

**WETLAND DETERMINATION DATA FORM**  
Great Plains Region

|  |            |                           |   |               |   |
|--|------------|---------------------------|---|---------------|---|
| Project/Site:  | L3R        | Subregion (MLRA or LRR):  | MLRA 56   | Date:         | 10/08/14  |
| Applicant:   | Enbridge   | County:                   | Pennington  | State:        | MN  |
| Investigators:   | NTT/BEH    | NWJ Classification: _____ |   |               |   |
| Soil Unit:   | I59A       | Local Relief:             | CC  | Sample Point: | w-152n43w24-b2  |
| Landform:  | Depression | Latitude:                 | 47.964701   | Longitude:    | -96.107031  |
| Slope (%):   | 3 - 7%     | Datum:                    | _____   |               |   |
| 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 |               |   |
| Section:   |            |                           |   |               | _____   |
| Township:  |            |                           |   |               | _____   |
| Range:   |            |                           |   |               | 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: <b>The wetland is a hardwood swamp that runs along the edge of a farmed field. The wetland is dominated by aspen trees. The groundlayer is made up of reed canary grass, woolly sedge, and dwarf red raspberry.</b> |     |   |            |

**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) |
|---|---|--|

|  |  |
|--|--|
| <b>Field Observations:</b>   | <b>Wetland Hydrology Present?</b> <u>Y</u> |
| Surface Water Present? Yes <input type="checkbox"/> Depth: _____ (in.) |  |
| 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: **No primary wetland hydrology indicators present. Wetland hydrology is assumed based on hydrophytic vegetation present and landscape position.**

**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                               |
| 0-8         | Hue_10YR      | 2/1 | 100 |               |     |      |         | LS      |  |
| 8-20        | Hue_10YR      | 5/2 | 90  | Hue_10YR      | 5/8 | 10   | C       | M       | FSL<br>gravel present throughout layer |
|             |               |     |     |               |     |      |         |         |  |
|             |               |     |     |               |     |      |         |         |  |

**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 checked="" 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 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 meet indicator A11.**

**WETLAND DETERMINATION DATA FORM**  
Great Plains Region

Project/Site: **L3R** Sample Point: **w-152n43w24-b2**

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

Tree Stratum (Plot size: 30 ft. radius)

|     | Species Name               | % Cover       | Dominant  | Ind. Status |
|-----|----------------------------|---------------|-----------|-------------|
| 1.  | <i>Populus tremuloides</i> | 30            | Y         | FAC         |
| 2.  | <i>Populus balsamifera</i> | 15            | Y         | FACW        |
| 3.  | <i>Fraxinus nigra</i>      | 5             | N         | FACW        |
| 4.  | <i>Quercus macrocarpa</i>  | 5             | N         | FACU        |
| 5.  |                            |               |           |             |
| 6.  |                            |               |           |             |
| 7.  |                            |               |           |             |
| 8.  |                            |               |           |             |
| 9.  |                            |               |           |             |
| 10. |                            |               |           |             |
|     |                            | Total Cover = | <b>55</b> |             |

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: **6** (A)

Total Number of Dominant Species Across All Strata: **6** (B)

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

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

|     |                            |               |           |      |
|-----|----------------------------|---------------|-----------|------|
| 1.  | <i>Populus balsamifera</i> | 10            | Y         | FACW |
| 2.  | <i>Cornus racemosa</i>     | 5             | Y         | FAC  |
| 3.  |                            |               |           |      |
| 4.  |                            |               |           |      |
| 5.  |                            |               |           |      |
| 6.  |                            |               |           |      |
| 7.  |                            |               |           |      |
| 8.  |                            |               |           |      |
| 9.  |                            |               |           |      |
| 10. |                            |               |           |      |
|     |                            | Total Cover = | <b>15</b> |      |

**Prevalence Index Worksheet**

| Total % Cover of:        | Multiply by: |                |
|--------------------------|--------------|----------------|
| OBL spp. <b>10</b>       | x 1 =        | <b>10</b>      |
| FACW spp. <b>115</b>     | x 2 =        | <b>230</b>     |
| FAC spp. <b>35</b>       | x 3 =        | <b>105</b>     |
| FACU spp. <b>5</b>       | x 4 =        | <b>20</b>      |
| UPL spp. <b>0</b>        | x 5 =        | <b>0</b>       |
| Total <b>165</b> (A)     |              | <b>365</b> (B) |
| Prevalence Index = B/A = |              | <b>2.212</b>   |

Herb Stratum (Plot size: 5 ft. radius)

|     |                              |               |           |      |
|-----|------------------------------|---------------|-----------|------|
| 1.  | <i>Phalaris arundinacea</i>  | 50            | Y         | FACW |
| 2.  | <i>Calamagrostis stricta</i> | 25            | Y         | FACW |
| 3.  | <i>Carex pellita</i>         | 10            | N         | OBL  |
| 4.  | <i>Rubus pubescens</i>       | 10            | N         | FACW |
| 5.  |                              |               |           |      |
| 6.  |                              |               |           |      |
| 7.  |                              |               |           |      |
| 8.  |                              |               |           |      |
| 9.  |                              |               |           |      |
| 10. |                              |               |           |      |
| 11. |                              |               |           |      |
| 12. |                              |               |           |      |
| 13. |                              |               |           |      |
| 14. |                              |               |           |      |
| 15. |                              |               |           |      |
|     |                              | Total Cover = | <b>95</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.

**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: **The wetland vegetation is dominated by quaking aspen and balsam poplar in the tree stratum and reed canary grass throughout the ground layer.**

**Additional Remarks:**