

**WETLAND DETERMINATION DATA FORM**  
Great Plains Region

|                                                                                                                                      |            |                          |                                                                     |                                                                     |               |
|--------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|---------------|
| Project/Site:                                                                                                                        | L3R        | Subregion (MLRA or LRR): | MLRA 56                                                             | Date:                                                               | 09/18/14      |
| Applicant:                                                                                                                           | Enbridge   |                          |                                                                     | County:                                                             | Marshall      |
| Investigators:                                                                                                                       | RAJ/BJC    |                          |                                                                     | State:                                                              | MN            |
| Soil Unit:                                                                                                                           | I24A       | NWI Classification:      |                                                                     | Sample Point:                                                       | w-155n46w3-f1 |
| Landform:                                                                                                                            | Depression | Local Relief:            | LC                                                                  | Section:                                                            |               |
| Slope (%):                                                                                                                           | 0 - 2%     | Latitude:                | 48.27393                                                            | Longitude:                                                          | -96.544199    |
| Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)                            |            |                          |                                                                     | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |               |
| Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed? |            |                          | Are normal circumstances present?                                   |                                                                     |               |
| Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?   |            |                          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                                                                     |               |
| Township:                                                                                                                            |            |                          |                                                                     | Dir:                                                                |               |

**SUMMARY OF FINDINGS**

|                                 |     |                                                 |            |
|---------------------------------|-----|-------------------------------------------------|------------|
| Hydrophytic Vegetation Present? | Yes | Hydric Soils Present?                           | Yes        |
| Wetland Hydrology Present?      | Yes | <b>Is This Sampling Point Within A Wetland?</b> | <b>Yes</b> |

Remarks: A shallow marsh community in a roadside ditch on the west side of 230th Avenue NW. Wetland vegetation and hydrology are present, and hydric soils are assumed.

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check all that apply; Minimum of one primary or two secondary required):

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Primary:</u><br><input type="checkbox"/> A1 - Surface Water<br><input type="checkbox"/> A2 - High Water Table<br><input type="checkbox"/> A3 - Saturation<br><input type="checkbox"/> B1 - Water Marks<br><input type="checkbox"/> B2 - Sediment Deposits<br><input type="checkbox"/> B3 - Drift Deposits<br><input type="checkbox"/> B4 - Algal Mat or Crust<br><input type="checkbox"/> B5 - Iron Deposits<br><input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery<br><input type="checkbox"/> B9 - Water-Stained Leaves | <input type="checkbox"/> B11 - Salt Crust<br><input type="checkbox"/> B13 - Aquatic Fauna<br><input type="checkbox"/> C1 - Hydrogen Sulfide Odor<br><input type="checkbox"/> C2 - Dry Season Water Table<br><input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (not till)<br><input type="checkbox"/> C4 - Presence of Reduced Iron<br><input type="checkbox"/> C7 - Thin Muck Surface<br><input type="checkbox"/> Other (Explain) | <u>Secondary:</u><br><input type="checkbox"/> B6 - Surface Soil Cracks<br><input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface<br><input type="checkbox"/> B10 - Drainage Patterns<br><input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (tilled)<br><input type="checkbox"/> C8 - Crayfish Burrows<br><input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery<br><input checked="" type="checkbox"/> D2 - Geomorphic Position<br><input checked="" type="checkbox"/> D5 - FAC-Neutral Test<br><input type="checkbox"/> D7 - Frost-Heaved Hummocks (LRR F) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Field Observations:**

|                                                     |                    |                                            |
|-----------------------------------------------------|--------------------|--------------------------------------------|
| Surface Water Present? Yes <input type="checkbox"/> | Depth: _____ (in.) | <b>Wetland Hydrology Present?</b> <u>Y</u> |
| Water Table Present? Yes <input type="checkbox"/>   | Depth: _____ (in.) |                                            |
| Saturation Present? Yes <input type="checkbox"/>    | Depth: _____ (in.) |                                            |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Indicators of wetland hydrology are present.

**SOILS**

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

(Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

| Depth (In.) | Matrix        |   | Mottles       |   |      |          | Texture | Remarks |
|-------------|---------------|---|---------------|---|------|----------|---------|---------|
|             | Color (Moist) | % | Color (Moist) | % | Type | Location |         |         |
|             |               |   |               |   |      |          |         |         |
|             |               |   |               |   |      |          |         |         |
|             |               |   |               |   |      |          |         |         |
|             |               |   |               |   |      |          |         |         |
|             |               |   |               |   |      |          |         |         |

**NRCS Hydric Soil Field Indicators** (check here if indicators are not present):

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> A1 - Histosol<br><input type="checkbox"/> A2 - Histic Epipedon<br><input type="checkbox"/> A3 - Black Histic<br><input type="checkbox"/> A4 - Hydrogen Sulfide<br><input type="checkbox"/> A5 - Stratified Layers (LRR F)<br><input type="checkbox"/> A9 - 1 cm Muck (LRR FGH)<br><input type="checkbox"/> A11 - Depleted Below Dark Surface<br><input type="checkbox"/> A12 - Thick Dark Surface<br><input type="checkbox"/> S1 - Sandy Mucky Mineral<br><input type="checkbox"/> S2 - 2.5 cm Mucky Peat or Peat (LRR G, H)<br><input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat (LRR F)<br><input type="checkbox"/> S4 - Sandy Gleyed Matrix | <input type="checkbox"/> S5 - Sandy Redox<br><input type="checkbox"/> S6 - Stripped Matrix<br><input type="checkbox"/> F1 - Loamy Mucky Mineral<br><input type="checkbox"/> F2 - Loamy Gleyed Matrix<br><input type="checkbox"/> F3 - Depleted Matrix<br><input type="checkbox"/> F6 - Redox Dark Surface<br><input type="checkbox"/> F7 - Depleted Dark Surface<br><input type="checkbox"/> F8 - Redox Depressions<br><input type="checkbox"/> F16 - High Plains Depressions (MLRA 72, 73 of LRR H) | <b>Indicators for Problematic Soils<sup>1</sup></b><br><input type="checkbox"/> A9 - 1 cm Muck (LRR I, J)<br><input type="checkbox"/> A16 - Coast Prairie Redox (LRR F, G, H)<br><input type="checkbox"/> S7 - Dark Surface (LRR G)<br><input type="checkbox"/> F16 - High Plains Depressions (LRR H, outside MLRA 72, 73)<br><input type="checkbox"/> F18 - Reduced Vertic<br><input type="checkbox"/> TF2 - Red Parent Material<br><input type="checkbox"/> TF12 - Very Shallow Dark Surface<br><input checked="" type="checkbox"/> Other (Explain in Remarks) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>1</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                               |              |                                      |
|-------------------------------|--------------|--------------------------------------|
| Restrictive Layer Type: _____ | Depth: _____ | <b>Hydric Soil Present?</b> <u>Y</u> |
|-------------------------------|--------------|--------------------------------------|

Remarks: Soils cannot be examined due to the position of the wetland in a roadside ditch. Based on vegetation and geomorphic position, hydric soils are assumed.

**WETLAND DETERMINATION DATA FORM**  
Great Plains Region

Project/Site: **L3R** Sample Point: **w-155n46w3-f1**

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft. radius)

|     | Species Name | % Cover       | Dominant | Ind. Status |
|-----|--------------|---------------|----------|-------------|
| 1.  |              |               |          |             |
| 2.  |              |               |          |             |
| 3.  |              |               |          |             |
| 4.  |              |               |          |             |
| 5.  |              |               |          |             |
| 6.  |              |               |          |             |
| 7.  |              |               |          |             |
| 8.  |              |               |          |             |
| 9.  |              |               |          |             |
| 10. |              |               |          |             |
|     |              | Total Cover = | <b>0</b> |             |

**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: **100.0%** (A/B)

**Prevalence Index Worksheet**

|                   |           |                                       |                |
|-------------------|-----------|---------------------------------------|----------------|
| Total % Cover of: |           | Multiply by:                          |                |
| OBL spp.          | <b>49</b> | x 1 =                                 | <b>49</b>      |
| FACW spp.         | <b>28</b> | x 2 =                                 | <b>56</b>      |
| FAC spp.          | <b>1</b>  | x 3 =                                 | <b>3</b>       |
| FACU spp.         | <b>1</b>  | x 4 =                                 | <b>4</b>       |
| UPL spp.          | <b>0</b>  | x 5 =                                 | <b>0</b>       |
| Total             |           | <b>79</b> (A)                         | <b>112</b> (B) |
|                   |           | Prevalence Index = B/A = <b>1.418</b> |                |

Sapling/Shrub Stratum (Plot size: 15 ft. radius)

|     |                         |               |           |      |
|-----|-------------------------|---------------|-----------|------|
| 1.  | <i>Salix petiolaris</i> | 10            | Y         | OBL  |
| 2.  | <i>Cornus alba</i>      | 5             | Y         | FACW |
| 3.  |                         |               |           |      |
| 4.  |                         |               |           |      |
| 5.  |                         |               |           |      |
| 6.  |                         |               |           |      |
| 7.  |                         |               |           |      |
| 8.  |                         |               |           |      |
| 9.  |                         |               |           |      |
| 10. |                         |               |           |      |
|     |                         | Total Cover = | <b>15</b> |      |

**Hydrophytic Vegetation Indicators:**

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is > 50%
  - Prevalence Index is ≤ 3.0 \*
  - Morphological Adaptations (Explain) \*
  - Problem Hydrophytic Vegetation (Explain) \*

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

Herb Stratum (Plot size: 5 ft. radius)

|     |                                |               |           |      |
|-----|--------------------------------|---------------|-----------|------|
| 1.  | <i>Typha X glauca</i>          | 30            | Y         | OBL  |
| 2.  | <i>Calamagrostis stricta</i>   | 10            | Y         | FACW |
| 3.  | <i>Agrostis gigantea</i>       | 5             | N         | FACW |
| 4.  | <i>Asclepias incarnata</i>     | 5             | N         | FACW |
| 5.  | <i>Carex pellita</i>           | 5             | N         | OBL  |
| 6.  | <i>Mentha arvensis</i>         | 3             | N         | FACW |
| 7.  | <i>Epilobium coloratum</i>     | 3             | N         | OBL  |
| 8.  | <i>Rorippa palustris</i>       | 1             | N         | OBL  |
| 9.  | <i>Ambrosia artemisiifolia</i> | 1             | N         | FACU |
| 10. | <i>Equisetum arvense</i>       | 1             | N         | FAC  |
| 11. |                                |               |           |      |
| 12. |                                |               |           |      |
| 13. |                                |               |           |      |
| 14. |                                |               |           |      |
| 15. |                                |               |           |      |
|     |                                | Total Cover = | <b>64</b> |      |

**Definitions of Vegetation Strata:**

- Tree** - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
- Sapling/Shrub** - Woody plants less than 3 in. DBH, regardless of height.
- Herb** - All herbaceous (non-woody) plants, regardless of size.
- Woody Vines** - All woody vines, regardless of height.

Woody Vine Stratum (Plot size: 30 ft. radius)

|    |  |               |          |  |
|----|--|---------------|----------|--|
| 1. |  |               |          |  |
| 2. |  |               |          |  |
| 3. |  |               |          |  |
| 5. |  |               |          |  |
| 4. |  |               |          |  |
|    |  | Total Cover = | <b>0</b> |  |

**Hydrophytic Vegetation Present?** Y

Remarks: **A shallow marsh community dominated by hybrid cattail and slim-stem reedgrass with many additional species present at low coverages. There are a few scattered willows and dogwoods. Hydrophytic vegetation is present.**

**Additional Remarks:**