## The US 14 Wetland Technical Report: Supplement

PREPARED FOR: Minnesota Department of Transportation

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### **Introduction and Purpose**

This Supplement summarizes additional wetland delineation work completed in August 2005 for the US 14 Draft Environmental Impact Statement (DEIS) from New Ulm to North Mankato. Additional wetland delineations were performed adjacent to the US 14 approach to the Minnesota River bridge. Figure 1 (see page 2) shows the US 14 DEIS study area, including the alternative corridor locations that are being evaluated in detail. As shown on the top of Figure 1, this study uses two Study Sections, West and East, to describe and analyze the Alternatives.

Additional wetlands delineated in August 2005 are named Wetland "A", Wetland "B", and Wetland "C". Wetland "A" surrounds the US 14 road embankment on the east side of the Minnesota River. Wetland "B" surrounds the US 14 road embankment on the west side of the River (in New Ulm). Wetland "C" is an extension of wetland "W-NU-30-21-1" (Wetland #1) delineated and reported previously. Routine On-site Wetland Delineation Forms for Wetland "A" and Wetland "B" are attached to this Supplement. Delineation Forms for Wetland "C" are found in the original Wetland Technical Report, synonymous with Wetland "W-NU-30-21-1" (Wetland #1).

Wetland delineation work completed prior to August 2005 is presented in the Wetland Delineation Technical Report for the US 14 EIS Corridor (January 26, 2005). The Report does not cover wetlands near the US 14 Minnesota River bridge because the area was not included within the study limits when the delineations were initially completed. The US 14 EIS project team subsequently decided to include the US 14 Minnesota River bridge within the project limits. The consideration of a new bridge required completing additional wetland delineations. (See the US 14 Amended Scoping Decision Document for more information on this decision; this document is found at: http://www.dot.state.mn.us/d7/projects/14newulmtonmankato/).

This Supplement also corrects errors and clarifies information presented in the January 2005 Report. Wetland acreage within the US 14 Project Area Polygon (hereafter, the Project Area; see January 2005 Wetland Delineation Technical Report for a definition) as reported in this Supplement supersede acreage previously shown in the January 2005 Report. Likewise, wetland impact acreages reported in this Supplement supersede impacts shown in the previous Report. Any future changes to acreage of wetlands within the Project Area or changes in potential wetland impacts would be reported in a subsequent Supplement.

### **Updated Results**

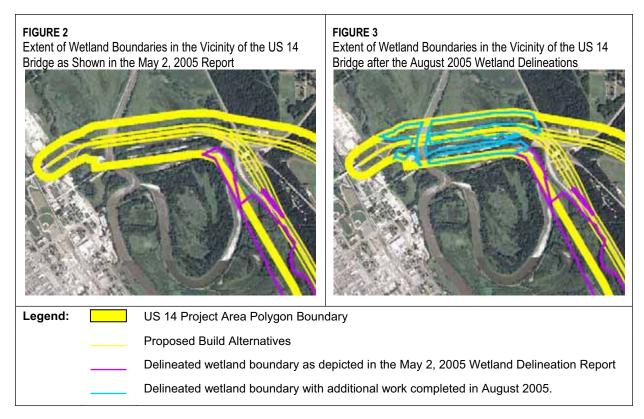
The January 2005 Report, (subsection "Routine On-Site Wetland Delineation," p. 21) reads "The Routine On-Site Wetland Delineation effort identified 22 non-agricultural wetlands that lie wholly or partly in the US 14 Project Area Polygon, with a total area of 143.5 acres." The revised total acreage, including the original effort and the August 2005 wetland delineations) is 196.9 acres. Thus, an additional 53.4 acres of wetland were delineated in August 2005 within the US 14 Project Area (9.2 acres are on the New Ulm side of the River and 44.2 acres are on the east

side of the River). A portion of this acreage would be impacted by proposed DEIS Build Alternatives (see New Wetland Impact Results below for more information).

Figure 2 (see page 3) shows the terminus of the wetland delineation boundary as it was presented in the January 2005 Wetland Report. These boundaries were also shown to members of the Technical Evaluation Panel (TEP) on March 2, 2005, and to the Army Corps of Engineers on May 2, 2005. Figure 3 shows the extension of the wetland delineation boundary in the vicinity of the US 14 Bridge and approach on both sides of the Minnesota River. This extended boundary contains the additional 53.4 acres of wetlands delineated in August 2005.

**East Study Section** 

West Study Section



#### **New Wetland Impact Results**

Table 1 provides a comparison of the wetland impacts for the DEIS Build Alternatives. These impacts include the additional wetland acreage delineated in August 2005. Table 1 updates Table 10 in the January 2005 Report. The results presented below more accurately reflect overall wetland impacts by separating the impacts of the two interchange options under consideration for Alternatives E1, E2, and E3. The interchange options are located near Nicollet at County Road 23 and MN 99 (see Figure 1). Ultimately, only one of these options would be selected if Alternatives E1, E2, or E3 were selected as part of the DEIS Preferred Alternative. Table 10 in the previous Report over reported the wetland impacts for Alternatives E1, E2, and E3 by including impacts from both interchange options.

**TABLE 1 (NEW TABLE)**Updated Wetland Impacts by Alternative

|               | No-Build | Build Alts West (New Ulm) |         |         | Build Alts East (Courtland-Nicollet) |         |         |         | Build - Total Range |         |
|---------------|----------|---------------------------|---------|---------|--------------------------------------|---------|---------|---------|---------------------|---------|
|               | Alt.     | Alt. W1                   | Alt. W2 | Alt. W3 | Alt. E1                              | Alt. E2 | Alt. E3 | Alt. E4 | Minimum             | Maximum |
| Total         | 0        | 18.1                      | 5.0     | 20.2    | 12.0                                 | 13.8    | 17.9    | 4.8     | 9.8                 | 38.1    |
| Wetlands (ac) |          |                           |         |         | [11.5]                               | [13.6]  | [14.0]  |         | [16.5]              | [34.2]  |

NOTE: The numbers not in brackets under Alts. E1, E2, and E3 are the impacts for the interchange option at CR 23. The bracketed numbers under are the impacts for the interchange option at MN 99.

#### Correction to Range of Wetland Impacts Reported in January 2005 Wetland Technical Report

The wetland impacts reported in Table 1 above include a correction to an error in the January 2005 Wetland Technical Report. Table 10 in the January 2005 Report incorrectly showed the range of wetland acreage impacts for the Western Segment, Eastern Segment, and Combined segments. Table 2 shows the incorrect values, as well as the current, correct values.

#### TABLE 2 (DOCUMENTS AND CORRECTS ERROR IN TABLE 10 OF JANUARY 2005 REPORT)

Correction to Range or Wetland Impacts Reported in January 2005 Report & Current Range of Wetland Impacts

|                                       | Incorrect Range of Wetland<br>Impacts (acres) | Correct Range of Wetland<br>Impacts (Acres |
|---------------------------------------|---|--|
| Western Segment                       | 1.8 – 10.2                                    | 5.0 – 20.2                                 |
| Eastern Segment                       | 6.0 – 19.2                                    | 4.8 – 17.9                                 |
| Combined Segments (Western + Eastern) | 7.8 – 29.4                                    | 9.8 – 38.1                                 |

**Detailed Wetland Delineation Information for Western End of Study Area in Vicinity of US 14 Bridge** Table 3 of this Supplement updates Table 7 in the January 2005 Report. The table below shows the total wetland acreage by wetland type in the Project Area as reported to members of the TEP on March 2, 2005, and to the Army Corps on May 2, 2005. This table includes minor corrections to the data presented to the TEP.

TABLE 3 (UPDATES TABLE 7 IN THE JANUARY 2005 REPORT)

Areal Extent of Wetland Types in the US 14 Project Area Polygon

|   | Delineation l               | Methodology                         |                                     |                                |
|---|-----------------------------|-------------------------------------|-------------------------------------|--------------------------------|
| Circular 39 (Cowardin<br>Code) <sup>1</sup> | Routine On-<br>Site (acres) | Aerial Slide<br>Review<br>(acres)   | Total Area<br>(acres)               | % Project<br>Area <sup>2</sup> |
| Type 1 (PEMA)                               | 0.0                         | <del>145.4</del> 142.3 <sup>3</sup> | <del>145.4</del> 142.3 <sup>3</sup> | 2.0%                           |
| Type 2 (PEMB)                               | 14.9                        | 0.0                                 | 14.9                                | 0.2%                           |
| Type 3 (PEMC)                               | 52.7                        | 0.0                                 | 52.7                                | 0.8%                           |
| Type 4 (PEMC, PEMF)                         | 0.0                         | 0.0                                 | 0.0                                 | 0.0%                           |
| Type 5 (PEMF, POWF)                         | 2.9                         | 0.0                                 | 2.9                                 | 0.04%                          |
| Type 6 (PSS1A, PSS1C)                       | 1.8                         | 0.0                                 | 1.8                                 | 0.03%                          |
| Type 7 (PFO1A, PFO1C)                       | 71.2                        | 0.0                                 | 71.2                                | 1.0%                           |
| Type 8 (PFO –various)                       | 0.0                         | 0.0                                 | 0.0                                 | 0.0%                           |
| Total                                       | 143.5                       | 142.3                               | 285.8                               | 4.1%                           |
| "Field Verification" Needed                 | 0.0                         | 24.9                                | 24.9                                | 0.4%                           |
| Grand Total                                 | 143.5                       | 167.2                               | 310.7                               | 4.5%                           |

<sup>&</sup>lt;sup>1</sup> Translations of Cowardin Codes and Circular 39 Codes are per the Minnesota Wetland Conservation Act.

NOTE: Acreages in this table represent the total extent of wetlands in the Project Area; not wetland impacts.

Table 4 of this Supplement summarizes the total wetland acreage in the Project Area, including additional wetlands delineated in August 2005.

<sup>&</sup>lt;sup>2</sup>Assumes US 14 Project Area Polygon is 6,902 acres.

<sup>&</sup>lt;sup>3</sup>The number of Type 1 (PEMA) wetlands in the Project Area was incorrectly reported in the January 2005 Report. The percentage area of the Project Area, as well as the Total and Grand Total Rows reflect the change.

#### **TABLE 4 (NEW TABLE)**

Areal Extent of Wetland Types in the US 14 Project Area (including additional wetlands delineated in August 2005)

|   |                    | Delineation I         | Methodology       |                             |  |                                   |
|---|--------------------|-----------------------|-------------------|-----------------------------|--|-----------------------------------|
|   | Rou                | tine On-Site (A       | cres)             |                             |  |                                   |
| Circular 39 (Cowardin<br>Code) <sup>1</sup> | Original<br>Effort | August<br>2005 Effort | Total On-<br>Site | Aerial Slide<br>Review      | Total Area<br>(acres)                  | % of Project<br>Area <sup>2</sup> |
| Type 1 (PEMA)                               | 0.0                | 0.0                   | 0.0               | 145.4<br>142.3 <sup>3</sup> | <del>145.4</del><br>142.3 <sup>3</sup> | 2.0%                              |
| Type 2 (PEMB)                               | 14.9               | 0.0                   | 14.9              | 0.0                         | 14.9                                   | 0.2%                              |
| Type 3 (PEMC)                               | 52.7               | 15.9                  | 68.6              | 0.0                         | 68.6                                   | 1.%                               |
| Type 4 (PEMC, PEMF)                         | 0.0                | 0.0                   | 0.0               | 0.0                         | 0.0                                    | 0.0%                              |
| Type 5 (PEMF, POWF)                         | 2.9                | 0.0                   | 2.9               | 0.0                         | 2.9                                    | 0.04%                             |
| Type 6 (PSS1A, PSS1C)                       | 1.8                | 0.0                   | 1.8               | 0.0                         | 1.8                                    | 0.03%                             |
| Type 7 (PFO1A, PFO1C)                       | 71.2               | 37.5                  | 108.7             | 0.0                         | 108.7                                  | 1.6%                              |
| Type 8 (PFO –various)                       | 0.0                | 0.0                   | 0.0               | 0.0                         | 0.0                                    | 0.0%                              |
| Total                                       | 143.5              | 53.4                  | 196.9             | 142.3                       | 339.2                                  | 4.9%                              |
| "Field Verification" Needed                 | 0.0                | 0.0                   | 0.0               | 24.9                        | 24.9                                   | 0.4%                              |
| Grand Total                                 | 143.5              | 53.4                  | 196.9             | 167.2                       | 364.1                                  | 5.3%                              |

<sup>&</sup>lt;sup>1</sup> Translations of Cowardin Codes and Circular 39 Codes are per the Minnesota Wetland Conservation Act.

NOTE: Acreages in this table represent the total extent of wetlands in the Project Area; not wetland impacts.

Table 5 summarizes potential wetland impacts for proposed Build Alternatives in the West Study Section of the Project Area including the Original Effort and the August 2005 Effort.

**TABLE 5 (UPDATES TABLE 8 IN JANUARY 2005 REPORT)** 

Summary of Wetland Impacts by Wetland Type in Western Section of the US 14 Project Area

| Circular 39     |       | Alt W1                  |       |       | Alt W2                  |       |       | Alt W3                  |       |
|-----------------|-------|-------------------------|-------|-------|-------------------------|-------|-------|-------------------------|-------|
| (Cowardin Code) | Known | Require Field<br>Verify | Total | Known | Require Field<br>Verify | Total | Known | Require Field<br>Verify | Total |
| Type 1          | 0.0   | 0.1                     | 0.1   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   |
| Type 2          | 1.2   | 0.0                     | 1.2   | 1.3   | 0.0                     | 1.3   | 1.3   | 0.0                     | 1.3   |
| Type 3          | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   |
| Type 4          | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   |
| Type 5          | 0.0   | 0.0                     | 0.0   | 0.5   | 0.0                     | 0.5   | 0.5   | 0.0                     | 0.5   |
| Type 6          | 1.0   | 0.0                     | 1.0   | 0.0   | 0.0                     | 0.0   | 1.0   | 0.0                     | 1.0   |
| Type 7          | 15.8  | 0.0                     | 15.8  | 3.2   | 0.0                     | 3.2   | 17.4  | 0.0                     | 17.4  |
| Type 8          | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   |
| Total           | 18.0  | 0.1                     | 18.1  | 5.0   | 0.0                     | 5.0   | 20.2  | 0.0                     | 20.2  |

Impacts associated with all interchanges in the Western Segment are included in the acreages above.

<sup>&</sup>lt;sup>2</sup>Assumes US 14 Project Area Polygon is 6,902 acres.

<sup>&</sup>lt;sup>3</sup>The number of Type 1 (PEMA) wetlands in the Project Area was incorrectly reported in the January 2005 Report. The percentage area of the Project Area, as well as the Total and Grand Total Rows reflect the change.

Table 6 provides the current wetland impacts in the East Study Section. The table below replaces Table 9 in the January 2005 Report. Table 6 of this Supplement specifies wetland impacts for Alternatives E1, E2, and E3 by interchange options at either County Highway 23 or MN 99, while Table 9 combined wetland impacts for the two interchange options. See the New Wetland Impact Results discussion above for more complete details.

TABLE 6 ( UPDATES AND CLARIFIES TABLE 9 IN JANUARY 2005 REPORT)

Summary of Wetland Impacts by Wetland Type in Eastern Section of Project Area

| Circular 39 Type   | lm          | pacts per Propose | ed Alternative – acre | es     |
|--------------------|-------------|-------------------|-----------------------|--------|
|                    | Alt E1      | Alt E2            | Alt E3                | Alt E4 |
| 1 (seasonal basin) | 6.0 [5.5]   | 6.6 [6.4]         | 17.8 [13.9]           | 4.7    |
| 2 (wet meadow)     | 3.6 [3.6]   | 2.1 [2.1]         | 0.0 [0.0]             | 0.0    |
| 3 (shallow marsh)  | 2.3 [2.3]   | 5.0 [5.0]         | 0.1 [0.1]             | 0.1    |
| 4 (deep marsh)     | 0.0 [0.0]   | 0.0 [0.0]         | 0.0 [0.0]             | 0.0    |
| 5 (open water)     | 0.0 [0.0]   | 0.0 [0.0]         | 0.0 [0.0]             | 0.0    |
| 6 (shrub swamp)    | 0.0 [0.0]   | 0.0 [0.0]         | 0.0 [0.0]             | 0.0    |
| 7 (wooded swamp)   | 0.1 [0.1]   | 0.1 [0.1]         | 0.0 [0.0]             | 0.0    |
| 8 (bog)            | 0.0 [0.0]   | 0.0 [0.0]         | 0.0 [0.0]             | 0.0    |
| Total              | 12.0 [11.5] | 13.8 [13.6]       | 17.9 [14.0]           | 4.8    |

NOTE: The numbers not in brackets under Alts. E1, E2, and E3 are the impacts for the optional interchange at MN 99. The bracketed numbers under Alts. E1, E2, and E3 are the impacts for the optional interchange at MN 99 instead of at County Highway 23. These data are based on impact calculation on December 7, 2004 and August 24, 2005.

| Project/Site:   | US 14 (North Mank   | ato to New Ulm,                                   | , MN)                            |   |   | Date:  | _8  | 3-17-2   | 2005         |
|---|---|---|----------------------------------|---|---|--|---|----------|--------------|
| Applicant/Owner:  | MN DOT District 7   |   |                                  |   |   | Coun   | ity: _N                                       | Nicol    | let          |
| Investigator:   | Jeff Olson and Mar  | y Gute (CH2M H                                    | IILL)                            |   |   | State:   | _ <u>N</u>                                    | Minn     | esota        |
| Do Normal Circumstanc   | es exist on the site?   |   |                                  | Yes   | No  | Com  | munity ID:                                    | _        | Wetland "A"  |
| Is the site significantly di  | isturbed (Atypical Site   | uation)?  |                                  | Yes   | No  | Trans  | sect ID:                                      |          |              |
| Is the area a potential Pro   | oblem Area?   |   |                                  | Yes   | No  | Plot I   | D:  |          | Upland Pit   |
| (If needed, explain o   | n reverse)  |   |                                  |   |   | (acro  | ss Minneso                                    | ta R.    | from New Ulm |
| VEGETATION  |   |   |                                  |   |   |  |   |          |              |
| Dominant Plant Spe  | cies Stratum  | Indicator   |                                  | Dominar   | nt Plant Spe  | ecies  | Stratum                                       | <u>1</u> | Indicator    |
| 1. Acer saccharinum   | T   | FACW  | 9.                               |   |   |  |   |          |              |
| 2. Fraxinus pensylvanica  | T   | FACW  |                                  |   |   |  |   |          |              |
| 3. Fraxinus pensylvanica  | Sap   | FACW  |                                  |   |   |  |   |          |              |
| 4. Laportea canadensis  | H   | FACW  |                                  |   |   |  |   |          |              |
| 5. <u>Leersia virginica</u>   | H   | FACW  |                                  |   |   |  |   |          |              |
| 6   |   | _   |                                  |   |   |  |   |          |              |
|   |   |   |                                  |   |   |  |   |          |              |
|   |   |   | 15.                              |   |   |  |   |          |              |
|   |   |   | 15.<br>16.                       |   |   |  |   |          |              |
| 78.  Percent of Dominant (excluding FAC-)   | Species that are OBL,   | FACW or FAC                                       | 16.                              |   |   |  |   |          |              |
| 7   | Species that are OBL,   | FACW or FAC                                       | 16.                              |   |   |  |   |          |              |
| 7   | Species that are OBL,  of predominance of I   | FACW or FAC                                       | 16.  1009  etation.              | 6<br>and Hydro  | ology Indica  |  |   |          |              |
| 7 8.  Percent of Dominant (excluding FAC-)  Remarks: Meets criterion  HYDROLOGY  Recorded Data (I | Species that are OBL,  of predominance of I  Describe in Remarks): tream, Lake or Tide G                    | FACW or FAC                                       | 16.  1009  etation.              | 6   | ology Indica  |  |   |          |              |
| 7 8.  Percent of Dominant (excluding FAC-)  Remarks: Meets criterion  HYDROLOGY  Recorded Data (I | Species that are OBL,  of predominance of I   | FACW or FAC                                       | 16.  1009  etation.              | and Hydro<br>nary Indio<br>Inund  | ology Indica  | ators:   |   |          |              |
| 7 8.  Percent of Dominant (excluding FAC-)  Remarks: Meets criterion  HYDROLOGY  Recorded Data (I | Species that are OBL,  of predominance of l  Describe in Remarks): tream, Lake or Tide G  erial Photographs | FACW or FAC                                       | 16.  1009  etation.              | and Hydro<br>mary Indio<br>Inund<br>Satura<br>Water                                     | ology Indica<br>cators:<br>lated<br>ated in Upp   | ators:   |   |          |              |
| 7   | Species that are OBL,  of predominance of l  Describe in Remarks): tream, Lake or Tide G  erial Photographs | FACW or FAC                                       | 16.  1009  etation.              | and Hydro<br>nary Indio<br>Inund<br>Satura<br>Water<br>Drift I                          | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines   | ators:<br>er 12 Ir   |   |          |              |
| 7   | Species that are OBL,  of predominance of l  Describe in Remarks): tream, Lake or Tide G  erial Photographs | FACW or FAC                                       | 16.  1009  etation.              | and Hydro<br>nary Indio<br>Inund<br>Satura<br>Water<br>Drift I<br>Sedim                 | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>lent Deposi  | ators:<br>er 12 Ir<br>ts   | nches   |          |              |
| 7   | Species that are OBL,  of predominance of l  Describe in Remarks): tream, Lake or Tide G  erial Photographs | FACW or FAC                                       | 16.  1009 Petation.  Wetl.  Prin | and Hydromary Indio Satura Water Drift I Sedim Drain                                    | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines   | ators:<br>er 12 Ir<br>ts<br>s in We  | nches   |          |              |
| 7   | Species that are OBL,  of predominance of l  Describe in Remarks): tream, Lake or Tide G  erial Photographs | FACW or FAC  nydrophytic vege                     | 16.  1009 Petation.  Wetl.  Prin | and Hydromary Indio Inund Satura Water Drift I Sedim Drain                              | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>lent Deposi<br>age Pattern                                 | ators:<br>er 12 Ir<br>ts<br>s in We  | iches<br>tlands<br>e required):               | :        |              |
| 7   | Describe in Remarks): tream, Lake or Tide Gerial Photographs ther ta Available                              | FACW or FAC  nydrophytic vege                     | 16.  1009 Petation.  Wetl.  Prin | and Hydromary Indio Satura Water Drift I Sedim Drain Ondary In Water                    | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>lent Deposi<br>age Pattern<br>dicators (2 o<br>zed Root Cl | ators:<br>er 12 Ir<br>ts<br>s in We<br>or more<br>nannels                  | iches<br>tlands<br>e required):               | :        |              |
| 7   | Describe in Remarks): tream, Lake or Tide Gerial Photographs ther ta Available                              | FACW or FAC  nydrophytic vege  auge  (in.)  (in.) | 16.  1009 Petation.  Wetl.  Prin | and Hydro mary Indio Inund Satura Water Drift I Sedim Drain Ondary In Water Local       | ology Indicators: lated in Upp Marks Lines Lines Lines Pattern dicators (2 of 2 de Root Cles) -Stained Le                       | ators:<br>er 12 Ir<br>ts<br>s in We<br>or more<br>nannels<br>vaves<br>Data | iches<br>tlands<br>e required):               | :        |              |
| 7 8.  Percent of Dominant (excluding FAC-)  Remarks: Meets criterion  HYDROLOGY  Recorded Data (I | Describe in Remarks): tream, Lake or Tide Gerial Photographs ther ta Available                              | FACW or FAC  nydrophytic vege  auge  (in.)        | 16.  1009 Petation.  Wetl.  Prin | and Hydromary Indio Satura Water Drift I Sedim Drain ondary In Oxidi: Water Local FAC-I | ology Indica<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>lent Deposi<br>age Pattern<br>dicators (2 o<br>zed Root Cl | ators: er 12 Ir ts s in We or more nannels aves Data t                     | iches<br>tlands<br>e required):<br>in Upper 1 | :        |              |

| Map Unit Name<br>(Series and Phase | e): Nishna sil     | ty clay loam                    |                                  | Drainage Class:  | Poorly Drained                        |
|------------------------------------|--------------------|---------------------------------|----------------------------------|--|---------------------------------------|
| Taxonomy (Subg                     | roup): Cumulic F   | Iaplaquolls                     |                                  | Field Observations<br>Confirm Mapped Type?                 | Yes No                                |
| Profile Description                | <u>on</u>          |                                 |                                  |  |                                       |
| Depth (inches)                     | Horizon            | Matrix Color<br>(Munsell Moist) | Mottle Colors<br>(Munsell Moist) | Mottle Abundance/<br>Size/Contrast                         | Texture, Concretions, Structure, etc. |
| 0-3                                | A                  | 10YR 2/1                        | None                             | None   | Silt loam                             |
| 3-13                               | <u>B</u>           | 10YR 3/2                        | 10YR 4/4                         | Common/ small  | Silty clay loam                       |
| Hydric Soil Indic                  | ators: Meets defin | ition of hydric soil            | per 1987 Manual an               | d Field Indicators of the Unite                            | ed States.                            |
| •                                  | Histosol           | ,                               |                                  | cretions (Redox concentration                              |                                       |
|                                    | Histic Epipedon    |                                 |                                  | Organic Content in Surface                                 |                                       |
|                                    | Sulfidic Odor      |                                 | Orga                             | nic Streaking in Sandy Soil                                | 5                                     |
|                                    | Aquic Moisture R   | egime                           | Liste                            | d on Local Hydric Soils Lis                                | i l                                   |
|                                    | Reducing Condition | ons                             | Liste                            | d on National Hydric Soils                                 | List                                  |
| X                                  | Gleyed or Low-Ch   |                                 |                                  | r (Explain in Remarks)                                     |                                       |
|                                    |                    |                                 |                                  | with a low-lying landscape<br>characteristics appear to be |                                       |
| WETLAND DETE                       | RMINATION          |                                 |                                  |  |                                       |
| Hydrophytic Vego                   | etation Present?   | Yes                             | No                               |  |                                       |
| Wetland Hydrolo                    | gy Present?        | Yes                             | No                               |  |                                       |
| Hydric Soils Prese                 | ent?               | Yes                             | No Is this San                   | npling Point Within a Wetla                                | nd? Yes No                            |
| Remarks: Only tw                   | o of three mandato | ory criteria of wetla           | nds are met at this              | sampling pit.  |                                       |
|                                    |                    |                                 |                                  |  |                                       |

| Project/Site:   | US 14  | 4 (North Manka  | to to New Ulm,                                      | MN)                         |  |  | Date:  | 8-1              | 7-2005      |
|---|--|---|---|-----------------------------|--|--|--|------------------|-------------|
| Applicant/Owner:  | MN I   | DOT District 7  |   |                             |  |  | County:  | Nic              | collet      |
| Investigator:   | Jeff C   | Olson and Mary  | Gute (CH2M H  | ILL)                        |  |  | State:   | Miı              | nnesota     |
| Do Normal Circumstand   | ces exist  | on the site?  |   |                             | Yes  | No   | Commun   | ity ID:          | Wetland "A" |
| Is the site significantly d   | listurbec  | d (Atypical Situa   | ation)?   | _                           | Yes  | No   | Transect 1   | ID:              |             |
| Is the area a potential Pr  |  |   | Yes   | No                          | Plot ID:   |  | Wetland Pit  |                  |             |
| (If needed, explain o   |  |   |   |                             |  | (across M  | linnesota  | R. from New Ulm) |             |
| VEGETATION  |  |   |   |                             |  |  |  |                  |             |
| Dominant Plant Spe  | ecies  | Stratum   | Indicator   | Ī                           | Domina   | ınt Plant Sp   | pecies S   | Stratum          | Indicator   |
| 1. <u>Carex normalis</u>  |  | Н   | OBL   | 9                           |  |  |  |                  |             |
| 2. <u>Bidens aristosa</u>   |  | Н   | OBL   |                             |  |  |  |                  |             |
| 3. <u>Lemna minor</u>   |  | Н   | OBL   |                             |  |  |  |                  |             |
| 4. Polygonum amphibium  | 1 .  | Н   | FACW  |                             |  |  |  |                  |             |
| E 6 : 0 : 177   |  | Н   | OBL   | 13.                         |  |  |  |                  |             |
| 5. Scirpus fluviatilis  |  | Sap   | FACW  |                             |  |  |  |                  |             |
| 6. Acer saccharinum   |  | Sap   |   |                             |  |  |  |                  |             |
| 6. <u>Acer saccharinum</u>  |  |   |   |                             |  |  |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  |  | Sap   | OBL   |                             |  |  |  |                  |             |
| 6. <u>Acer saccharinum</u><br>7. Salix exigua   | Species  | Sap<br>that are OBL, F.   | OBL ACW or FAC                                      | 15<br>16                    |  |  |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-)  | Species  | Sap<br>that are OBL, F.   | OBL ACW or FAC                                      | 15<br>16                    |  |  |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion   | Species<br>).<br>n of prec   | Sap<br>that are OBL, F.   | OBL ACW or FAC                                      | 15<br>16<br>100%<br>tation. | 5  |  |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8. Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (  | Species ). n of prec (Describe   | Sap that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gar                      | OBL  ACW or FAC  odrophytic vege                    | 15 16 100% tation.          | and Hydr   | rology Indi  |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species ). n of prec (Describe Stream, I Aerial Ph   | Sap that are OBL, F. dominance of hy  | OBL  ACW or FAC  odrophytic vege                    | 15 16 100% tation.          | nd Hydr<br>nary Ind<br>Inuno   | rology Indi<br>icators:<br>dated   | cators:  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species ).  In of precipitation of preci | Sap that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gan                      | OBL  ACW or FAC  odrophytic vege                    | 15 16 100% tation.          | nd Hydi<br>nary Ind<br>Inund<br>Satur                                      | rology Indi<br>icators:<br>dated   |  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species ).  In of precipitation of preci | Sap that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gan                      | OBL  ACW or FAC  odrophytic vege                    | 15 16 100% tation.          | nd Hydi<br>nary Ind<br>Inund<br>Satur<br>Wate                              | rology Indi<br>icators:<br>dated<br>rated in Up<br>r Marks   | cators:  |                  |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species ).  In of precipitation of preci | Sap that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gan                      | OBL  ACW or FAC  odrophytic vege                    | tation.                     | nd Hydranary Ind<br>Inuna<br>Satur<br>Wate<br>Drift<br>Sedir               | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>nent Depos   | cators:<br>per 12 Inches   | 5                |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species<br>).<br>n of prec<br>(Describe<br>Stream, I<br>Aerial Ph<br>Other<br>ata Avail  | that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gar notographs               | OBL ACW or FAC                                      | 15. 16. 100% tation.        | nd Hydnary Ind<br>Inund<br>Satur<br>Wate<br>Drift<br>Sedir<br>Drair        | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>nent Depon<br>nage Patter  | cators:<br>per 12 Inches<br>sits<br>ns in Wetland  | s<br>ds          |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | Species<br>).<br>n of prec<br>(Describe<br>Stream, I<br>Aerial Ph<br>Other<br>ata Avail  | Sap that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gan                      | OBL  ACW or FAC  odrophytic vege                    | 15. 16. 100% tation.        | nd Hydnary Ind<br>Inund<br>Satur<br>Wate<br>Drift<br>Sedir<br>Drair        | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>ment Depon<br>nage Patter<br>ndicators (2  | cators:<br>per 12 Inches   | ds<br>(uired):   |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | (Describe<br>(Describe<br>Stream, I<br>Aerial Ph<br>Other<br>ata Avail   | that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gar notographs               | OBL ACW or FAC                                      | 15. 16. 100% tation.        | Ind Hydinary Ind Inuno Satur Wate Drift Sedir Drair Drair Oxid Wate        | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>nent Depon<br>nage Patter<br>ndicators (2<br>ized Root (2  | cators:  per 12 Inches sits ns in Wetland or more req Channels in U                        | ds<br>(uired):   |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (excluding FAC-) No Recorded Data (excluding FAC-) No Recorded Data (excluding FAC-) Depth of Surface Water in 19 | (Describe<br>Stream, I<br>Aerial Ph<br>Other<br>ata Avail  | that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gar notographs lable  0  >18 | OBL  ACW or FAC  odrophytic vege  uge  (in.)  (in.) | 15. 16. 100% tation.        | nnd Hydrinary Ind Inund Satur Wate Drift Sedir Orair Oxid Wate Local       | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>nent Depos<br>nage Patter<br>ndicators (2<br>ized Root (<br>ized Root (  | cators:  per 12 Inches  sits  ns in Wetland  2 or more req  Channels in U  Leaves  by Data | ds<br>(uired):   |             |
| 6. Acer saccharinum 7. Salix exigua 8.  Percent of Dominant (excluding FAC-) Remarks: Meets criterion  HYDROLOGY  Recorded Data (   | (Describe<br>Stream, I<br>Aerial Ph<br>Other<br>ata Avail  | that are OBL, F. dominance of hy e in Remarks): Lake or Tide Gan notographs lable         | OBL  ACW or FAC  drophytic vege                     | 15. 16. 100% tation.        | and Hydranary Ind Inuna Satur Wate Drift Sedir Orair Oraid Wate Local FAC- | rology Indi<br>icators:<br>dated<br>rated in Up<br>or Marks<br>Lines<br>nent Depos<br>nage Patter<br>ndicators (2<br>ized Root (2<br>ized Root (2<br>ized Root (2<br>ized Surve<br>v-Stained I | cators:  per 12 Inches  sits  ns in Wetland  2 or more req  Channels in U  Leaves  by Data | ds<br>(uired):   |             |

| Map Unit Name<br>(Series and Phase | e): <u>Nishna sil</u> | ty clay loam                                |                                  | Drainage Class:                            | Poorly Drain                  | ned                      |  |  |  |  |
|------------------------------------|-----------------------|---|----------------------------------|--|-------------------------------|--------------------------|--|--|--|--|
| Taxonomy (Subg                     | group): Cumulic I     | Haplaquolls                                 |                                  | Field Observations<br>Confirm Mapped Type? | Yes                           | No                       |  |  |  |  |
| Profile Description                | <u>on</u>             |   |                                  |  |                               |                          |  |  |  |  |
| Depth (inches)                     | Horizon               | Matrix Color<br>(Munsell Moist)             | Mottle Colors<br>(Munsell Moist) | Mottle Abundance/<br>Size/Contrast         |                               | oncretions,<br>ıre, etc. |  |  |  |  |
| 0-6                                | A                     | N/2.5                                       | None                             | None                                       | oam                           |                          |  |  |  |  |
| 6-13                               | B                     | 10YR 3/1                                    | 10YR 3/6                         | Common/ medium                             | ommon/ medium Silty clay loan |                          |  |  |  |  |
|                                    |                       |   |                                  |  | -                             |                          |  |  |  |  |
| Hydric Soil India                  | cators: Meets defin   | ition of hydric soil                        | per 1987 Manual an               | d Field Indicators of the Unit             | ed States.                    |                          |  |  |  |  |
|                                    | Histosol              |   | X Cond                           | cretions (Redox concentration              | ons)                          |                          |  |  |  |  |
|                                    | _ Histic Epipedon     |   | High                             | Organic Content in Surface                 | e Layer in Sand               | dy Soils                 |  |  |  |  |
|                                    | _Sulfidic Odor        |   | Orga                             | nic Streaking in Sandy Soil                | s                             |                          |  |  |  |  |
|                                    | Aquic Moisture R      | egime                                       | Liste                            | d on Local Hydric Soils Lis                | t                             |                          |  |  |  |  |
|                                    | Reducing Condition    | ions  | Liste                            | d on National Hydric Soils                 | List                          |                          |  |  |  |  |
| X                                  | _Gleyed or Low-C      | hroma Colors                                | Othe                             | r (Explain in Remarks)                     |                               |                          |  |  |  |  |
|                                    | in this sampling pi   | d redox concentrati<br>t meet hydric soil c |                                  | with a low-lying landscape                 | e position are e              | vidence of               |  |  |  |  |
| Hydrophytic Veg                    | etation Present?      | Yes   | No                               |  |                               |                          |  |  |  |  |
| Wetland Hydrolo                    | ogy Present?          | Yes   | No                               |  |                               |                          |  |  |  |  |
| Hydric Soils Pres                  | ent?                  | Yes   | No Is this San                   | npling Point Within a Wetla                | and?                          | <b>Yes</b> No            |  |  |  |  |
| Remarks: All thr                   | ee mandatory crite    | ria of wetlands are                         | met at this samplin              | g pit.                                     |                               |                          |  |  |  |  |
|                                    |                       |   |                                  |  |                               |                          |  |  |  |  |
|                                    |                       |   |                                  |  |                               |                          |  |  |  |  |

|  | US 14 (North Mank  | auto to Ivew Chil                                 | , 1111 ()                   | Date  |  |   |  |             |
|--|--|---|-----------------------------|---|--|---|--|-------------|
| Applicant/Owner:   | MN DOT District 7  | 7   |                             |   | County   | : Bro   | own                                    |             |
| Investigator:  | Jeff Olson and Mar   | y Gute (CH2M H                                    | HILL)                       |   |  | State:  | _Mi                                    | nnesota     |
| Do Normal Circumstances  | exist on the site?   |   |                             | Yes   | No   | Commi   | unity ID:                              | Wetland "B" |
| Is the site significantly dis  | turbed (Atypical Sit   | uation)?  |                             | Yes   | No   | Transec   | et ID:                                 |             |
| Is the area a potential Prob   | olem Area?   |   |                             | Yes   | No   | Plot ID   | :                                      | Upland Pit  |
| (If needed, explain on   | reverse)   |   |                             |   |  | (in Nev   | v Ulm)                                 |             |
| VEGETATION   |  |   |                             |   |  |   |  |             |
| Dominant Plant Speci   | es <u>Stratum</u>  | Indicator   |                             | Domina  | nt Plant Sp  | <u>ecies</u>  | Stratum                                | Indicator   |
| 1. Bromus inermis  | H  | UPL   | 9.                          |   |  |   |  |             |
| 2. Acer negundo  | T  | FACW  |                             |   |  |   |  |             |
| 3  |  |   |                             |   |  |   |  | _           |
| 4  |  | _   |                             |   |  |   |  |             |
| 5  |  |   |                             |   |  |   |  |             |
|  |  |   |                             |   |  |   |  |             |
|  |  |   |                             |   |  |   |  |             |
|  |  | _   | _ 15.                       |   |  |   |  | _           |
| 78. Percent of Dominant Sp (excluding FAC-).   |  |   | 15.<br>16.                  |   |  |   |  |             |
| 78.  Percent of Dominant Sp (excluding FAC-).  | pecies that are OBL,   | FACW or FAC                                       | 16.<br>50%                  |   |  |   |  |             |
| 78.  Percent of Dominant Sp (excluding FAC-).  | pecies that are OBL,   | FACW or FAC                                       | 16.<br>50%                  |   |  |   |  |             |
| 7  | pecies that are OBL, iterion of predominates in Remarks):  | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | etation.<br>and Hydr  | ology Indic  |   |  |             |
| 7 8.  Percent of Dominant Sp (excluding FAC-).  Remarks: Does not meet cr  HYDROLOGY  Recorded Data (Do Str  | pecies that are OBL,<br>iterion of predominates<br>escribe in Remarks):<br>eam, Lake or Tide C                 | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | etation.<br>and Hydr<br>mary Indi   | ology Indic<br>cators:   |   |  |             |
| 7 8.  Percent of Dominant Sp (excluding FAC-).  Remarks: Does not meet cr  HYDROLOGY  Recorded Data (Dominant Sp | pecies that are OBL,<br>iterion of predominates<br>escribe in Remarks):<br>eam, Lake or Tide Grial Photographs | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | etation.<br>and Hydr<br>mary Indi<br>Inunc  | ology Indic<br>cators:<br>lated  | cators:   |  |             |
| 7 8.  Percent of Dominant Sp (excluding FAC-).  Remarks: Does not meet cr  HYDROLOGY  Recorded Data (Do Str  | pecies that are OBL,<br>iterion of predominal<br>escribe in Remarks):<br>eam, Lake or Tide Carial Photographs  | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | etation.  and Hydr mary Indi Inunc  | ology Indic<br>cators:   | cators:   |  |             |
| 7  | pecies that are OBL,<br>iterion of predominal<br>escribe in Remarks):<br>eam, Lake or Tide Carial Photographs  | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | etation.  and Hydr mary Indi Inunc Satur Water Drift                                      | ology Indic<br>cators:<br>lated<br>ated in Upp<br>: Marks<br>Lines   | cators:<br>oer 12 Inch  |  |             |
| 7  | pecies that are OBL,<br>iterion of predominal<br>escribe in Remarks):<br>eam, Lake or Tide Carial Photographs  | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg           | and Hydr<br>mary Indi<br>Inunc<br>Satur<br>Water<br>Drift<br>Sedin                        | ology Indic<br>cators:<br>lated<br>ated in Upp<br>: Marks<br>Lines<br>nent Depos   | cators:<br>oer 12 Inch  | nes                                    |             |
| 7  | escribe in Remarks): eam, Lake or Tide Crial Photographs ner Available   | FACW or FAC ance of hydrophy  Gauge               | 16. 50%  ytic veg  Wetl Pri | etation.  and Hydr mary Indi Inunc Satur. Water Drift Sedin Drain                         | ology Indic<br>cators:<br>lated<br>ated in Upp<br>r Marks<br>Lines<br>nent Depos<br>age Patterr  | cators:<br>per 12 Inch<br>its<br>ns in Wetla                                      | nes                                    |             |
| 7  | pecies that are OBL,<br>iterion of predominal<br>escribe in Remarks):<br>eam, Lake or Tide Carial Photographs  | FACW or FAC ance of hydrophy                      | 16. 50%  ytic veg  Wetl Pri | and Hydr<br>mary Indi<br>Inunc<br>Satur.<br>Water<br>Drift<br>Sedin<br>Drain              | ology Indic<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>hent Depos<br>age Patterr<br>dicators (2                             | cators:<br>per 12 Inch<br>its<br>its<br>or more r                                 | nes                                    |             |
| 7  | escribe in Remarks): eam, Lake or Tide Grial Photographs her Available   | FACW or FAC ance of hydrophy Gauge                | 16. 50%  ytic veg  Wetl Pri | etation.  and Hydr mary Indi Inunc Satur Water Drift Sedin Drain condary Ir Oxidi Water   | ology Indic<br>cators:<br>lated in Upp<br>Marks<br>Lines<br>nent Depos<br>age Patterr<br>dicators (2<br>zed Root C                       | cators:  oer 12 Inch  its  ns in Wetla  or more r  Channels ir  eaves             | nes<br>ands<br>equired):               |             |
| 7  | escribe in Remarks): eam, Lake or Tide Grial Photographs ner Available  0  >18                                 | FACW or FAC ance of hydrophy  Gauge  (in.)  (in.) | 16. 50%  ytic veg  Wetl Pri | and Hydr mary Indi Inunc Satur Vater Drift Sedin Drain Condary Ir Water Under Vater Local | ology Indic<br>cators:<br>lated<br>ated in Upp<br>Marks<br>Lines<br>nent Depos<br>age Pattern<br>dicators (2<br>zed Root C<br>zed Root C | cators:  oer 12 Inch  its  ns in Wetla  or more r  channels ir  eaves  y Data     | nes<br>ands<br>equired):               |             |
| 7  | escribe in Remarks): eam, Lake or Tide Grial Photographs her Available   | FACW or FAC ance of hydrophy  Gauge  (in.)  (in.) | 16. 50%  ytic veg  Wetl Pri | etation.  and Hydr mary Indi Inunc Satur. Water Drift Sedin Oxidi Water Local FAC-        | ology Indic<br>cators:<br>lated in Upp<br>Marks<br>Lines<br>nent Depos<br>age Patterr<br>dicators (2<br>zed Root C                       | cators:  per 12 Inch  its  as in Wetla  or more r  Channels ir  eaves  y Data  st | nes<br>ands<br>equired):<br>n Upper 12 |             |

| Map Unit Name<br>(Series and Phase |                     |                                 |                                  | Drainage Class:   | Unknown        | <u> </u>           |       |
|------------------------------------|---------------------|---------------------------------|----------------------------------|---|----------------|--------------------|-------|
| Taxonomy (Sub                      | group): (disturbed  | l road embankmer                | nt)                              | Field Observations Confirm Mapped Type?                   | Yes            | No                 | o     |
| Profile Description                | on                  |                                 |                                  |   |                |                    |       |
| Depth (inches)                     | Horizon             | Matrix Color<br>(Munsell Moist) | Mottle Colors<br>(Munsell Moist) | Mottle Abundance/<br>Size/Contrast                        | Texture, C     | Concreticure, etc. |       |
| 0-3                                |                     | 10YR 3/2                        | None                             | None  | Silt           | loam               |       |
| 3-13                               |                     | 10YR 3/2                        | None                             | None  | Silt           | loam               |       |
|                                    |                     | 10YR 3/3                        |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
| Hydric Soil Indic                  | cators: Does not me | eet definition of hy            | /dric soil per 1987 A            | Manual and Field Indicators of                            | the United Sta | ites.              |       |
|                                    | _ Histosol          |                                 | Cor                              | ncretions (Redox concentratio                             | ns)            |                    |       |
|                                    | _ Histic Epipedon   |                                 | Hig                              | h Organic Content in Surface                              | Layer in Sar   | ıdy Soils          | 3     |
|                                    | _Sulfidic Odor      |                                 | Org                              | anic Streaking in Sandy Soils                             | ;              |                    |       |
|                                    | _ Aquic Moisture R  | legime                          | List                             | ed on Local Hydric Soils List                             |                |                    |       |
|                                    | _ Reducing Conditi  | ions                            | List                             | ed on National Hydric Soils I                             | List           |                    |       |
| X                                  | Gleyed or Low-Cl    |                                 |                                  | er (Explain in Remarks)                                   |                |                    |       |
|                                    |                     |                                 |                                  | ,   |                |                    |       |
|                                    | redox concentration |                                 |                                  | ing activities. Soils with a made and the definition of l |                | 10YR 3/            | '2 or |
| Hydrophytic Veg                    | rotation Present?   | Yes                             | No                               |   |                |                    |       |
| Wetland Hydrolo                    |                     | Yes                             | No                               |   |                |                    |       |
| Hydric Soils Pres                  |                     | Yes                             |                                  | mpling Point Within a Wetla                               | nd2            | Yes                | No    |
| Tyunc sons mes                     | ent:                | 165                             | 15 UII5 Ja                       | mpmig romi venum a vecua                                  | na:            | ies [              | INU   |
| Remarks: None o                    | f the three mandate | ory criteria of wetl            | lands are met at this            | s sampling pit.   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |
|                                    |                     |                                 |                                  |   |                |                    |       |

| Project/Site:  | US 14 (Nor                           | to to New Ulm,    | Date:            | 8-17-                                    | -2005                                   |                            |                          |          |                   |  |
|--|--------------------------------------|-------------------|------------------|--|---|----------------------------|--------------------------|----------|-------------------|--|
| Applicant/Owner:   | MN DOT E                             | MN DOT District 7 |                  |  |   |                            |                          | Brov     | vn                |  |
| Investigator:  | Jeff Olson and Mary Gute (CH2M HILL) |                   |                  |  |   |                            | State:                   | Mini     | Minnesota         |  |
| Do Normal Circumstances exist on the site?  Yes No Community ID: Wetland |                                      |                   |                  |  |   |                            |                          |          |                   |  |
|  |                                      |                   |                  | L  |   |                            | ĺ                        | iD.      | - Vectoria B      |  |
| Is the site significantly disturbed (Atypical Situation)?                |                                      |                   |                  |  | Yes                                     | No                         | Transect ID:             |          |                   |  |
| Is the area a potential Problem Area?                                    |                                      |                   |                  |  | Yes                                     | No                         | Plot ID:                 |          | Wetland Pit       |  |
| (If needed, explain on reverse)  |                                      |                   |                  |  |   |                            | (in New Ulm              | .)       |                   |  |
| VEGETATION   |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| Dominant Plant Spe   | ecies Str                            | <u>ratum</u>      | Indicator        |  | Domina                                  | nt Plant Spe               | <u>cies</u> <u>Strat</u> | um       | Indicator         |  |
| 1. <u>Carex normalis</u>   |                                      | Н                 | FACW             | 9  |   |                            |                          |          | . <u> </u>        |  |
| 2. Phalaris arundinacea  |                                      | <u>H</u>          | OBL              |  |   |                            |                          |          | . <u></u>         |  |
| 3. <u>Sagittaria latifolia</u>   |                                      | <u>H</u>          | OBL              |  |   |                            |                          |          |                   |  |
| 4. Scirpus tabernaemonta   | nus                                  | Н                 | OBL              |  |   |                            |                          |          |                   |  |
| 5  |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| 6  |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| 7  |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| 8.   |                                      |                   |                  | 16.                                      |   |                            |                          |          |                   |  |
| Percent of Dominant<br>(excluding FAC-)                                  |                                      | re OBL, FA        | ACW or FAC       | 100%                                     |   |                            |                          |          |                   |  |
| Remarks: Meets criterior   | n of predomina                       | ance of hy        | drophytic vege   | tation.                                  |   |                            |                          |          |                   |  |
| HYDROLOGY  |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| Recorded Data (Describe in Remarks): Wetland Hydrology Indicators:       |                                      |                   |                  |  |   |                            |                          |          |                   |  |
| Stream, Lake or Tide Gauge   |                                      |                   |                  | Primary Indicators:                      |   |                            |                          |          |                   |  |
| Aerial Photographs   |                                      |                   |                  | Inundated                                |   |                            |                          |          |                   |  |
| Other<br>No Recorded Data Available                                      |                                      |                   |                  | Saturated in Upper 12 Inches Water Marks |   |                            |                          |          |                   |  |
| No Recorded Data Available   |                                      |                   |                  | X Drift Lines                            |   |                            |                          |          |                   |  |
| Field Observations:  |                                      |                   |                  |  | -<br>Sedim                              | ent Deposit                | :S                       |          |                   |  |
|  |                                      |                   |                  | Х  | _                                       |                            | s in Wetlands            |          |                   |  |
| Depth of Surface Water:  | _                                    | 0                 | (in.)            | Seco                                     | -                                       |                            | or more require          |          | _                 |  |
| Donath to Europ Wester in I  | D: L.                                | <b>\10</b>        | (in )            |  | _                                       |                            | nannels in Upp           | er 12 Ir | nches             |  |
| Depth to Free Water in I   | - Ti: –                              | >18               | (in.)            |  | _                                       | -Stained Le<br>Soil Survev |                          |          |                   |  |
| Depth to Saturated Soil  |                                      | >18               | (in.)            |  | Local Soil Survey Data FAC-Neutral Test |                            |                          |          |                   |  |
| _  | _                                    |                   |                  |  | –<br>Other                              | (Explain in                | Remarks)                 |          |                   |  |
|  |                                      |                   |                  |  |   | (ZAPIGITI III              | ,                        |          |                   |  |
| Remarks: Bare area dev   | oid of vegetat                       | ion (indic        | ative of inundat | ion dur                                  | _                                       | · -                        | ·<br>                    | dant n   | ear this sampling |  |

| Map Unit Name<br>(Series and Phase  | ): Nishna sil                        | ty clay loam         |                                  | Drainage Class:  | Poorly Drained                        |        |  |  |  |
|---|--------------------------------------|----------------------|----------------------------------|--|---------------------------------------|--------|--|--|--|
| Taxonomy (Subgroup): Cumulic Haplaquolls  |                                      |                      |                                  | Field Observations<br>Confirm Mapped Type?                   | Yes                                   | No     |  |  |  |
| Profile Descriptio  | <u>n</u>                             |                      |                                  |  |                                       |        |  |  |  |
| Depth (inches)  | Matrix ( n (inches) Horizon (Munsell |                      | Mottle Colors<br>(Munsell Moist) | Mottle Abundance/<br>Size/Contrast                           | Texture, Concretions, Structure, etc. |        |  |  |  |
| 0-5   | A                                    | N/2.5                | None                             | None   | Silt loam                             |        |  |  |  |
| 5-18  | B 10YR 3/1                           |                      | 10YR 4/4                         | Common/ medium   | Silty clay loam                       |        |  |  |  |
|   |                                      |                      |                                  |  |                                       |        |  |  |  |
| •   |                                      | ition of hydric soil | -                                | d Field Indicators of the Unite                              |                                       |        |  |  |  |
| Histosol X Concretions (Redox concentrations)  Histic Epipedon High Organic Content in Surface Layer in Sandy Soils |                                      |                      |                                  |  |                                       |        |  |  |  |
| Sulfidic Odor Organic Streaking in Sandy Soils  |                                      |                      |                                  |  |                                       |        |  |  |  |
|   |                                      |                      |                                  |  |                                       |        |  |  |  |
| Aquic Moisture Regime Listed on Local Hydric Soils List   |                                      |                      |                                  |  |                                       |        |  |  |  |
| Reducing Conditions Listed on National Hydric Soils List  X Gleyed or Low-Chroma Colors Other (Explain in Remarks)  |                                      |                      |                                  |  |                                       |        |  |  |  |
|   |                                      |                      |                                  | a matrix, and redox concen<br>hydric soils. Soils in this sa |                                       |        |  |  |  |
| WETLAND DETEI   |                                      |                      |                                  |  |                                       |        |  |  |  |
| Hydrophytic Vege  | etation Present?                     | Yes                  | No                               |  |                                       |        |  |  |  |
| Wetland Hydrolog  | gy Present?                          | Yes                  | No                               |  |                                       |        |  |  |  |
| Hydric Soils Prese  | nt?                                  | Yes                  | No Is this San                   | npling Point Within a Wetla                                  | nd?                                   | Yes No |  |  |  |
| Remarks: All three  | e mandatory criter                   | ia of wetlands are 1 | met at this samplinຊ             | g pit.   |                                       |        |  |  |  |
|   |                                      |                      |                                  |  |                                       |        |  |  |  |
|   |                                      |                      |                                  |  |                                       |        |  |  |  |
|   |                                      |                      |                                  |  |                                       |        |  |  |  |