# WETLAND DETERMINATION DATA FORM
## Great Plains Region

| | | |
|---|---|---|
| Project/Site: | L3R | Date: 06/24/14 |
| Applicant: | Enbridge | County: Marshall |
| Investigators: | BCS/BEH | Subregion (MLRA or LRR): MLRA 56 | State: MN |

Soil Unit: I15A  NWI Classification:

Landform: Depression  Local Relief: CL  Sample Point: w-156n46w33-b1

Slope (%): 0 - 2%  Latitude: 48.29680117  Longitude: -96.566090833  Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? *(If no, explain in remarks)*  ☒ Yes  ☐ No  Section:

Are Vegetation ☐ Soil ☐, or Hydrology ☐ significantly disturbed?  Are normal circumstances present?  Township:

Are Vegetation ☐ Soil ☐, or Hydrology ☐ naturally problematic?  ☒ Yes  ☐ No  Range:  Dir:

## SUMMARY OF FINDINGS

| | | |
|---|---|---|
| Hydrophytic Vegetation Present? | Yes | Hydric Soils Present? Yes |
| Wetland Hydrology Present? | Yes | **Is This Sampling Point Within A Wetland?  Yes** |

Remarks: The wetland is a wet meadow located in a roadside ditch dominated by tall scouring rush and water horsetail. The site is adjacent to a tilled soybean field.

## HYDROLOGY

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

**Primary:**
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☒ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B9 - Water-Stained Leaves

- ☐ B11 - Salt Crust
- ☐ B13 - Aquatic Fauna
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C2 - Dry Season Water Table
- ☐ C3 - Oxidized Rhizospheres on Living Roots (not tille
- ☐ C4 - Presence of Reduced Iron
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

**Secondary:**
- ☐ B6 - Surface Soil Cracks
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B10 - Drainage Patterns
- ☐ C3 - Oxidized Rhizospheres on Living Roots (tilled)
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D2 - Geomorphic Position
- ☒ D5 - FAC-Neutral Test
- ☐ D7 - Frost-Heaved Hummocks (LRR F)

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes | ☐ | Depth: _____ (in.) | |
| Water Table Present? | Yes | ☐ | Depth: _____ (in.) | **Wetland Hydrology Present?  Y** |
| Saturation Present? | Yes | ☒ | Depth: 0 (in.) | |

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

Remarks: Saturation was observed at soil surface. The water table was not observed due to digging restrictions within the roadside ditch.

## 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 Color (Moist) | % | Mottles Color (Moist) | % | Type | Location | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers (LRR F)
- ☐ A9 - 1 cm Muck (LRR FGH)
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Mucky Mineral
- ☐ S2 - 2.5 cm Mucky Peat or Peat (LRR G, H)
- ☐ S3 - 5 cm Mucky Peat or Peat (LRR F)
- ☐ S4 - Sandy Gleyed Matrix

- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Mucky Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions
- ☐ F16 - High Plains Depressions (MLRA 72, 73 of LRR H)

**Indicators for Problematic Soils[1]**
- ☐ A9 - 1 cm Muck (LRR I, J)
- ☐ A16 - Cost Prairie Redox (LRR  F, G, H)
- ☐ S7 - Dark Surface (LRR G)
- ☐ F16 - High Plains Depressions (LRR H, outisde MLRA 72, 73)
- ☐ F18 - Reduced Vertic
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☒ Other (Explain in Remarks)

[1]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | | | |
|---|---|---|---|
| **Restrictive Layer** | Type: _____ | Depth: _____ | **Hydric Soil Present?  Y** |

Remarks: Due to potential buried utilities in roadside ditches, the soil profile was not observed. The soils are assumed to be hydric based on the landscape position and dominance of hydrophytic vegetation.

# WETLAND DETERMINATION DATA FORM
## Great Plains Region

| Project/Site: | L3R | | Sample Point: | | w-156n46w33-b1 |
|---|---|---|---|---|---|

**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 = | 0 | | |

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

| | Species Name | % Cover | Dominant | Ind.Status |
|---|---|---|---|---|
| 1. | Salix petiolaris | 5 | Y | OBL |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | Total Cover = | 5 | | |

**Herb Stratum** (Plot size: 5 ft. radius)

| | Species Name | % Cover | Dominant | Ind.Status |
|---|---|---|---|---|
| 1. | Equisetum hyemale | 40 | Y | FACW |
| 2. | Equisetum fluviatile | 30 | Y | OBL |
| 3. | Agrostis gigantea | 15 | N | FACW |
| 4. | Poa pratensis | 10 | N | FACU |
| 5. | Vicia americana | 2 | N | FACU |
| 6 | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| | Total Cover = | 97 | | |

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

| | Species Name | % Cover | Dominant | Ind.Status |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 5. | | | | |
| 4. | | | | |
| | Total Cover = | 0 | | |

### Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:    3    (A)

Total Number of Dominant Species Across All Strata:    3    (B)

Percent of Dominant Species That Are OBL, FACW, or FAC:  **100.0%**  (A/B)

### Prevalence Index Worksheet

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL spp. | 35 | x 1 = | 35 |
| FACW spp. | 55 | x 2 = | 110 |
| FAC spp. | 0 | x 3 = | 0 |
| FACU spp. | 12 | x 4 = | 48 |
| UPL spp. | 0 | x 5 = | 0 |
| Total | 102 (A) | | 193 (B) |

Prevalence Index = B/A =    **1.892**

### Hydrophytic Vegetation Indicators:

| | |
|---|---|
| | Rapid Test for Hydrophytic Vegetation |
| X | Dominance Test is > 50% |
| X | 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.

### 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.

**Hydrophytic Vegetation Present?**    Y

Remarks:    The wetland is dominated by tall scouring rush and water horsetail.

**Additional Remarks:**