# WETLAND DETERMINATION DATA FORM
## Great Plains Region

| | | | |
|---|---|---|---|
| Project/Site: | L3R | Date: | 08/06/14 |
| Applicant: | Enbridge | County: | Marshall |
| Investigators: | KRG/MRK | State: | MN |
| Subregion (MLRA or LRR): | MLRA 56 | | |
| Soil Unit: | I65A | NWI Classification: | PSS1B |
| Landform: | Depression | Local Relief: | CC |
| Slope (%): | 0 - 2% | Latitude: 48.237625 Longitude: -96.468635 Datum: | Sample Point: **w-155n45w20-a3** |
| 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
Wetland Hydrology Present? Yes
Hydric Soils Present? Yes
Is This Sampling Point Within A Wetland? **Yes**

Remarks: The wetland consists of a shallow marsh community located adjacent to an existing pipeline corridor. It is part of a larger complex which also includes a Shrub-Carr community and a wet meadow. Vegetation is dominated by cattails and reed canary grass.

## 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: 14 | (in.) |
| Saturation Present? | Yes | ☑ | Depth: 0 | (in.) |

**Wetland Hydrology Present?** Y

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

Remarks: Soils are saturated at the surface and algal mat is present. The water table was also observed at 14 inches.

## 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) | | Matrix % | Mottles Color (Moist) | | Mottles % | Mottles Type | Mottles Location | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-15 | Hue_10YR | 2/1 | 100 | | | | | | MMI | |
| 15-20 | Hue_10YR | 3/1 | 100 | | | | | | FS | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**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: Soil is dark mucky clay loam underlain by a slightly lighter fine sand. Soil meets hydric soil indicator F1 - Loamy Mucky Mineral.

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Project/Site: L3R | Sample Point: **w-155n45w20-a3**

**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)

| | | | | |
|---|---|---|---|---|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

Total Cover = 0

Herb Stratum (Plot size: 5 ft. radius)

| | | | | |
|---|---|---|---|---|
| 1. | *Typha angustifolia* | 40 | Y | OBL |
| 2. | *Phalaris arundinacea* | 30 | Y | FACW |
| 3. | *Eleocharis palustris* | 30 | Y | OBL |
| 4. | *Scirpus atrovirens* | 10 | N | OBL |
| 5. | *Cicuta maculata* | 5 | N | OBL |
| 6 | *Mentha arvensis* | 5 | N | FACW |
| 7. | *Persicaria amphibia* | 5 | N | OBL |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |

Total Cover = 125

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

| | | | | |
|---|---|---|---|---|
| 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. | 90 | x 1 = | 90 |
| FACW spp. | 35 | x 2 = | 70 |
| FAC spp. | 0 | x 3 = | 0 |
| FACU spp. | 0 | x 4 = | 0 |
| UPL spp. | 0 | x 5 = | 0 |
| Total | 125 (A) | | 160 (B) |

Prevalence Index = B/A = ***1.280***

### 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: Vegetation is dominated by narrow-leaf cattail, reed canary grass, and common spike-rush.

**Additional Remarks:**