# WETLAND DETERMINATION DATA FORM
## Great Plains Region

| | | |
|---|---|---|
| Project/Site: | L3R | Date: 09/25/14 |
| Applicant: | Enbridge | County: Marshall |
| Investigators: | NTT/BEH    Subregion (MLRA or LRR): MLRA 56 | State: MN |
| Soil Unit: | I18A    NWI Classification: | |
| Landform: | Depression    Local Relief: CL | Sample Point: w-154n45w2-c1 |
| Slope (%): | 3 - 7%    Latitude: 48.190464    Longitude: -96.403951    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?    Township:
Are Vegetation ☐ Soil ☐, or Hydrology ☐ naturally problematic?    Are normal circumstances present? ☑ 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 scrub-shrub area that borders a seasonally-flooded basin that is located within a farmed soybean field. The vegetation is dominated by red-osier dogwood and a mix of sedges.

## 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 tilled)
- ☐ 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: _____ (in.) | |

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

Remarks: No primary hydrology indicators are present. Wetland hydrology is assumed based on landscape position and hydrophytic vegetation.

## 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 |
|---|---|---|---|---|---|---|---|---|
| 0-10 | Hue_10YR  2/1 | 100 | | | | | CL | |
| 10-20 | Hue_10YR  4/1 | 90 | Hue_10YR  6/8 | 10 | C | M | CL | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**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 - Coast Prairie Redox (LRR F, G, H)
- ☐ S7 - Dark Surface (LRR G)
- ☐ F16 - High Plains Depressions (LRR H, outside 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: Soils meet indicator A11.

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## Great Plains Region

| Project/Site: | L3R | Sample Point: | w-154n45w2-c1 |
|---|---|---|---|

**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. | Cornus alba | 50 | Y | FACW |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| | Total Cover = | 50 | | |

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

| | Species Name | % Cover | Dominant | Ind.Status |
|---|---|---|---|---|
| 1. | Carex tenera | 40 | Y | FACW |
| 2. | Carex pellita | 25 | Y | OBL |
| 3. | Phalaris arundinacea | 20 | Y | FACW |
| 4. | Anemone canadensis | 5 | N | FACW |
| 5. | Typha angustifolia | 5 | N | OBL |
| 6. | Eleocharis palustris | 5 | N | OBL |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| | Total Cover = | 100 | | |

### 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:    **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. | 35 | x 1 = | 35 |
| FACW spp. | 115 | x 2 = | 230 |
| FAC spp. | 0 | x 3 = | 0 |
| FACU spp. | 0 | x 4 = | 0 |
| UPL spp. | 0 | x 5 = | 0 |
| Total | 150 (A) | | 265 (B) |

Prevalence Index = B/A =   **1.767**

### 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 vegetation is dominated by red-osier dogwood with sedges and reed canary grass.

**Additional Remarks:**