  
**Sampling Date**: May 18, 2015  
**Sampling Point**: sp29-1up  

**Investigator(s)**: Rebecca Beduhn  
**Landform (hillslope, terrace, etc.)**: hillslope  
**Local relief (concave, convex, none)**: concave  
**Slope (%):**  
**Lat:**  
**Long:**  
**Soil Map Unit Name**: D30A - Seeleyville and Markey mucks, depressional, 0-1% slopes, hydric  
**NWI Classification**: PEM1C  

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

---

**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** [ ]  
- **Hydric soil present?** [ ]  
- **Indicators of wetland hydrology present?** [ ]

**Is the sampled area within a wetland?** [ ]

**Remarks**: (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acer negundo -- Ash-Leaf Maple</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Ulmus alata -- Winged Elm</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Zanthoxylum americanum -- Toothachetree</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Zanthoxylum americanum -- Toothachetree</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: [2] (A)
- Total Number of Dominant Species Across all Strata: [5] (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: [40.00%] (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:  
  - OBL species: [0 x 1 = 0]  
  - FACW species: [0 x 2 = 0]  
  - FAC species: [80 x 3 = 240]  
  - FACU species: [90 x 4 = 360]  
  - UPL species: [0 x 5 = 0]

- Column totals: [170] (A)  
- Prevalence Index = B/A = [3.53] (B)

**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

**Hydrophytic vegetation present?** [ ]

---

**Note**: This data sheet has been adapted to use the 2014 National Wetland Plant List:

### Hydric Soil Indicators:

<table>
<thead>
<tr>
<th>Type</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histosol (A1)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>Histic Epipedon (A2)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Black Histic (A3)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>Hydrogen Sulfide (A4)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Loamy Mucky Mineral (F1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>Stratified Layers (A5)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Loamy Gleyed Matrix (F2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>2 cm Muck (A10)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Depleted Matrix (F3)</td>
<td></td>
<td></td>
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<td>loamy sand</td>
</tr>
<tr>
<td>Depleted Below Dark Surface (A11)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Redox Dark Surface (F6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>Thick Dark Surface (A12)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
<tr>
<td>Sandy Mucky Mineral (S1)</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Redox Depressions (F8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
</tr>
</tbody>
</table>

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

### Hydric Soil Indicators:

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

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
<th>Hydric soil present?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

### HYDROLOGY

**Wetland Hydrology Indicators:**

- **Primary Indicators (minimum of one is required; check all that apply)**
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- **Secondary Indicators (minimum of two required)**
  - Surface Soil Cracks (B6)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Stunted or Stressed Plants (D1)
  - FAC-Neutral Test (D5)

- **Gauge or Well Data (D9)**

### Field Observations:

- **Surface water present?** Yes No X Depth (inches): >16 inches
- **Water table present?** Yes No X Depth (inches): >16 inches
- **Saturation present?** Yes No X Depth (inches): >16 inches

**Indicators of wetland hydrology present?** N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 2/1</td>
<td>90</td>
<td>4/5G</td>
<td>10</td>
<td>D</td>
<td>PL</td>
<td>silt loam</td>
<td>green gley</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

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

---

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**

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

**Field Observations:**

- Surface water present? Yes X No
- Water table present? Yes X No
- Saturation present? Yes X No

<table>
<thead>
<tr>
<th>Depth (inches):</th>
<th>13 inches</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth (inches):</th>
<th>5 inches</th>
</tr>
</thead>
</table>

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---

US Army Corps of Engineers Midwest Region
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site:** Blue Line LRT  
**City/County:** Crystal/ Henn Co.  
**Applicant/Owner:** Hennepin Co.  
**State:** MN  
**Investigator(s):** Rebecca Beduhn  
**Sampling Date:** May 18, 2015  
**Sampling Point:** sp29-1wet

**Landform (hillslope, terrace, etc.):** depression  
**Local relief (concave, convex, none):** concave

**Slope (%):**  
**Long:**  
**Datum:**

**Soil Map Unit Name D30A - Seeleyville and Markey mucks, depressional, 0-1% slopes, hydric**

**NWI Classification:** PEM1C

**Are climatic/hydrologic conditions of the site typical for this time of the year?**  
**If no, explain in remarks:** (If needed, explain any answers in remarks.)

**Are vegetation, soil significantly disturbed?**  
**Are vegetation, soil naturally problematic?**  
**Are "normal circumstances" present?** Yes

### SUMMARY OF FINDINGS

- Hydrophytic vegetation present? Y  
- Hydric soil present? Y  
- Indicators of wetland hydrology present? Y

**Is the sampled area within a wetland?** Y

If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
<td>--</td>
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<td></td>
</tr>
</tbody>
</table>

**Total Cover:** 0 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>5</td>
<td>--</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Cover:** 0 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Typha angustifolia</td>
<td>Narrow-Leaf Cat-Tail</td>
<td>65</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>2</td>
<td>Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td>Urtica dioica</td>
<td>Stinging Nettle</td>
<td>5</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>4</td>
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<td></td>
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<td></td>
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<tr>
<td>10</td>
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</tr>
</tbody>
</table>

**Total Cover:** 100 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td></td>
</tr>
</tbody>
</table>

**Total Cover:** 0 = Total Cover

**Number of Dominant Species that are OBL, FACW, or FAC:** 2 (A)

**Total Number of Dominant Species Across all Strata:** 2 (B)

**Percent of Dominant Species that are OBL, FACW, or FAC:** 100.00% (A/B)

**Prevalence Index Worksheet**

**Total % Cover of:**
- OBL species 65 x 1 = 65  
- FACW species 35 x 2 = 70  
- FAC species 0 x 3 = 0  
- FACU species 0 x 4 = 0  
- UPL species 0 x 5 = 0

**Column totals:** 100 (A)  
**Prevalence Index = B/A = 1.35 (B)**

**Hydrophytic Vegetation Indicators:**

- X Dominance test is >50%
- X 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

**Hydrophytic vegetation present?** Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
**SOIL**

**Sampling Point:** sp29-1wet

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td><strong>X</strong>*</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 6/2</td>
<td>95</td>
<td></td>
<td></td>
<td></td>
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<td>loamy sand</td>
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</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

**Restrictive Layer (if observed):**
- Type: _____________________________
- Depth (inches): ______________

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes, No, X [Depth (inches): ______________]
- Water table present? Yes, No, X [Depth (inches): ______________]
- Saturation present? Yes, No, X [Depth (inches): ______________]
- (includes capillary fringe)

**Indicators of wetland hydrology present?** Y

**Remarks:**

- Meets criteria for wetland hydrology.

US Army Corps of Engineers

Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**City/County:** Robbinsdale/ Henn Co.  
**State:** MN  
**Sampling Date:** May 21, 2015  
**Applicant/Owner:** Hennepin Co.  
**Sampling Point:** new w30 up  
**Investigator(s):** Rebecca Beduhn  
**Section, Township, Range:** s6, 29n, 24w  
**Landform (hillslope, terrace, etc.):**  
**Local relief (concave, convex, none):** concave  
**Slope (%): three  
**Lat:** 45.0347  
**Long:** 93.3457  
**Datum:**  
**Soil Map Unit Name D64B - Urban Land - Hubbard Complex, Mississippi River Valley, 0-8% slope**  
**NWI Classification:** PUBGx/ PEM1A  

---

**SUMMARY OF FINDINGS**

- Are climatic/hydrologic conditions of the site typical for this time of the year? **Yes**  
- Are vegetation, soil significantly disturbed? **No**  
- Are vegetation, soil naturally problematic? **Yes**

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<td>4</td>
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<td>5</td>
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<tr>
<td>Total Cover</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>(Plot size: 15' Radius)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
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<td>2</td>
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<td>5</td>
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<tr>
<td>Total Cover</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>(Plot size: 5' Radius)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Poa pratensis -- Kentucky Blue Grass</td>
<td>30</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td>Rumex crispus -- Curly Dock</td>
<td>15</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
<td>Cirsium arvense -- Canadian Thistle</td>
<td>10</td>
<td>N</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
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<tr>
<td>10</td>
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<td></td>
</tr>
<tr>
<td>Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)  
- Total Number of Dominant Species Across all Strata: **2** (B)  
- Percent of Dominant Species that are OBL, FACW, or FAC: **100.00%** (A/B)  

**Prevalence Index Worksheet**

- Total % Cover of:  
  - OBL species: **0 x 1 = 0**  
  - FACW species: **0 x 2 = 0**  
  - FAC species: **45 x 3 = 135**  
  - FACU species: **10 x 4 = 40**  
  - UPL species: **0 x 5 = 0**  
- Column totals: **55 (A) 175 (B)**  
- Prevalence Index = B/A = **3.18**  

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation  
  - X 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**

**Hydrophytic vegetation present?** **Y**

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>soils disturbed from earthwork</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>not sampled</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>edge of storm pond</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

- Type: __________________________
- Depth (inches): __________________________
- Remarks: __________________________

**Hydric soil present?** N

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? Yes, No X Depth (inches): ________________
- Water table present? Yes, No X Depth (inches): ________________
- Saturation present? Yes, No X Depth (inches): ________________

*Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: __________________________

US Army Corps of Engineers
Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site** Blue Line LRT  
**City/County:** Robbinsdale/ Henn Co.  
**State:** MN  
**Sampling Date:** May 21, 2015

**Applicant/Owner:** Hennepin Co.  
**Investigator(s):** Rebecca Beduhn

**Landform (hillslope, terrace, etc.):** depression  
**Local relief (concave, convex, none):** concave

**Slope (%):** three  
**Lat:** 45.0347  
**Long:** 93.3457

**Soil Map Unit Name** D64B - Urban Land - Hubbard Complex, Mississippi River Valley, 0-8% slope  
**NWI Classification:** PUBGx/ PEM1A

**Are climatic/hydrologic conditions of the site typical for this time of the year?**  
**Are vegetation, soil significantly disturbed?**  
**Are vegetation, soil naturally problematic?**  
**Are "normal circumstances" present?** Yes

---

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** Y  
- **Hydric soil present?** Y  
- **Indicators of wetland hydrology present?** Y  
- **Is the sampled area within a wetland?** Y

Remarks: (Explain alternative procedures here or in a separate report.)

---

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size: )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>5</td>
<td>--</td>
<td><strong>0</strong> = Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>15' Radius</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1</td>
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</tr>
<tr>
<td>5</td>
<td>--</td>
<td><strong>0</strong> = Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>5' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td><em>Poa pratensis</em></td>
<td>Kentucky Blue Grass</td>
<td>30</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td><em>Rumex crispus</em></td>
<td>Curly Dock</td>
<td>15</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>10</td>
<td>--</td>
<td><strong>45</strong> = Total Cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>30' Radius</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
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<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td><strong>0</strong> = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
- Total Number of Dominant Species Across all Strata: 2 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 0 x 2 = 0
  - FAC species: 45 x 3 = 135
  - FACU species: 0 x 4 = 0
  - UPL species: 0 x 5 = 0
- Column totals: 45 (A) 135 (B)
- Prevalence Index = B/A = 3.00

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: Prevalence index is ≤3.0*
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

---

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:


---

US Army Corps of Engineers  
Midwest Region
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

#### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Hydric soil present? Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (inches):</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Ponded for a long or very long duration during the growing season.

### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>X High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>X Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
<tr>
<td>X Aquatic Fauna (B13)</td>
<td>X Recent Iron Reduction in Tilled Soils (C6)</td>
</tr>
<tr>
<td>X True Aquatic Plants (B14)</td>
<td>X Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>X Hydrogen Sulfide Odor (C1)</td>
<td>X Gauge or Well Data (D9)</td>
</tr>
<tr>
<td>Oxidized Rhizospheres on Living Roots (C3)</td>
<td>X Other (Explain in Remarks)</td>
</tr>
<tr>
<td>Presence of Reduced Iron (C4)</td>
<td></td>
</tr>
<tr>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
<td></td>
</tr>
<tr>
<td>Thin Muck Surface (C7)</td>
<td></td>
</tr>
<tr>
<td>Gauge or Well Data (D9)</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present? Yes X No</th>
<th>Depth (inches): 5 inches</th>
<th>Indicators of wetland hydrology present? Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present? Yes X No</td>
<td>Depth (inches): surface</td>
<td></td>
</tr>
<tr>
<td>Saturation present? Yes X No</td>
<td>Depth (inches): surface</td>
<td></td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Meets criteria for wetland hydrology.
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Robbinsdale/ Henn Co.  
Sampling Date: May 18, 2015

Applicant/Owner: Hennepin Co.  
State: MN  
Sampling Point: sp31-1up

Investigator(s): Rebecca Beduhn  
Section, Township, Range: s7, 29n, 24w

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none): concave

Slope (%): three  
Lat: 45.0142  
Long: 93.3334  
Datum: 

Soil Map Unit Name 1A - Urban land udorthents, wet substratum, complex, 0-2% slopes  \nNWI Classification: PSS1A, PEM1A

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)  
Are vegetation, soil significantly disturbed?  
Are vegetation, soil naturally problematic?  
Are "normal circumstances" present? Yes

### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15’ Radius )</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5’ Radius )</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poa pratensis</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Carex pennsylvanica</td>
<td>20</td>
<td>Y</td>
<td>UPL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Solidago canadensis</td>
<td>10</td>
<td>N</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Taraxacum officinale</td>
<td>10</td>
<td>N</td>
<td>FAC</td>
<td></td>
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<tr>
<td>5</td>
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<tr>
<td>6</td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

40% bare soil, somewhat sparsely vegetated

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
<td></td>
</tr>
<tr>
<td>5-13</td>
<td>10YR 4/3</td>
<td>98</td>
<td>7.5YR 4/6</td>
<td>2</td>
<td>C</td>
<td>PL</td>
<td></td>
<td></td>
<td></td>
<td>sandy loam</td>
</tr>
<tr>
<td>13-20</td>
<td>10YR 4/4</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Indicators of problematic hydric soils must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: __________________________
Depth (inches): __________________________

Remarks: __________________________

Hydric soil present? _N_

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

Indicators of wetland hydrology present? _N_

Field Observations:
- Surface water present? _Yes_ _No_ _X_ Depth (inches): _>20 inches_
- Water table present? _Yes_ _No_ _X_ Depth (inches): _>20 inches_
- Saturation present? _Yes_ _No_ _X_ Depth (inches): _>20 inches_

Remarks: __________________________

Meets criteria for wetland hydrology.

US Army Corps of Engineers
Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Robbinsdale/ Henn Co.  
State: MN  
Sampling Date: May 18, 2015  
Sampling Point: sp31-1wet

Applicant/Owner: Hennepin Co.  
Investigator(s): Rebecca Beduhn

Landform (hillslope, terrace, etc.): depression  
Local relief (concave, convex, none): concave

Slope (%): three  
Lat: 45.0142  
Long: 93.3334

Soil Map Unit Name 1A - Urban land udorthents, wet substratum, complex, 0-2% slopes

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

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Hydric soil present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

### VEGETATION

--- Use scientific names of plants.

#### Tree Stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhamnus alnifolia</td>
<td>Alder-Leaf Buckthorn</td>
</tr>
<tr>
<td>Juglans nigra</td>
<td>Black Walnut</td>
</tr>
<tr>
<td>Populus tremuloides</td>
<td>Quaking Aspen</td>
</tr>
<tr>
<td>Acer negundo</td>
<td>Ash-Leaf Maple</td>
</tr>
</tbody>
</table>

#### Sapling/Shrub stratum (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carex stricta</td>
<td>Uptight Sedge</td>
</tr>
</tbody>
</table>

#### Herb stratum (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
</tr>
<tr>
<td>Impatiens capensis</td>
<td>Spotted Touch-Me-Not</td>
</tr>
<tr>
<td>Carex lacustris</td>
<td>Lakebank Sedge</td>
</tr>
<tr>
<td>Carex stricta</td>
<td>Uptight Sedge</td>
</tr>
</tbody>
</table>

#### Woody vine stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Cover</td>
</tr>
</tbody>
</table>

### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata: 5 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)</td>
</tr>
</tbody>
</table>

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 x 1 = 40</td>
<td>70 x 2 = 140</td>
<td>15 x 3 = 45</td>
<td>10 x 4 = 40</td>
<td>0 x 5 = 0</td>
</tr>
<tr>
<td>Column totals</td>
<td>135 (A)</td>
<td>265 (B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence Index = B/A = 1.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

Hydrophytic vegetation present? Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

**Sampling Point:** sp31-1wet

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>10YR 2/2 100</td>
<td>mucky peat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-10</td>
<td>10YR 4/1 95 7.5YR 4/6 5 C PL</td>
<td>sandy loam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-20</td>
<td>10YR 6/1 85 10YR 5/6 15 C PL</td>
<td>sandy loam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

- Type: __________
- Depth (inches): __________
- **Hydric soil present?** __Y__

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? __Yes__ __X__ __No__
- Water table present? __Yes__ __X__ __No__
- Saturation present? __Yes__ __X__ __No__

- Depth (inches): __2 inches__
- Depth (inches): __surface__
- Depth (inches): __surface__

**Indicators of wetland hydrology present?** __Y__

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

- Meets criteria for wetland hydrology.

---

US Army Corps of Engineers  Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Robbinsdale/ Henn Co.  
Sampling Date: May 18, 2015  
State: MN  
Sampling Point: sp32-1up  
Section, Township, Range: s7, 29n, 24w  
Investigator(s): Rebecca Beduhn  
Landform (hillslope, terrace, etc.): hillslope  
Local relief (concave, convex, none): none  
Slope (%): three  
Lat: 45.0142  
Long: 93.3334  
Datum:  
Soil Map Unit Name W - water  
NWI Classification: PUBG/ PFO1A/ PSS1C

---

**SUMMARY OF FINDINGS**

- Are climatic/hydrologic conditions of the site typical for this time of the year? **Y**  
- Are vegetation, soil significantly disturbed? _____  
- Are vegetation, soil naturally problematic? _____

- Are "normal circumstances" present? Yes  
- If needed, explain any answers in remarks.

---

**VEGETATION**  
*Use scientific names of plants.*

### Tree Stratum

<table>
<thead>
<tr>
<th>Plot size: 30' Radius</th>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Acer negundo</strong></td>
<td>20</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

Total Cover: 20

### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Plot size: 15' Radius</th>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Lonicera tatarica</strong></td>
<td>40</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>2</td>
<td><strong>Rhamnus cathartica</strong></td>
<td>20</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

Total Cover: 60

### Herb stratum

<table>
<thead>
<tr>
<th>Plot size: 5' Radius</th>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Bromus inermis</strong></td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>2</td>
<td><strong>Poa pratensis</strong></td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
<td><strong>Taraxacum officinale</strong></td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>4</td>
<td><strong>Rhamnus cathartica</strong></td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
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<tr>
<td>8</td>
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<td></td>
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<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>
</tbody>
</table>

Total Cover: 80

### Woody vine stratum

<table>
<thead>
<tr>
<th>Plot size: 30' Radius</th>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

Total Cover: 0

---

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: **4 (A)**  
- Total Number of Dominant Species Across all Strata: **7 (B)**  
- Percent of Dominant Species that are OBL, FACW, or FAC: **57.14% (A/B)**

**Prevalence Index Worksheet**

- Total % Cover of:  
  - OBL species: **0 x 1 = 0**  
  - FACW species: **0 x 2 = 0**  
  - FAC species: **80 x 3 = 240**  
  - FACU species: **80 x 4 = 320**  
  - UPL species: **0 x 5 = 0**
- Column totals: **160 (A)**  
- Prevalence Index = B/A = **3.50**

---

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation: **X**  
- Dominance test is >50%  
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

---

**Remarks:**

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>10YR 3/3</td>
<td>100</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td>loamy sand</td>
</tr>
<tr>
<td>3-12</td>
<td>10YR 5/3</td>
<td>100</td>
<td>Loamy Mucky Mineral (F1)</td>
<td>loamy sand</td>
</tr>
</tbody>
</table>

- **Type:** C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

**Restrictive Layer (if observed):**
- Type: ____________________________
- Depth (inches): ____________________

**Hydric soil present?** N

**Remarks:**
- cobble or rubble at 12” prevented examination of soils to 24”.

### HYDROLOGY

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- Secondary Indicators (minimum of two required)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes No X
- Water table present? Yes No X
- Saturation present? Yes No X

**Indicators of wetland hydrology present?** N

**Remarks:**
- Does not meet criteria for wetland hydrology.
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site** Blue Line LRT  
**City/County:** Robbinsdale Henn Co.  
**Applicant/Owner:** Hennepin Co.  
**State:** MN  
**Sampling Date:** May 18, 2015  
**Investigator(s):** Rebecca Beduhn  
**Section, Township, Range:** s7, 29n, 24w  
**Soil Map Unit Name** W - water  
**Local relief (concave, convex, none):** concave

---

### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Hydric soil present?</th>
<th>Y</th>
<th>Indicators of wetland hydrology present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>Y</th>
</tr>
</thead>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
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<td>2</td>
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<td>4</td>
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<td></td>
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</tr>
<tr>
<td>5</td>
<td>--</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sapling/Shrub stratum

(Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
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<td>2</td>
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<td>4</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Herb stratum

(Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia</td>
<td>Narrow-Leaf Cat-Tail</td>
<td>80 Y OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Carex lacustris</td>
<td>Lakebank Sedge</td>
<td>10 N OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Lemna minor</td>
<td>Common Duckweed</td>
<td>10 N OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
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<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td>100 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Woody vine stratum

(Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loamy sand</td>
<td></td>
</tr>
<tr>
<td>8-16</td>
<td>10YR 6/2</td>
<td>95</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>loamy sand</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):
- Type:
- Depth (inches):

| Remarks:

### HYDROLOGY

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

#### Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches): 12 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>X</td>
<td>Depth (inches):</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>X</td>
<td>Depth (inches): surface</td>
</tr>
</tbody>
</table>

#### Indicators of wetland hydrology present?

*Indications of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

| Remarks: |

Meets criteria for wetland hydrology.

US Army Corps of Engineers  Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT

City/County: Robbinsdale/ Hennepin

Sampling Date: June 4, 2015

Applicant/Owner: Met Council

State: MN

Sampling Point: sp33-1up

Investigator(s): Jeff Olson

Section, Township, Range: s7, 29n, 24w

Landform (hillslope, terrace, etc.): hillslope

Local relief (concave, convex, none): concave

Slope (%): four

Lat: 45.0109

Long: 93.3312

Datum: NAD 83

Soil Map Unit Name W - water

NWI Classification: PUBG/ PEM1C/ PABG

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y

Hydric soil present? N

Indicators of wetland hydrology present? N

If yes, optional wetland site ID: __________

Remarks: (Explain alternative procedures here or in a separate report.)

Hydrophytic vegetation indicators:

Rapid test for hydrophytic vegetation

X Dominance test is >50%

X 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

Wetland determination data form - Midwest Region

Are "normal circumstances" present? Yes

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>10YR 2/2</td>
<td>100</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td>silt</td>
</tr>
<tr>
<td>3-24</td>
<td>10YR 3/2</td>
<td>100</td>
<td>Sandy Redox (S5)</td>
<td></td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:**
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: _______________________
- Depth (inches): _______________

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

- Secondary Indicators (minimum of two required)
  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes _____ No X Depth (inches): >24 inches
- Water table present? Yes _____ No X Depth (inches): >24 inches
- Saturation present? Yes _____ No X Depth (inches): >24 inches

**Indicators of wetland hydrology present? ** N

**Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

US Army Corps of Engineers Midwest Region
**SUMMARY OF FINDINGS**

| Hydrophytic vegetation present? | Y |
| Hydric soil present? | Y |
| Indicators of wetland hydrology present? | Y |
| Is the sampled area within a wetland? | Y |

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Acer negundo -- Ash-Leaf Maple</td>
<td>30</td>
<td>Y</td>
<td>FAC</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>
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<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Pilea pumila -- Canadian Clearweed</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>3 Phalaris arundinacea -- Reed Canary Grass</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>4 Lemna minor -- Common Duckweed</td>
<td>15</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>7</td>
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<td>8</td>
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</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**

- **Rapid test for hydrophytic vegetation**
  - X: Dominance test is >50%
  - X: 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

**Hydrophytic vegetation present?** Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist) %</th>
<th>Redox Features Type*</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>N/2.5 100</td>
<td></td>
<td></td>
<td>sapric muck</td>
</tr>
</tbody>
</table>

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

### Hydric Soil Indicators:

- X Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

- **Type:**
- **Depth (inches):**
- **Remarks:**

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

#### Field Observations:

- Surface water present? Yes X No
- Depth (inches): 3 inches
- Water table present? Yes X No
- Depth (inches): 3 inches
- Saturation present? Yes X No
- Depth (inches): surface

**Indicators of wetland hydrology present? Y**

#### Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---

US Army Corps of Engineers  Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site Blue Line LRT
Applicant/Owner: Met Council
Investigator(s): Jeff Olson
Landform (hillslope, terrace, etc.): hillslope
Slope (%): four
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS
Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? N

Is the sampled area within a wetland? N
If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Populus deltoides - Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 --</td>
<td>20</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica - European Buckthorn</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Viburnum opulus - Highbush-Cranberry</td>
<td>5</td>
<td>N</td>
<td>FAC</td>
</tr>
<tr>
<td>3 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica - European Buckthorn</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Fraxinus pennsylvanica - Green Ash</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 --</td>
<td>--</td>
<td></td>
<td></td>
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<tr>
<td>7 --</td>
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<tr>
<td>8 --</td>
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<td></td>
</tr>
<tr>
<td>9 --</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>Absolute % Cover</td>
<td>Dominant Species</td>
<td>Indicator Status</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>1 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 2/2</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td></td>
<td></td>
<td></td>
<td>silty clay loam</td>
</tr>
<tr>
<td>8-24</td>
<td>10YR 2/2</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td></td>
<td></td>
<td></td>
<td>clay loam</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

### Restrictive Layer (if observed):
Type: __________
Depth (inches): __________

### Hydric soil present?
Y

### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Clayfish Burrows (C8)</td>
</tr>
<tr>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>FAC-Neutral Test (D5)</td>
</tr>
</tbody>
</table>

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X Depth (inches):</th>
<th>&gt;24 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td>&gt;24 inches</td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Indicators of wetland hydrology present?
N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers  Midwest Region
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Robbinsdale/ Hennepin  
Applicant/Owner: Met Council  
Investigator(s): Jeff Olson  
Landform (hillslope, terrace, etc.): depression  
Local relief (concave, convex, none): concave  
Slope (%): four  
Lat: 45.0073  
Long: 93.3326  
Datum:  
Soil Map Unit Name: L50A - Houghton and Muskego mucks depressional, 0-1% slopes  
NWI Classification: PAGB/ PEM1F/ PFO1A  
Sampling Date: May 27, 2015  
Sampling Point: sp34-1wet  
State: MN  
Section, Township, Range: s7, 29n, 24w  
Concave, convex or none:

### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

**VEGETATION**  
Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>0 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Fraxinus pennsylvanica -- Green Ash</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>70 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fraxinus pennsylvanica -- Green Ash</td>
<td>25</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>--</td>
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</tr>
<tr>
<td>8</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td>45 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>0 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC:</th>
<th>4 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata:</td>
<td>4 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC:</td>
<td>100.00% (A/B)</td>
</tr>
</tbody>
</table>

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
</tr>
<tr>
<td>FACW species</td>
</tr>
<tr>
<td>FAC species</td>
</tr>
<tr>
<td>FACU species</td>
</tr>
<tr>
<td>UPL species</td>
</tr>
<tr>
<td>Column totals</td>
</tr>
<tr>
<td>Prevalence Index = B/A =</td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

### Remarks:

Include photo numbers here or on a separate sheet.

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silty muck</td>
<td></td>
</tr>
<tr>
<td>5-16</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fine sandy clay</td>
<td></td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- Histosol (A1)
- X Historic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

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

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- X High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes  No  X  Depth (inches): 6 inches
- Water table present? Yes  X  No  Depth (inches): 3 inches
- Saturation present? Yes  X  No  Depth (inches): 6 inches

**Indicators of wetland hydrology present?** Y

**Remarks:**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers

Midwest Region
**SUMMARY OF FINDINGS**

- Hydrophytic vegetation present? **Y**
- Hydric soil present? **N**
- Indicators of wetland hydrology present? **N**
- Is the sampled area within a wetland? **N**

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

**VEGETATION** -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>35</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Populus deltoides -- Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3 Celtis occidentalis -- Common Hackberry</td>
<td>5</td>
<td>N</td>
<td>FAC</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sapling/Shrub stratum (Plot size: 15' Radius)**

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Herb stratum (Plot size: 5' Radius)**

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>40</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Prunus serotina -- Black Cherry</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>3 Hydrophyllum virginianum -- Shawnee-Salad</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Woody vine stratum (Plot size: 30' Radius)**

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: **4** (A)
- Total Number of Dominant Species Across all Strata: **5** (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: **80.00%** (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species: **0 x 1 = 0**
  - FACW species: **0 x 2 = 0**
  - FAC species: **120 x 3 = 360**
  - FACU species: **20 x 4 = 80**
  - UPL species: **0 x 5 = 0**
- Column totals: **140 (A)**, **440 (B)**
- Prevalence Index = B/A = **3.14**

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X: 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

- Hydrophytic vegetation present? **Y**

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

*This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>10YR 2/1</td>
<td>100</td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

#### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (F12)
- 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? N
Remarks: __________________________

#### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

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

#### Field Observations:

- Surface water present? Yes No X Depth (inches): >24 inches
- Water table present? Yes No X Depth (inches): >24 inches
- Saturation present? Yes No X Depth (inches): >24 inches

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: __________________________

---

US Army Corps of Engineers
Midwest Region

---
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**Applicant/Owner:** Met Council  
**Investigator(s):** Jeff Olson  
**Sampling Date:** May 28, 2015  
**State:** MN  
**Sampling Point:** sp35-1wet  
**City/County:** Robbinsdale/ Hennepin

**Landform (hillslope, terrace, etc.):** depression  
**Local relief (concave, convex, none):** concave  
**Slope (%):** 0-1  
**Lat:** 45.0065  
**Long:** 93.3309

**Soil Map Unit Name U2A - Udorthents, wet substratum, 0-2% slopes**  
**NWI Classification:** PEM1F

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

**Are vegetation, soil significantly disturbed?**

**Are vegetation, soil naturally problematic?**

**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** Y  
- **Hydric soil present?** Y  
- **Are the sampled area within a wetland?** Y  
- **Indicators of wetland hydrology present?** Y

**Remarks:** (Explain alternative procedures here or in a separate report.)

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>50</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Morus rubra -- Red Mulberry</td>
<td>20</td>
<td>Y</td>
<td>FACU</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>
</tbody>
</table>

**Total Number of Dominant Species Across all Strata:** 4 (A)

**% Cover**

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Impatiens capensis -- Spotted Touch-Me-Not</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>3 Lemna minor -- Common Duckweed</td>
<td>20</td>
<td>Y</td>
<td>OBL</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>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>
</tbody>
</table>

**Total Number of Dominant Species Across all Strata:** 4 (A)

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

**Hydrophytic vegetation present?** Y

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Soil Profile Description:
(Describe the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loam</td>
<td></td>
</tr>
<tr>
<td>11-24</td>
<td>10YR 2/1</td>
<td>80</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>sandy loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Stripped Matrix (S6)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Loamy Mucky Mineral (F1)
- Depleted Matrix (F3)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

### Restrictive Layer (if observed):
- Type: 
- Depth (inches): 
- Hydric soil present? Y

### Hydrology

#### Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

#### Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

#### Field Observations:
- Surface water present? Yes No X Depth (inches): >24 inches
- Water table present? Yes No X Depth (inches): >24 inches
- Saturation present? Yes No X Depth (inches): 15 inches

### Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

<table>
<thead>
<tr>
<th>Project/Site Blue Line LRT</th>
<th>City/County: Robbinsdale/ Hennepin</th>
<th>Sampling Date: June 4, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant/Owner: Met Council</td>
<td>State: MN</td>
<td>Sampling Point: sp 36-1up</td>
</tr>
<tr>
<td>Investigator(s): Jeff Olson</td>
<td>Section, Township, Range: s7, 29n, 24w</td>
<td></td>
</tr>
<tr>
<td>Landform (hillslope, terrace, etc.): hillside</td>
<td>Slope (%): four</td>
<td>Lat: 45.0081</td>
</tr>
<tr>
<td>Local relief (concave, convex, none): concave</td>
<td>Long: 93.3305</td>
<td>Datum:</td>
</tr>
<tr>
<td>Soil Map Unit Name</td>
<td>NWI Classification: PSS1A</td>
<td></td>
</tr>
</tbody>
</table>

**DOMINANCE TEST WORKSHEET**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Quercus macrocarpa -- Burr Oak</td>
<td>60</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Acer negundo -- Ash-Leaf Maple</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>80</td>
<td>Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

**SAPLING/SHRUB STRATUM (Plot size: 15' Radius )**

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>70</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2 Lonicera tatarica -- Twinsisters</td>
<td>15</td>
<td>N</td>
<td>FACU</td>
</tr>
<tr>
<td>3 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 --</td>
<td>85</td>
<td>Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

**HERB STRATUM (Plot size: 5' Radius )**

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Arctium minus -- Lesser Burdock</td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
</tr>
<tr>
<td>2 Impatiens capensis -- Spotted Touch-Me-Not</td>
<td>1</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>3 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td></td>
<td></td>
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<tr>
<td>5 --</td>
<td></td>
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<tr>
<td>6 --</td>
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<td></td>
<td></td>
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<tr>
<td>7 --</td>
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<td>8 --</td>
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<td></td>
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<tr>
<td>9 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

**WOODY VINE STRATUM (Plot size: 30' Radius )**

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

**DOMINANCE TEST WORKSHEET**

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata: 4 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)</td>
</tr>
</tbody>
</table>

**PREVALENCE INDEX WORKSHEET**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>0 x 1 = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACW species</td>
<td>1 x 2 = 2</td>
<td></td>
</tr>
<tr>
<td>FAC species</td>
<td>150 x 3 = 450</td>
<td></td>
</tr>
<tr>
<td>FACU species</td>
<td>45 x 4 = 180</td>
<td></td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
<td></td>
</tr>
<tr>
<td>Column totals</td>
<td>196 (A) = 632 (B)</td>
<td></td>
</tr>
<tr>
<td>Prevalence Index = B/A = 3.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HYDROPHYTIC VEGETATION INDICATORS:**

- Rapid test for hydrophytic vegetation
- Prevalence index ≤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

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>10YR 3/2</td>
<td>100 %</td>
<td>silt</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

#### Restrictive Layer (if observed):
- Type: ___________
- Depth (inches): ___________

#### Notes:
- Hydric soil present? ___________

### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required):**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

#### Field Observations:
- Surface water present? Yes __________ No __________
- Water table present? Yes __________ No __________
- Saturation present? Yes __________ No __________

*Includes capillary fringe*

#### Depth (inches):
- Water table: >24 ches
- Saturation: >24 inches

#### Indicators of wetland hydrology present? ___________

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:

US Army Corps of Engineers Midwest Region
### Hydrophytic vegetation present?  
Y

### Is the sampled area within a wetland?  
Y

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

#### VEGETATION  -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer negundo -- Ash-Leaf Maple</td>
<td>15</td>
<td>Y FAC</td>
</tr>
<tr>
<td>Fraxinus pennsylvanica -- Green Ash</td>
<td>15</td>
<td>Y FACW</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum (Plot size: 15' Radius)</td>
<td>30 = Total Cover</td>
<td></td>
</tr>
<tr>
<td>Rhamnus cathartica -- European Buckthorn</td>
<td>40</td>
<td>Y FAC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum (Plot size: 5' Radius)</td>
<td>80</td>
<td>Y FACW</td>
</tr>
<tr>
<td>Impatiens capensis -- Spotted Touch-Me-Not</td>
<td>10</td>
<td>N FACW</td>
</tr>
<tr>
<td>Phalaris arundinacea -- Reed Canary Grass</td>
<td>40</td>
<td>N FACW</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum (Plot size: 30' Radius)</td>
<td>90 = Total Cover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>Y</td>
</tr>
</tbody>
</table>

#### 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: 0 x 1 = 0 (A)
  - FACW species: 105 x 2 = 210 (A)
  - FAC species: 55 x 3 = 165 (A)
  - FACU species: 0 x 4 = 0 (A)
  - UPL species: 0 x 5 = 0 (A)
- Column totals: 160 (A) 375 (B)
- Prevalence Index = B/A = 2.34

#### Hydrophytic Vegetation Indicators:
- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: Prevalence index is ≤3.0*
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>6-24</td>
<td>10YR 2/2</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>silt loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

Type: [ ]

Depth (inches): 

Remarks: 

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

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

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches): 12 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches): 6 inches</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches): 12 inches</td>
</tr>
<tr>
<td>(includes capillary fringe)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indicators of wetland hydrology present? 

Remarks:

Standing water 10 feet from pit.
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Golden Valley/ Hennepin  Sampling Date: June 4, 2015
Applicant/Owner: Met Council  State: MN  Sampling Point: New w 37 up
Investigator(s): Jeff Olson  Section, Township, Range: S17, 29n, 24w
Landform (hillslope, terrace, etc.):  Local relief (concave, convex, none): concave
Slope (%): four  Lat: 45.0038  Long: 93.3276  Datum: NWI Classification: not mapped
Soil Map Unit Name U2A - Udorthents, wet substratum, 0-2% slopes
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?  Are vegetation, soil naturally problematic?  Are "normal circumstances" present? Yes
SUMMARY OF FINDINGS

Hydrophytic vegetation present?  Y  Is the sampled area within a wetland?  N
Hydric soil present?  N  Remarks: (Explain alternative procedures here or in a separate report.)
Indicators of wetland hydrology present?  N  If yes, optional wetland site ID:

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Phalaris arundinacea -- Reed Canary Grass</td>
<td>40  Y  FACW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2  Poa pratensis -- Kentucky Blue Grass</td>
<td>20  Y  FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

60 = Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

| OBL species | 0 x 1 = 0 |
| FACW species | 40 x 2 = 80 |
| FAC species | 20 x 3 = 60 |
| FACU species | 0 x 4 = 0 |
| UPL species | 0 x 5 = 0 |
| Column totals | 60 (A) 140 (B) |

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

<table>
<thead>
<tr>
<th>Rapid test for hydrophytic vegetation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Dominance test is &gt;50%</td>
</tr>
<tr>
<td>X Prevalence index is ≤3.0*</td>
</tr>
</tbody>
</table>

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

Hydrophytic vegetation present?  Y

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):
- Type: 
- Depth (inches): 

#### Remarks:
steep ditch slopes.

### HYDROLOGY

#### Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>True Aquatic Plants (B14)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Hydrogen Sulfide Odor (C1)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Oxidized Rhizospheres on Living Roots (C3)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Presence of Reduced Iron (C4)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Recent Iron Reduction in Tilled Soils (C6)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>Thin Mucky Surface (C7)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td>Gauge or Well Data (D9)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Other (Explain in Remarks)</td>
</tr>
<tr>
<td>X Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

#### Field Observations:
- Surface water present? Yes No X Depth (inches): 
- Water table present? Yes No X Depth (inches): 
- Saturation present? Yes No X Depth (inches): 

(Indicators of wetland hydrology present? N)

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site** Blue Line LRT  
**Applicant/Owner:** Met Council

**Investigator(s):** Jeff Olson  
**Sampling Date:** June 4, 2015

**Landform (hillslope, terrace, etc.):** depression  
**Soil Map Unit Name:** U2A - Udorthents, wet substratum, 0-2% slopes

**Slope (%):** four  
**Are climatic/hydrologic conditions of the site typical for this time of the year?** Y  
**Section, Township, Range:** s17, 29n, 24w

**Are vegetation, soil significantly disturbed?**  
**Are vegetation, soil naturally problematic?**

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Dominant Species Indicator</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL, FACW, or FAC</td>
<td>1 (A)</td>
</tr>
</tbody>
</table>

**Is the sampled area within a wetland?** Y

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

**Tree Stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Plot</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sapling/Shrub stratum** (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Plot</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Plot</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>Phalaris arundinacea</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Woody vine stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Plot</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Plot</th>
<th>% Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>0 x 1 = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FACW species</td>
<td>40 x 2 = 80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAC species</td>
<td>0 x 3 = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FACU species</td>
<td>0 x 4 = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column totals</td>
<td>40 (A) = 80 (B)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prevalence Index** = B/A = 2.00

**Hydrophytic Vegetation Indicators:**

- **Rapid test for hydrophytic vegetation**
  - X Dominance test is >50%
  - X 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

**Hydrophytic vegetation present?** Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List: Robert W. Lichvar and John T. Kartesz. 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC. (2014)
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10 YR 2/1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>loam</td>
<td></td>
</tr>
<tr>
<td>4-13</td>
<td>10 YR 3/2</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 YR 3/3</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>rail and road earthwork</td>
<td></td>
</tr>
<tr>
<td>13-24</td>
<td>10 YR 3/2</td>
<td>100</td>
<td>7.5 YR 5/6</td>
<td>2%</td>
<td>C</td>
<td>PL</td>
<td>silt loam</td>
<td></td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:**
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
- Type: ____________________________
- Depth (inches): ____________________

**Hydric soil present?** Y

Remarks:
- Assumed to be ponded for a long or very long duration during the growing season.

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clay Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes No X Depth (inches): 12 inches
- Water table present? Yes No X Depth (inches): Surface
- Saturation present? Yes X No Depth (inches): Surface

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers
Midwest Region
### SUMMARY OF FINDINGS

**Hydrophytic vegetation present?** Y

**Hydric soil present?** N

**Indicators of wetland hydrology present?** N

**Is the sampled area within a wetland?** N

If yes, optional wetland site ID: 

Remarks: (Explain alternative procedures here or in a separate report.)

---

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prunus serotina Black Cherry</td>
<td></td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
</tr>
</tbody>
</table>

#### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica European Buckthorn</td>
<td></td>
<td>25</td>
<td>Y</td>
<td>FAC</td>
</tr>
</tbody>
</table>

#### Herb stratum

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica European Buckthorn</td>
<td></td>
<td>15</td>
<td>Y</td>
<td>FAC</td>
</tr>
</tbody>
</table>

#### Woody vine stratum

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC:</th>
<th>2 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata:</td>
<td>3 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC:</td>
<td>66.67% (A/B)</td>
</tr>
</tbody>
</table>

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
<th>Column totals</th>
<th>Prevalence Index = B/A =</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 x 1 = 0</td>
<td>0 x 2 = 0</td>
<td>40 x 3 = 120</td>
<td>30 x 4 = 120</td>
<td>0 x 5 = 0</td>
<td>70 (A)</td>
<td>3.43</td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

- **Rapid test for hydrophytic vegetation**
  - X: 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

### Remarks:

Include photo numbers here or on a separate sheet.

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### Profile Description:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>10YR 3/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td>disturbed from past roadwork</td>
</tr>
<tr>
<td>8-24</td>
<td>10YR 3/3</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):

- Type:
- Depth (inches):
- Hydric soil present? N
- Remarks:

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Hydrogen Sulfide (A4)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

#### Field Observations:

- Surface water present? Yes No X Depth (inches): ____
- Water table present? Yes No X Depth (inches): ____
- Saturation present? Yes No X Depth (inches): ____ (includes capillary fringe)

**Indicators of wetland hydrology present? N**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

<table>
<thead>
<tr>
<th>Project/Site: Blue Line LRT</th>
<th>City/County: Golden Valley/ Hennepin</th>
<th>Sampling Date: June 4, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant/Owner: Met Council</td>
<td>State: MN</td>
<td>Sampling Point: new w 38 wet</td>
</tr>
<tr>
<td>Investigator(s): Jeff Olson</td>
<td>Section, Township, Range: s17, 29n, 24w</td>
<td></td>
</tr>
<tr>
<td>Landform (hillslope, terrace, etc.): depression</td>
<td>Local relief (concave, convex, none): concave</td>
<td></td>
</tr>
<tr>
<td>Slope (%): four</td>
<td>Lat: 45.0013</td>
<td>Long: 93.3254</td>
</tr>
<tr>
<td>Soil Map Unit Name W - Water</td>
<td>NWI Classification: PABG/ PFO1A</td>
<td></td>
</tr>
</tbody>
</table>

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?
Are "normal circumstances" present? Yes

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>Y</td>
</tr>
</tbody>
</table>

Remarks: (Explain alternative procedures here or in a separate report.)

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>0 = Total Cover</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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<td>3 --</td>
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<td>4 --</td>
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<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</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>
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<td>4 --</td>
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<td>5 --</td>
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<tr>
<td>6 --</td>
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<td>7 --</td>
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<td>8 --</td>
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<tr>
<td>9 --</td>
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</tr>
<tr>
<td>10 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>0 = Total Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
- Total Number of Dominant Species Across all Strata: 1 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species: 0 x 1 = 0
  - FACW species: 30 x 2 = 60
  - FAC species: 0 x 3 = 0
  - FACU species: 0 x 4 = 0
  - UPL species: 0 x 5 = 0
- Column totals: 30 (A) 60 (B)
- Prevalence Index = B/A = 2.00

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X Dominance test is >50%
  - X Prevalence index is ≤3.0*
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)
- Y

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

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

Connected hydrologically with Wetland #39. See data sheets for Wetland #39.

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Hydric Soil Indicators:

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See Wetland #39</td>
</tr>
</tbody>
</table>

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

### Indicators for Problematic Hydric Soils:

- **Coast Prairie Redox (A16) (LRR K, L, R)**
- **Dark Surface (S7) (LRR K, L)**
- **5 cm Mucky Peat or Peat (S3) (LRR K, L, R)**
- **Iron-Manganese Masses (F12) (LRR K, L, R)**
- **Very Shallow Dark Surface (TF12)**
- **Other (explain in remarks)**

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

### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required):**

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>X</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>X</td>
<td>No</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>X</td>
<td>No</td>
</tr>
</tbody>
</table>

(depth includes capillary fringe)

### Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Golden Valley/ Hennepin  
Sampling Date: June 4, 2015

Applicant/Owner: Met Council  
State: MN  
Sampling Point: new w 39 up

Investigator(s): Jeff Olson

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex, none):  
Slope (%): four  
Lat: 45.0015  
Long: 93.2249  
Datum:

Soil Map Unit Name: W - Water  
NWI Classification: PUBG/ PFO1A

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?  
Are "normal circumstances" present?  
Yes

**SUMMARY OF FINDINGS**

Hydrophytic vegetation present?  
Hydric soil present?  
Indicators of wetland hydrology present?  
Is the sampled area within a wetland?  
If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30’ Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acer negundo -- Ash-Leaf Maple</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Populus deltoides -- Eastern Cottonwood</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>3 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</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>
</tbody>
</table>

Total Number of Dominant Species Across all Strata: 6

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
<th>Column totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 --</td>
<td>--</td>
<td>--</td>
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<td></td>
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<tr>
<td>5 --</td>
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<td>--</td>
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<tr>
<td>6 --</td>
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<tr>
<td>7 --</td>
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<td>--</td>
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<tr>
<td>8 --</td>
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<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prevalence Index = B/A = 3.00

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X  
  - Dominance test is >50%
  - X  
  - 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

**Hydrophytic vegetation present?  Y**

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:  
<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>10YR2/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>14-24</td>
<td>10YR3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Restrictive Layer (if observed):**
Type: ____________________________
Depth (inches): ____________________

Hydric soil present? N

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required):**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
<th>Depth (inches): &gt;24 inches</th>
<th>Indicators of wetland hydrology present? N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches): &gt;24 inches</td>
<td></td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches): &gt;24 inches</td>
<td></td>
</tr>
</tbody>
</table>

(includes capillary fringe)

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

US Army Corps of Engineers Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT
Applicant/Owner: Met Council
Investigator(s): Jeff Olson

City/County: Golden Valley/ Hennepin
State: MN
Sampling Date: June 4, 2015
Sampling Point: new w 39 wet

Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): four
Lat: 45.0015
Long: 93.2249
Datum:
Soil Map Unit Name W - Water
NWI Classification: PUBG/ PFO1A

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y

Is the sampled area within a wetland? Y
Remarks: (If needed, explain any answers in remarks.)

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' Radius )

<table>
<thead>
<tr>
<th>Tree</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute</th>
<th>Dominant</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acer negundo</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2</td>
<td>Populus deltoides</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
</tbody>
</table>

Sapling/Shrub stratum (Plot size: 15' Radius )

<table>
<thead>
<tr>
<th>Sapling/Shrub</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute</th>
<th>Dominant</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rhamnus cathartica</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
</tr>
</tbody>
</table>

Herb stratum (Plot size: 5' Radius )

<table>
<thead>
<tr>
<th>Herb</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute</th>
<th>Dominant</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td>Lemma minor</td>
<td>15</td>
<td>Y</td>
<td>OBL</td>
</tr>
</tbody>
</table>

Woody vine stratum (Plot size: 30' Radius )

<table>
<thead>
<tr>
<th>Woody vine</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Hydrophytic vegetation present? Y

Hydrophytic vegetation indicators:

X Dominance test is >50%
X 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

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

Connected hydrologically with Wetland #39. See data sheets for Wetland #39.

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18</td>
<td>N/2.5</td>
<td>sapric muck</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Hydric Soil Indicators:
- X Histosol (A1)
- X Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Restrictive Layer (if observed):
Type: 
Depth (inches): 
Remarks:

Hydric soil present? Y

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:
- Surface water present? Yes X No Depth (inches): 4 inches
- Water table present? Yes X No Depth (inches): surface
- Saturation present? Yes X No Depth (inches): surface

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Golden Valley/ Hennepin  Sampling Date: June 4, 2015
Applicant/Owner: Met Council  State: MN  Sampling Point: new w40up
Investigator(s): Jeff Olson  Section, Township, Range: s17, 29n, 24w
Landform (hillslope, terrace, etc.): hillslope  Local relief (concave, convex, none): concave
Slope (%): four  Lat: 44.9951  Long: 93.3191  Datum:

Soil Map Unit Name: U2A - Udorthents, wet substratum, 0-2% slope  NWI Classification: PFO1A

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?  Are "normal circumstances" present?  Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present?  Y  Hydric soil present?  N  Is the sampled area within a wetland?  N

Indicators of wetland hydrology present?  N

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size:</th>
<th>AbsOLUTE % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree stratum</td>
<td>(Plot size: 30' Radius )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>5</td>
<td>--</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>(Plot size: 15' Radius )</td>
<td>40 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
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<td>2</td>
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<td>5</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>(Plot size: 5' Radius )</td>
<td>20 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 Cirsium arvense</td>
<td>-- Canadian Thistle</td>
<td>15</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>--</td>
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<td></td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>10</td>
<td>--</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>(Plot size: 30' Radius )</td>
<td>45 = Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total Cover                  | 2.67         |                  |                  |                  |        |

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:

US Army Corps of Engineers  Midwest Region
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coastal Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

Restrictive Layer (if observed):
- Type: ____________________________
- Depth (inches): __________________

Remarks:
- steeply sloping embankment.

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Surface soil present? N

Field Observations:
- Surface water present? Yes No X Depth (inches):
- Water table present? Yes No X Depth (inches):
- Saturation present? Yes No X Depth (inches):

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site**: Blue Line LRT  
**City/County**: Golden Valley/Hennepin  
**Applicant/Owner**: Met Council  
**State**: MN  
**Investigator(s)**: Jeff Olson  
**Sampling Point**: new w40 wet

**Landform (hillslope, terrace, etc.)**: depression  
**Local relief (concave, convex, none)**: concave  
**Slope (%):** four  
**Lat**: 44.9951  
**Long**: 93.3191  
**Section, Township, Range:** s17, 29n, 24w  
**Soil Map Unit Name U2A - Udorthents, wet substratum, 0-2% slope**

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Hydric soil present?</th>
<th>Y</th>
<th>Indicators of wetland hydrology present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks: (Explain alternative procedures here or in a separate report.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>20</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
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<td>--</td>
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</tr>
<tr>
<td>5</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>40 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 15' Radius)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>20 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 5' Radius)</td>
<td></td>
</tr>
<tr>
<td>Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>--</td>
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<tr>
<td>5</td>
<td>--</td>
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<td>6</td>
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<tr>
<td>7</td>
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<td>8</td>
<td>--</td>
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<td>9</td>
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</tr>
<tr>
<td>10</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>60 = Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Plot size: 30' Radius)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
</tr>
</tbody>
</table>

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

**Dominance Test Worksheet**

- Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
- Total Number of Dominant Species Across all Strata: 4 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 25.00% (A/B)

**Prevalence Index Worksheet**

- Total % Cover of:
  - OBL species 0 x 1 = 0
  - FACW species 60 x 2 = 120
  - FAC species 0 x 3 = 0
  - FACU species 0 x 4 = 0
  - UPL species 0 x 5 = 0
- Column totals 60 (A) 120 (B)
- Prevalence Index = B/A = 2.00

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - Dominance test is >50%
- 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

Hydrophytic vegetation present? Y

*Connected hydrologically with Wetland #39. See data sheets for Wetland #39.*

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
US Army Corps of Engineers
Midwest Region

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist) %</th>
<th>Redox Features Color (moist) %</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Sandy Gleyed Matrix (S4)
Sandy Redox (S5)
Striped Matrix (S6)
Loamy Mucky Mineral (F1)
Loamy Gleyed Matrix (F2)
Depleted Matrix (F3)
Depleted Dark Surface (F7)
Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: ________________
Depth (inches): ________________

Hydric soil present? __ Y __

Remarks:
Assumed to be ponded for a long duration or very long duration during the growing season.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Aquatic Fauna (B13)
True Aquatic Plants (B14)
Hydrogen Sulfide Odor (C1)
Oxidized Rhizospheres on Living Roots (C3)
Presence of Reduced Iron (C4)
Recent Iron Reduction in Tilled Soils (C6)
Thin Mucky Surface (C7)
Gauge or Well Data (D9)
Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

- Surface water present? Yes X No
- Water table present? Yes X No
- Saturation present? Yes X No
- (includes capillary fringe)

Depth (inches):

4 inches
surface
surface

Indicators of wetland hydrology present? __ Y __

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site:** Blue Line LRT  
**Applicant/Owner:** Metropolitan Council  
**Investigator(s):** Jeff Olson  
**Landform (hillslope, terrace, etc.):** hillslope  
**Local relief (concave, convex, none):** concave  
**Slope (%):** four  
**Lat:** 44.9919  
**Long:** 93.3189  
**Section, Township, Range:** S17, 29n, 24w  
**City/County:** Golden Valley/ Hennepin  
**Sampling Date:** June 4, 2015  
**State:** MN  
**Sampling Point:** new w41 up  

**Summary of Findings**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>N</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td>Is the sampled area within a wetland?</td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

**Vegetation -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation indicators*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation indicators*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation indicators*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bromus inermis</td>
<td>Smooth Brome</td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>2 Cirsium arvense</td>
<td>Canadian Thistle</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>3 Phalaris arundinacea</td>
<td>Reed Canary Grass</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Hydrophytic vegetation indicators*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
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<td>2</td>
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</tbody>
</table>

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

**Connected hydrologically with Wetland #39. See data sheets for Wetland #39.**
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist) %</th>
<th>Redox Features Color (moist) %</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture Remarks</th>
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</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide Odor (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

Type: __________________________

Remarks: ________________________

**Hydric soil present?**  N

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**

- Surface water present? Yes No X Depth (inches): __________________
- Water table present? Yes No X Depth (inches): __________________
- Saturation present? Yes No X Depth (inches): __________________

(if includes capillary fringe)

**Indicators of wetland hydrology present?**  N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: ______________________

US Army Corps of Engineers
Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Applicant/Owner: Met Council
Investigator(s): Jeff Olson
Landform (hillslope, terrace, etc.): depression
Local relief (concave, convex, none): concave
Slope (%): four

Soil Map Unit Name U2A - Udorthents, wet substratum, 0-2% slope
NWI Classification: not mapped

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

Are vegetation, soil significantly disturbed?

Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Is the sampled area within a wetland?

Hydrophytic vegetation present? Y

Hydric soil present? Y

Indicators of wetland hydrology present? Y

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' Radius ) Absolute % Cover Dominant Species Indicator Status

| 1 | -- | -- | -- |
| 2 | -- | -- | -- |
| 3 | -- | -- | -- |
| 4 | -- | -- | -- |
| 5 | 0 = Total Cover | 0 = Total Cover |

Sapling/Shrub stratum (Plot size: 15' Radius )

| 1 | -- | -- | -- |
| 2 | -- | -- | -- |
| 3 | -- | -- | -- |
| 4 | -- | -- | -- |
| 5 | 0 = Total Cover | 0 = Total Cover |

Herb stratum (Plot size: 5' Radius )

| 1 | Phalaris arundinacea -- Reed Canary Grass | 60 | Y | FACW |
| 2 | -- | -- | -- |
| 3 | -- | -- | -- |
| 4 | -- | -- | -- |
| 5 | -- | -- | -- |
| 6 | -- | -- | -- |
| 7 | -- | -- | -- |
| 8 | -- | -- | -- |
| 9 | -- | -- | -- |
| 10 | 60 = Total Cover | 60 = Total Cover |

Woody vine stratum (Plot size: 30' Radius )

| 1 | -- | -- | -- |
| 2 | -- | -- | -- |
| 3 | -- | -- | -- |
| 4 | -- | -- | -- |
| 5 | 0 = Total Cover | 0 = Total Cover |

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

Connected hydrologically with Wetland #39. See data sheets for Wetland #39.

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist)</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):
- Type: ____________________________
- Depth (inches): __________________

Hydric soil present? Y

Remarks:
- Assumed to be ponded for a long duration or very long duration during the growing season.

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:
- Surface water present? Yes X No
- Water table present? Yes X No
- Saturation present? Yes X No
- Depth (inches): 4 inches
- Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Midwest Region
<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
<th>Is the sampled area within a wetland?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUMMARY OF FINDINGS**

- **Hydrophytic vegetation present?** Y
- **Hydric soil present?** N
- **Indicators of wetland hydrology present?** N

**Remarks:** (Explain alternative procedures here or in a separate report.)

---

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Cover**

---

#### Sapling/Shrub stratum (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Cover**

---

#### Herb stratum (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>90</td>
<td>Phalaris arundinacea</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>Barbarea vulgaris</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>5</td>
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</tbody>
</table>

**Total Cover**

---

#### Woody vine stratum (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Number</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Woody vine</td>
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</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Cover**

---

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### Profile Description:
(Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>sandy clay loam</td>
<td>cobble below 12 inches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

#### Hydric Soil Indicators:
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide Odor (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)

#### Restrictive Layer (if observed):
Type: ______________________________________
Depth (inches): ____________________________

Remarks: steeply sloping.

#### HYDROLOGY

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

#### Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)

#### Field Observations:
- Surface water present? Yes No X Depth (inches): __________
- Water table present? Yes No X Depth (inches): __________
- Saturation present? Yes No X Depth (inches): __________

Remarks: ____________________________

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: ____________________________
### PROJECT/SITE

- **Project/Site:** Blue Line LRT
- **City/County:** Golden Valley/ Hennepin
- **Applicant/Owner:** Met Council
- **State:** MN
- **Sampling Point:** new w42 wet
- **Investigator(s):** Jeff Olson
- **Landform (hillslope, terrace, etc.):** depression
- **Local relief (concave, convex, none):** concave
- **Slope (%):** four
- **Lat:** 44.9872
- **Long:** 93.318
- **Datum:**

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** Y
- **Hydric soil present?** Y
- **Indicators of wetland hydrology present?** Y
- **Is the sampled area within a wetland?** Y

### VEGEATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<td></td>
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<tr>
<td>2</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum (Plot size: 15’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum (Plot size: 5’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Urtica dioica</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum (Plot size: 30’ Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Remarks: (Explain alternative procedures here or in a separate report.)

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist)</td>
<td>%</td>
<td>Color (moist)</td>
<td>%</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

**Restrictive Layer (if observed):**
- Type: __________________
- Depth (inches): __________________

**Remarks:**
- Assumed to be ponded for a long duration or very long duration during the growing season.

### HYDROLOGY

**Wetland Hydrology Indicators:**

#### Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

#### Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes X No Depth (inches): 4 inches
- Water table present? Yes X No Depth (inches): surface
- Saturation present? Yes X No Depth (inches): surface (includes capillary fringe)

**Indicators of wetland hydrology present?**  Y

**Remarks:**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

---

US Army Corps of Engineers  
Midwest Region
**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Stratum</th>
<th>(Plot size: Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tree Stratum</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Acer negundo</strong></td>
<td>30'</td>
<td>50</td>
<td>Y</td>
<td>FAC</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><strong>Sapling/Shrub stratum</strong></td>
<td>15'</td>
<td>70</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2. <strong>Rhamnus cathartica</strong></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><strong>Herb stratum</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Rhamnus cathartica</strong></td>
<td>5'</td>
<td>60</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>2. <strong>Parthenocissus quinquefolia</strong></td>
<td></td>
<td></td>
<td></td>
<td>FACU</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><strong>Woody vine stratum</strong></td>
<td>30'</td>
<td>85</td>
<td>Y</td>
<td></td>
</tr>
<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>
</tbody>
</table>

Is the sampled area within a wetland? Yes

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-24</td>
<td>10YR 2/2 100</td>
<td>silt loam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

Restrictive Layer (if observed):

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
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- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:
- Surface water present? Yes No
- Water table present? Yes No
- Saturation present? Yes No

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site Blue Line LRT**

**Applicant/Owner:** Met Council

**Investigator(s):** Jeff Olson

**Landform (hillslope, terrace, etc.):** depression

**Slope (%):** zero

**Soil Map Unit Name:** U2A - Udorthents, wet asubstratum, 0-2% slopes

**Are climatic/hydrologic conditions of the site typical for this time of the year?**

**Are vegetation, soil significantly disturbed?**

**Are vegetation, soil naturally problematic?**

---

### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Is the sampled area within a wetland?**

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acer negundo -- Ash-Leaf Maple</td>
<td>40</td>
<td>Y</td>
<td>FAC</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>
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<td></td>
</tr>
<tr>
<td>5 --</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

40 = Total Cover

#### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>50</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2 Fraxinus pennsylvanica -- Green Ash</td>
<td>20</td>
<td>Y</td>
<td>FACW</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>
</tbody>
</table>

70 = Total Cover

#### Herb stratum

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lemma minor -- Common Duckweed</td>
<td>25</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>2 Phalaris arundinacea -- Reed Canary Grass</td>
<td>15</td>
<td>Y</td>
<td>FACW</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>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>
</tbody>
</table>

40 = Total Cover

#### Woody vine stratum

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 --</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 = Total Cover

### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Number of Dominant Species that are OBL, FACW, or FAC:</th>
<th>5 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across all Strata:</td>
<td>5 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species that are OBL, FACW, or FAC:</td>
<td>100.00% (A/B)</td>
</tr>
</tbody>
</table>

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
</tr>
<tr>
<td>FACW species</td>
</tr>
<tr>
<td>FACU species</td>
</tr>
<tr>
<td>UPL species</td>
</tr>
<tr>
<td>Column totals</td>
</tr>
<tr>
<td>Prevalence Index  = B/A = 2.43</td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X Dominance test is >50%
  - X 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

---

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>N/2.5</td>
<td>100</td>
<td>sapric muck</td>
<td></td>
</tr>
<tr>
<td>6-24</td>
<td>10YR 2/1</td>
<td>90</td>
<td>7.5YR 5/6</td>
<td>10</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Hydric Soil Indicators:</th>
<th>Indicators for Problematic Hydric Soils:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histosol (A1)</td>
<td>Coast Prairie Redox (A16) (LRR K, L, R)</td>
</tr>
<tr>
<td>Histic Epipedon (A2)</td>
<td>Dark Surface (S7) (LRR K, L)</td>
</tr>
<tr>
<td>Black Histic (A3)</td>
<td>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</td>
</tr>
<tr>
<td>Hydrogen Sulfide (A4)</td>
<td>Iron-Manganese Masses (F12) (LRR K, L, R)</td>
</tr>
<tr>
<td>Stratified Layers (A5)</td>
<td>Very Shallow Dark Surface (TF12)</td>
</tr>
<tr>
<td>2 cm Muck (A10)</td>
<td>Other (explain in remarks)</td>
</tr>
<tr>
<td>Depleted Below Dark Surface (A11)</td>
<td>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</td>
</tr>
<tr>
<td>Thick Dark Surface (A12)</td>
<td></td>
</tr>
<tr>
<td>Sandy Mucky Mineral (S1)</td>
<td></td>
</tr>
</tbody>
</table>

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Hydric soil present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (inches):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

### HYDROLOGY

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>X High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>X Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Clayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td></td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td></td>
</tr>
<tr>
<td>Sparsely Vegetated Concave Surface (B8)</td>
<td></td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td></td>
</tr>
</tbody>
</table>

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>X</th>
<th>No</th>
<th>Depth (inches):</th>
<th>6 inches</th>
<th>Indicators of wetland hydrology present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td></td>
<td>surface</td>
<td></td>
</tr>
<tr>
<td>Saturation present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td></td>
<td>surface</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

**Project/Site**: Blue Line LRT  
**City/County**: Robbinsdale/Hennepin  
**Applicant/Owner**: Met Council  
**State**: MN  
**Investigator(s)**: Jeff Olson  
**Landform (hillslope, terrace, etc.)**: hillslope  
**Local relief (concave, convex, none)**: concave  
**Slope (%): zero**  
**Lat**: 45.1037  
**NWI Classification**: PUBG/PFO1A  
**Section, Township, Range**: s7, 29n, 24w

### SUMMARY OF FINDINGS

- **Hydrophytic vegetation present?** N  
- **Hydric soil present?** N  
- **Indicators of wetland hydrology present?** N  
- **Is the sampled area within a wetland?** N

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

### VEGETATION

---

**Tree Stratum** (Plot size: 30' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Dominant Species Indicator</th>
<th>% Cover</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornus drummondii</td>
<td>Y</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Rhamnus cathartica</td>
<td>Y</td>
<td>30</td>
<td>FAC</td>
</tr>
<tr>
<td>Lonicera tatarica</td>
<td>Y</td>
<td>20</td>
<td>FACU</td>
</tr>
<tr>
<td>Lonicera tatarica</td>
<td>Y</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

**Sapling/Shrub stratum** (Plot size: 15' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Dominant Species Indicator</th>
<th>% Cover</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parthenocissus quinquefolia</td>
<td>Y</td>
<td>20</td>
<td>FACU</td>
</tr>
<tr>
<td>Leonurus cardiaca</td>
<td>Y</td>
<td>20</td>
<td>UPL</td>
</tr>
</tbody>
</table>

**Herb stratum** (Plot size: 5' Radius)

<table>
<thead>
<tr>
<th>Species</th>
<th>Dominant Species Indicator</th>
<th>% Cover</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woody vine stratum**</td>
<td></td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

**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)

**Vegetation present?** N

---

**Notes**: This data sheet has been adapted to use the 2014 National Wetland Plant List:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 2/2</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>4-24</td>
<td>10YR 3/2</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
</tbody>
</table>

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

Hydric Soil Indicators:
- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

Restrictive Layer (if observed):
- Type:
- Depth (inches):
- Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

Field Observations:
- Surface water present? Yes No X Depth (inches): >24 inches
- Water table present? Yes No X Depth (inches): >24 inches
- Saturation present? Yes No X Depth (inches): >24 inches

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
### WETLAND DETERMINATION DATA FORM - Midwest Region

<table>
<thead>
<tr>
<th>Project/Site Blue Line LRT</th>
<th>City/County: Robbinsdale/Hennepin</th>
<th>Sampling Date: June 15, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant/Owner: Met Council</td>
<td>State: MN</td>
<td>Sampling Point: sp 45-1wet</td>
</tr>
<tr>
<td>Investigator(s): Jeff Olson</td>
<td>Section, Township, Range: s7, 29n, 24w</td>
<td></td>
</tr>
</tbody>
</table>

**Landform (hillslope, terrace, etc.):** depression

**Local relief (concave, convex, none):** concave

**Slope (%):** zero

**Lat:** 45.1037

**Long:** 93.3333

**Daturn:**

**Soil Map Unit Name U2A - Udotrents, wet asubstratum, 0-2% slopes**

**NWI Classification:** PUBG/P FO1A

---

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Is the sampled area within a wetland?** Y

If yes, optional wetland site ID: 

Remarks: (Explain alternative procedures here or in a separate report.)

---

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant t Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ulmus americana -- American Elm</td>
<td>20</td>
<td>Y</td>
<td>FACW</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>
</tbody>
</table>

**Sapling/ Shrub stratum: (Plot size: 15' Radius )**

**Absolute % Cover = Total Cover**

<table>
<thead>
<tr>
<th>Sapling/ Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant t Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td>20</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Herb stratum: (Plot size: 5' Radius )**

**Absolute % Cover = Total Cover**

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant t Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia -- Narrow-Leaf Cat-Tail</td>
<td>80</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>2 Phalaris arundinacea -- reed canary grass</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4 --</td>
<td>--</td>
<td>--</td>
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<tr>
<td>5 --</td>
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<tr>
<td>6 --</td>
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<tr>
<td>7 --</td>
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<tr>
<td>8 --</td>
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</tr>
<tr>
<td>9 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>10 --</td>
<td>100</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Woody vine stratum: (Plot size: 30' Radius )**

**Absolute % Cover = Total Cover**

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant t Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2 --</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

| Number of Dominant Species that are OBL, FACW, or FAC: | 3 (A) |

**Prevalence Index Worksheet**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 x 1</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 x 2</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 x 3</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 x 4</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 x 5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Column totals</th>
<th>120 (A)</th>
<th>160 (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence Index = B/A =</td>
<td>1.33</td>
<td></td>
</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X Dominance test is >50%
  - X 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

**Hydrophytic vegetation present?** Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>N/2.5</td>
<td>100</td>
<td>sapric muck</td>
<td>8-24</td>
<td>10YR 2/1</td>
<td>100</td>
<td>silt loam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
</tr>
</thead>
</table>

**Hydric soil present?** Y

**Remarks:**

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- FAC-Neutral Test (D5)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
<th>Indicator of wetland hydrology present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td>surface</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>X</td>
<td>No</td>
<td>Depth (inches):</td>
<td>6 inches</td>
</tr>
</tbody>
</table>

**Remarks:**

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

US Army Corps of Engineers

Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Golden Valley/Hennepin  Sampling Date: June 15, 2015
Applicant/Owner: Met Council  State: MN  Sampling Point: new w46 up
Investigator(s): Jeff Olson

Landform (hillslope, terrace, etc.): hillside  Local relief (concave, convex, none): concave
Slope (%): zero  Lat: 44.9951  Long: 93.3191  Datum: 
Soil Map Unit Name: U2A - Udorthents, wet asubstratum, 0-2% slopes  NWI Classification: PFO1A/PEM1A

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?

SUMMARY OF FINDINGS

Hydrophytic vegetation present?  Y  Hydric soil present?  N  Is the sampled area within a wetland?  N
Indicators of wetland hydrology present?  N

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius )</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rhamnus cathartica -- European Buckthorn</td>
<td>30</td>
<td>Y</td>
<td>FAC</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>
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<td></td>
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<tr>
<td>4 --</td>
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<td>5 --</td>
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<td>6 --</td>
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<td>7 --</td>
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<td>8 --</td>
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<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>Woody vine stratum (Plot size: 30' Radius )</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<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>
</tbody>
</table>

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>see Wetland #47</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)

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

#### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

#### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X Depth (inches):</th>
<th>Indicators of wetland hydrology present?</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Includes capillary fringe)

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

---

US Army Corps of Engineers

Midwest Region
### SUMMARY OF FINDINGS

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
<tr>
<td>Is the sampled area within a wetland?</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

#### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Absolute</th>
<th>Dominant</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Cover</td>
<td>Species</td>
<td>Status</td>
</tr>
</tbody>
</table>

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

- Total Number of Dominant Species Across all Strata: 5 (B)
- Percent of Dominant Species that are OBL, FAC, or FAC: 80.00% (A/B)

#### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 x 1 = 0</td>
<td>30 x 2 = 60</td>
<td>90 x 3 = 270</td>
<td>0 x 4 = 0</td>
<td>0 x 5 = 0</td>
</tr>
</tbody>
</table>

Column totals: 120 (A) = 330 (B)

Prevalence Index \( B/A = 2.75 \)

#### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

#### Remarks:

- (Include photo numbers here or on a separate sheet)

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist) %</td>
<td>Color (moist) %</td>
<td>Type*</td>
<td>Loc**</td>
</tr>
<tr>
<td></td>
<td>see Wetland #47</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Dark Surface (S7)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)

**Restrictive Layer (if observed):**
- Type: 
- Depth (inches): 
- Remarks: 

**Hydric soil present?** Y

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one is required; check all that apply):**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface water present? Yes No Depth (inches): 
- Water table present? Yes X No Depth (inches): surface
- Saturation present? Yes X No Depth (inches): 6 inches

**Indicators of wetland hydrology present?** Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
### Dominance Test Worksheet

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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<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>Sapling/Shrub stratum</td>
<td>(Plot size: 15' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
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<td>3</td>
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<td>4</td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>(Plot size: 5' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Phalaris arundinacea</td>
<td>60</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
<td>Poa pratensis</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>(Plot size: 30' Radius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<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>
</tbody>
</table>

#### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 x 1</td>
<td>60 x 2</td>
<td>30 x 3</td>
<td>0 x 4</td>
<td>0 x 5</td>
</tr>
<tr>
<td>Column totals</td>
<td>90 (A)</td>
<td>210 (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence Index</td>
<td>B/A = 2.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Hydrophytic Vegetation Indicators:

- **X**: Dominance test is >50%
- **X**: Prevalence index is ≤3.0*

* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
* Problematic hydrophytic vegetation* (explain)

#### Notes:

- If yes, optional wetland site ID:
- **Y**: Hydrophytic vegetation present
- **N**: Hydrophytic soil present
- **N**: Indicators of wetland hydrology present
- If yes, optional wetland site ID:

#### Remarks:

- Include photo numbers here or on a separate sheet
- *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18</td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>10YR 2/2</td>
<td>80</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td>silt clay loam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10YR 4/2</td>
<td>10</td>
<td>D</td>
<td>PL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

#### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

#### Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
<th>N</th>
</tr>
</thead>
</table>

#### Remarks:

#### HYDROLOGY

#### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Clayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

#### Field Observations:

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
<th>Depth (inches):</th>
<th>&gt;24 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
<td>&gt;24 inches</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
<td>&gt;24 inches</td>
</tr>
</tbody>
</table>

**Indicators of wetland hydrology present? N**

#### Remarks:

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

#### Remarks:

US Army Corps of Engineers Midwest Region
## WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site:** Blue Line LRT  
**City/County:** Golden Valley/ Hennepin  
**State:** MN  
**Sampling Date:** June 10, 2015

**Applicant/Owner:** Met Council  
**Investigator(s):** Jeff Olson  
**Landform (hillslope, terrace, etc.):** depression  
**Local relief (concave, convex, none):** concave  
**Slope (%):** four  
**Lat.:** 44.9919  
**Long.:** 93.3189  
**Section, Township, Range:** s17, 29n, 24w  
**NWI Classification:** PEM1C

### SUMMARY OF FINDINGS

- Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
- Are vegetation, soil significantly disturbed?
- Are vegetation, soil naturally problematic?

### Hydrophytic vegetation present?

- Y

### Hydric soil present?

- Y

### Indicators of wetland hydrology present?

- Y

### Is the sampled area within a wetland?

- Y

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
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<td></td>
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<tr>
<td>3</td>
<td>--</td>
<td></td>
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<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>
</tbody>
</table>

- Total Cover = 0

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

- Total Cover = 0

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bidens frondosa</td>
<td>--</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Phalaris arundinacea</td>
<td>--</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>3 Impatiens capensis</td>
<td>--</td>
<td>20</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>4 Ambrosia trifida</td>
<td>--</td>
<td>10</td>
<td>N</td>
<td>FACW</td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>--</td>
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<tr>
<td>7</td>
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<tr>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>9</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>--</td>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Total Cover = 90

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

- Total Cover = 0

### Dominance Test Worksheet

- Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
- Total Number of Dominant Species Across all Strata: 3 (B)
- Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

### Prevalence Index Worksheet

<table>
<thead>
<tr>
<th>OBL species</th>
<th>FACW species</th>
<th>FAC species</th>
<th>FACU species</th>
<th>UPL species</th>
<th>Column totals</th>
<th>Prevalence Index = B/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 x 1</td>
<td>80 x 2</td>
<td>10 x 3</td>
<td>0 x 4</td>
<td>0 x 5</td>
<td>90 (A)</td>
<td>190 (B)</td>
</tr>
</tbody>
</table>

- Prevalence Index = B/A = 2.11

### Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
  - X Dominance test is >50%
  - X 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

### Hydrophytic vegetation present?

- Y

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td>N/2.5</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-24</td>
<td></td>
<td>10YR 3/2</td>
<td>80</td>
<td>7.5YR 5/6</td>
<td>10</td>
<td>C</td>
<td>PL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- Histosol (A1)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)

**Restrictive Layer (if observed):**
- Type: 
  - **Hydric soil present?** Y

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Primary Indicators (minimum of one is required; check all that apply)
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)

  - Aquatic Fauna (B13)
  - True Aquatic Plants (B14)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Gauge or Well Data (D9)
  - Other (Explain in Remarks)

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

**Field Observations:**
- Surface water present? Yes  No  X  Depth (inches): >24 inches
- Water table present? Yes  No  X  Depth (inches): >24 inches
- Saturation present? Yes  No  X  Depth (inches): >24 inches
  (includes capillary fringe)

**Indicators of wetland hydrology present?** Y

**Remarks:**

*Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

US Army Corps of Engineers  Midwest Region
### Hydrophytic vegetation present?

Y

### Hydric soil present?

N

### Indicators of wetland hydrology present?

N

### Is the sampled area within a wetland?

N

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

### VEGETATION -- Use scientific names of plants.

#### Tree Stratum

<table>
<thead>
<tr>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

#### Sapling/Shrub stratum

<table>
<thead>
<tr>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
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#### Herb stratum

<table>
<thead>
<tr>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea</td>
<td>95</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2 Cirsium arvense</td>
<td>5</td>
<td>N</td>
<td>FACU</td>
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#### Woody vine stratum

<table>
<thead>
<tr>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
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</tbody>
</table>

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:

### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18</td>
<td>10YR 2/2</td>
<td>100</td>
<td>(moist)</td>
<td>7.5YR 5/6</td>
</tr>
<tr>
<td>18-24</td>
<td>10YR 2/2</td>
<td>95</td>
<td>(moist)</td>
<td>7.5YR 5/6</td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

#### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

#### Restrictive Layer (if observed):
- Type: 
- Depth (inches): 
- Hydric soil present? N

#### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- FAC-Neutral Test (D5)

### Field Observations:

- Surface water present? Yes
- No
- Depth (inches): >24 inches
- Water table present? Yes
- No
- Depth (inches): >24 inches
- Saturation present? Yes
- No
- Depth (inches): >24 inches
- Indicates of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: 

US Army Corps of Engineers
Midwest Region
### Hydrophytic vegetation present? Y
### Hydric soil present? Y
### Indicators of wetland hydrology present? Y

**SUMMARY OF FINDINGS**

<table>
<thead>
<tr>
<th>Hydrophytic vegetation present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric soil present?</td>
<td>Y</td>
</tr>
<tr>
<td>Indicators of wetland hydrology present?</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Is the sampled area within a wetland?** Y

If yes, optional wetland site ID: ___________

**Remarks:** (Explain alternative procedures here or in a separate report.)

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
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<tbody>
<tr>
<td>1</td>
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<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
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<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Typha angustifolia Narrow-Leaf Cat-Tail 30</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>2 Schoenoplectus fluitatilis River Club-Rush 30</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>3 Carex lacustris Lakebank Sedge 20</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>4 Polygonum amphibium -- 20</td>
<td>Y</td>
<td>OBL</td>
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</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 --</td>
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<tr>
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</tbody>
</table>

### 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)

### Total % Cover of:

<table>
<thead>
<tr>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FACW</td>
<td></td>
<td></td>
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<tr>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FACU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPL</td>
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</table>

### Column totals

<table>
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<tr>
<th>Species</th>
<th>Absolute % Cover</th>
<th>Dominant Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL</td>
<td>100 x 1 =</td>
<td>100</td>
</tr>
<tr>
<td>FACW</td>
<td>0 x 2 =</td>
<td>0</td>
</tr>
<tr>
<td>FAC</td>
<td>0 x 3 =</td>
<td>0</td>
</tr>
<tr>
<td>FACU</td>
<td>0 x 4 =</td>
<td>0</td>
</tr>
<tr>
<td>UPL</td>
<td>0 x 5 =</td>
<td>0</td>
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</tbody>
</table>

Prevalence Index = B/A = 1.00

**Hydrophytic Vegetation Indicators:**

- Rapid test for hydrophytic vegetation
  - X: Dominance test is >50%
  - X: 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

**Hydrophytic vegetation present?** Y

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

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type*</th>
<th>Loc**</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
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<tr>
<td>0-5</td>
<td>10YR 2/1</td>
<td>90</td>
<td>10YR 5/2</td>
<td>10</td>
<td>D</td>
<td>PL</td>
<td>silt loam</td>
<td></td>
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<tr>
<td>5-12</td>
<td>10YR 2/1</td>
<td>85</td>
<td>7.5YR 5/6</td>
<td>5</td>
<td>C</td>
<td>PL</td>
<td>silt loam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10YR 5/2</td>
<td>10</td>
<td>D</td>
<td>PL</td>
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</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**
Type: ____________________
Depth (inches): ____________________
Hydric soil present? ______
Remarks: ____________________

**HYDROLOGY**

**Wetland Hydrology Indicators:**

*Primary Indicators (minimum of one is required; check all that apply)*
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
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- Water-Stained Leaves (B9)

*Secondary Indicators (minimum of two required)*
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes ______ No ______
- Water table present? Yes ______ No ______
- Saturation present? Yes ______ No ______
  (includes capillary fringe)
- Depth (inches): >12 inches

**Indicators of wetland hydrology present?** ______

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: ____________________

---

US Army Corps of Engineers
Midwest Region
<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Total Number of Dominant Species Across all Strata: 2 (B)</th>
<th>Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Hydrophytic vegetation present? **Y**  
Hydric soil present? **N**  
Indicators of wetland hydrology present? **N**

Is the sampled area within a wetland? **N**  
If yes, optional wetland site ID: ________________

Remarks: (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
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<th>Total Number of Dominant Species Across all Strata: 2 (B)</th>
<th>Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)</th>
</tr>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Total Number of Dominant Species Across all Strata: 2 (B)</th>
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<tbody>
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</tr>
</tbody>
</table>

Hydrophytic vegetation present? **Y**  
Hydric soil present? **N**  
Indicators of wetland hydrology present? **N**

Is the sampled area within a wetland? **N**  
If yes, optional wetland site ID: ________________

Remarks: (Explain alternative procedures here or in a separate report.)

### Hydrophytic Vegetation Indicators:
- Rapid test for hydrophytic vegetation
  - Dominance test is >50%
- 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

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

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist) %</td>
<td>Color (moist) %</td>
</tr>
<tr>
<td></td>
<td>soils not sampled</td>
<td>disturbed from ditching and earthwork</td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**

- Histosol (A1)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

**Indicators for Problematic Hydric Soils:**

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric soil present?</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>Assumed to be ponded for a long or very long duration during the growing season.</td>
</tr>
</tbody>
</table>

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Mucky Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**

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

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>No</td>
<td>X</td>
<td>Depth (inches):</td>
</tr>
</tbody>
</table>

(includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
**WETLAND DETERMINATION DATA FORM - Midwest Region**

Project/Site: Blue Line LRT  
City/County: Minneapolis/ Hennepin  
Sampling Date: June 10, 2015  
Investigator(s): Jeff Olson  
Applicant/Owner: Met Council  
State: MN  
Sampling Point: new w49 wet  
Section, Township, Range: s20, 29n, 24w  
Local relief (concave, convex, none): concave  
Landform (hillslope, terrace, etc.): depression  
Slope (%): four  
Lat: 44.9872  
Long: 93.318  
Soil Map Unit Name: U2A - Udorthents, wet asubstratum, 0-2% slopes  
NWI Classification: PFO1A  

**SUMMARY OF FINDINGS**

Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)  
Are vegetation, soil significantly disturbed?  
Are vegetation, soil naturally problematic?  
Are "normal circumstances" present? Yes

**Hydrophytic vegetation present?** Y  
**Hydric soil present?** Y  
**Indicators of wetland hydrology present?** Y  
**Is the sampled area within a wetland?** Y  
**Remarks:** (Include photo numbers here or on a separate sheet)

**VEGETATION -- Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>5</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sapling/Shrub stratum</td>
<td>0</td>
<td>Total Cover</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>5</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Herb stratum</td>
<td>0</td>
<td>Total Cover</td>
<td></td>
</tr>
<tr>
<td>1 Phalaris arundinacea</td>
<td>50</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>6</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Woody vine stratum</td>
<td>50</td>
<td>Total Cover</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)  
Total Number of Dominant Species Across all Strata: 1 (B)  
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)  

**Prevalence Index Worksheet**

Total % Cover of:  
OBL species \(0 \times 1 = 0\)  
FACW species \(50 \times 2 = 100\)  
FAC species \(0 \times 3 = 0\)  
FACU species \(0 \times 4 = 0\)  
UPL species \(0 \times 5 = 0\)  
Column totals 50 (A) 100 (B)  
Prevalence Index = \(B/A = 2.00\)  

**Hydrophytic Vegetation Indicators:**  
Rapid test for hydrophytic vegetation  
\(X\) Dominance test is >50%  
\(X\) 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

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

---

**Note:** This data sheet has been adapted to use the 2014 National Wetland Plant List:  
## SOIL

### Profile Description:

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked 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)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (A13)

<table>
<thead>
<tr>
<th></th>
<th>Sandy Gleyed Matrix (S4)</th>
<th>Sandy Redox (S5)</th>
<th>Loamy Mucky Mineral (F1)</th>
<th>Loamy Gleyed Matrix (F2)</th>
<th>Depleted Matrix (F3)</th>
<th>Redox Dark Surface (F6)</th>
<th>Depleted Dark Surface (F7)</th>
<th>Redox Depressions (F8)</th>
</tr>
</thead>
</table>

### Indicators for Problematic Hydric Soils:

- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

### Restrictive Layer (if observed):

- Type: Hydric soil present? Y
- Depth (inches):...

### Remarks:

Assumed to be ponded for a long or very long duration during the growing season.

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- X Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)

#### Secondary Indicators (minimum of two required)

- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

#### Field Observations:

- Surface water present? Yes No X Depth (inches):
- Water table present? Yes No X Depth (inches): surface
- Saturation present? Yes X No Depth (inches): surface

#### Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:
### WETLAND DETERMINATION DATA FORM - Midwest Region

**Project/Site:** Blue Line LRT  
**City/County:** Golden Valley/Hennepin  
**State:** MN  
**Applicant/Owner:** Met Council  
**Slope (%):** four  
**Investigator(s):** Jeff Olson  
**Section, Township, Range:** s17, 29n, 24w  
**Landform (hillslope, terrace, etc.):** hillside  
**Local relief (concave, convex, none):** concave  
**Slope (Lat):** 44.9951  
**Soil Map Unit Name U2A - Udorthents, wet asubstratum, 0-2% slopes**  
**Wetland DETERMINATION DATA FORM - Midwest Region**  
**City/County:** Golden Valley/ Hennepin  
**Sampling Date:** June 10, 2015  
**Investigator(s):** Jeff Olson  
**Landform (hillslope, terrace, etc.):** hillside  
**Local relief (concave, convex, none):** concave  
**Slope (Lat):** 44.9951  
**Soil Map Unit Name U2A - Udorthents, wet asubstratum, 0-2% slopes**  

**SUMMARY OF FINDINGS**

| Hydrophytic vegetation present? | Y |
| Hydric soil present? | N |
| Indicators of wetland hydrology present? | N |

**Remarks:** (Explain alternative procedures here or in a separate report.)

### VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Phalaris arundinacea -- Reed Canary Grass</td>
<td>30</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
<tr>
<td>2 Melilotus officinalis -- Yellow Sweet-Clover</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>3 Cirsium arvense -- Canadian Thistle</td>
<td>10</td>
<td>N</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>4</td>
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<td>10</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

### Dominance Test Worksheet

**Number of Dominant Species that are OBL, FACW, or FAC:** 1 (A)  
**Total Number of Dominant Species Across all Strata:** 2 (B)  
**Percent of Dominant Species that are OBL, FACW, or FAC:** 50.00% (A/B)

### Prevalence Index Worksheet

| OBL species | 0 x 1 = 0 |
| FACW species | 30 x 2 = 60 |
| FAC species | 0 x 3 = 0 |
| FACU species | 30 x 4 = 120 |
| UPL species | 0 x 5 = 0 |

**Column totals:** 60 (A)  
**Prevalence Index = B/A = 3.00**

### Hydrophytic Vegetation Indicators

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

- **Rapid test for hydrophytic vegetation**
  - Dominance test is >50%

- **X** 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

**Hydrophytic vegetation present?** Y

---

**Notes:** This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

### Hydric Soil Indicators:
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

### Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

### Restrictive Layer (if observed):
- Type: ____________________________
- Depth (inches): __________________
- Hydric soil present? N

- Remarks: Assumed to be ponded for a long or very long duration during the growing season.

### HYDROLOGY

#### Wetland Hydrology Indicators:

**Primary Indicators (minimum of one is required; check all that apply)**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
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- Water-Stained Leaves (B9)

**Secondary Indicators (minimum of two required)**
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

**Field Observations:**
- Surface water present? Yes No X Depth (inches): ______
- Water table present? Yes No X Depth (inches): ______
- Saturation present? Yes No X Depth (inches): ______

- (includes capillary fringe)

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

- Remarks:

---

US Army Corps of Engineers  Midwest Region
WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Blue Line LRT  City/County: Golden Valley/ Hennepin  Sampling Date: June 10, 2015
Applicant/Owner: Met Council  State: MN  Sampling Point: new w50 wet
Investigator(s): Jeff Olson  Section, Township, Range: s17, 29n, 24w
Landform (hillslope, terrace, etc.): depression  Local relief (concave, convex, none): concave
Slope (%): four  Long: 44.9951
Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)

Are vegetation, soil significantly disturbed?
Are vegetation, soil naturally problematic?
Are "normal circumstances" present? Yes

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y
Hydric soil present? Y
Indicators of wetland hydrology present? Y
Is the sampled area within a wetland? Y
If yes, optional wetland site ID: ____________________________

Remarks: (Explain alternative procedures here or in a separate report.)

VEGETATION -- Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub stratum</th>
<th>(Plot size: 15' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
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<tr>
<td>2</td>
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<td>3</td>
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<tr>
<td>4</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Herb stratum</th>
<th>(Plot size: 5' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phalaris arundinacea</td>
<td>-- Reed Canary Grass</td>
<td>50</td>
<td>Y</td>
<td>FACW</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>
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<tr>
<td>5</td>
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<tr>
<td>6</td>
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<tr>
<td>7</td>
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</tr>
<tr>
<td>8</td>
<td>--</td>
<td></td>
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<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>
</tbody>
</table>

= Total Cover

<table>
<thead>
<tr>
<th>Woody vine stratum</th>
<th>(Plot size: 30' Radius)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>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>
</tbody>
</table>

= Total Cover

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

Note: This data sheet has been adapted to use the 2014 National Wetland Plant List:
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Inches)</td>
<td>Color (moist) %</td>
<td>Color (moist) %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Hydric Soil Indicators:**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)

**Indicators for Problematic Hydric Soils:**
- Coast Prairie Redox (A16) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

**Restrictive Layer (if observed):**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Hydric soil present?</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (inches):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**
Assumed to be ponded for a long or very long duration during the growing season.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (minimum of one is required; check all that apply)</th>
<th>Secondary Indicators (minimum of two required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water (A1)</td>
<td>Surface Soil Cracks (B6)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>X Saturation (A3)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Water Marks (B1)</td>
<td>Clayfish Burrows (C8)</td>
</tr>
<tr>
<td>Sediment Deposits (B2)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Drift Deposits (B3)</td>
<td>Stunted or Stressed Plants (D1)</td>
</tr>
<tr>
<td>Algal Mat or Crust (B4)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>Iron Deposits (B5)</td>
<td>Water-Stained Leaves (B9)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Hydraulic Resistance (D4)</td>
</tr>
<tr>
<td>X Sparsely Vegetated Concave Surface (B8)</td>
<td>Geomorphic Position (D2)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>Other (Explain in Remarks)</td>
</tr>
</tbody>
</table>

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface water present?</th>
<th>Yes</th>
<th>No</th>
<th>X Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water table present?</td>
<td>Yes</td>
<td>No</td>
<td>X Depth (inches):</td>
</tr>
<tr>
<td>Saturation present?</td>
<td>Yes</td>
<td>X</td>
<td>No Depth (inches): surface</td>
</tr>
</tbody>
</table>

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
Appendix B

Ground Photographs

Photo B-1: Wetland #1

Photo B-2: Wetland #2
No Photo Available

**Photo B-3**: Wetland #3

**Photo B-4**: Wetland #4
Photo B-5: Wetland #5

Photo B-6: Wetland #6
Photo B-7: Wetland #7

Photo B-8: Wetland #8
Photo B-11  Wetland #11

Photo B-12  Wetland #12
Photo B-13  Wetland #13
No photo Available
Photo B-14: Wetland #14
Photo B-15: Wetland #15

Photo B-16: Wetland #16
Photo B-17  Wetland #17

Photo B-26: Wetland #26
Photo B-27  Wetland #27

Photo B-28  Wetland #28
Photo B-29: Wetland #29

No Photo Available

Photo B-30: Wetland #30
Photo B-31  Wetland #31
Photo B-32  Wetland #32
Photo B-33  Wetland #33
No Photo Available
Photo B-34:  Wetland #34
No Photo Available

**Photo B-37**  Wetland #37

No Photo Available

**Photo B-38**  Wetland #38
Photo B-39  Wetland #39

Photo B-40:  Wetland #40
Photo B-44  Wetland #44
No Photo Available
Photo B-45  Wetland #45
Photo B-50  Wetland #50
No Photo Available
Photo B-51:  Wetland #51
Appendix C

Climate Summary Data
**Minnesota Climatology Working Group**

**Precipitation Worksheet Using Gridded Database**

**Precipitation data for target wetland location:**
- **county:** Hennepin
- **township number:** 119N
- **township name:** Brooklyn Park
- **range number:** 21W
- **nearest community:** Brooklyn Center
- **section number:** 27

**Aerial photograph or site visit date:**
Monday, June 15, 2015

**Score using 1981-2010 normal period**

<table>
<thead>
<tr>
<th>(values are in inches)</th>
<th>first prior month: May 2015</th>
<th>second prior month: April 2015</th>
<th>third prior month: March 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>estimated precipitation total for this location:</td>
<td>4.67</td>
<td>1.93</td>
<td>0.62</td>
</tr>
<tr>
<td>there is a 30% chance this location will have less than: *</td>
<td>2.72</td>
<td>1.79</td>
<td>1.30</td>
</tr>
<tr>
<td>there is a 30% chance this location will have more than: *</td>
<td>4.60</td>
<td>3.50</td>
<td>2.17</td>
</tr>
<tr>
<td>type of month: dry normal wet</td>
<td>wet</td>
<td>normal</td>
<td>dry</td>
</tr>
<tr>
<td>monthly score</td>
<td>$3 \times 3 = 9$</td>
<td>$2 \times 2 = 4$</td>
<td>$1 \times 1 = 1$</td>
</tr>
<tr>
<td>multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)</td>
<td></td>
<td></td>
<td>14 (Normal)</td>
</tr>
</tbody>
</table>

* from USDA-NRCS two-parameter gamma distribution fit