

**WETLAND DETERMINATION DATA FORM**  
Great Plains Region

Project/Site:	L3R	Date:	10/09/14
Applicant:	Enbridge	County:	Polk
Investigators:	JLS/SAM	State:	MN
Soil Unit:	1879	Subregion (MLRA or LRR):	MLRA 56
Landform:	Rise	NWI Classification:	
Slope (%):	0 - 2%	Local Relief:	VV
	Latitude: 47.7798964	Longitude: -95.7045850	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?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?			

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? No      Hydric Soils Present? Yes No

Wetland Hydrology Present? No      **Is This Sampling Point Within A Wetland? No**

Remarks: **The sample point is located on a slight rise near an existing pipeline within a large emergent wetland. The area was historically wetland, but was effectively drained until tiles broke during pipe installation. The pipeline restoration partially restored the original wetland hydrology, but not in this particular area. As a result, the soils in this area are drained peat.**

**HYDROLOGY**

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

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

Surface Water Present? Yes <input type="checkbox"/>	Depth: _____ (in.)	<b>Wetland Hydrology Present? <u>N</u></b>
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 or secondary indicators of wetland hydrology were observed.**

**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		
0-12	Hue 10YR	2/1	100					MP	
12-18	Hue 10YR	4/1	100					MP	

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

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

Restrictive Layer Type: \_\_\_\_\_ Depth: \_\_\_\_\_      **Hydric Soil Present? Y**

Remarks: **Relict hydric soils are present. The site was historically wetland, but has been drained. The soil is a dark mucky peat over a lighter mucky peat with abundant calcium carbonate. A shell was observed in the soil sample.**

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Great Plains Region

Project/Site: **L3R** Sample Point: **u-150n39w19-b3**

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

Tree Stratum (Plot size: 30 ft. radius)

1.	Species Name	% Cover	Dominant	Ind.Status
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Total Cover = 0

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

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

**Prevalence Index Worksheet**

Total % Cover of:	Multiply by:	
OBL spp. <u>0</u>	x 1 =	<u>0</u>
FACW spp. <u>10</u>	x 2 =	<u>20</u>
FAC spp. <u>10</u>	x 3 =	<u>30</u>
FACU spp. <u>65</u>	x 4 =	<u>260</u>
UPL spp. <u>45</u>	x 5 =	<u>225</u>
Total <u>130</u> (A)		<u>535</u> (B)

Prevalence Index = B/A = 4.115

Total Cover = 0

Herb Stratum (Plot size: 5 ft. radius)

1.	<i>Bromus inermis</i>	45	Y	UPL
2.	<i>Poa pratensis</i>	45	Y	FACU
3.	<i>Helianthus giganteus</i>	10	N	FAC
4.	<i>Euthamia graminifolia</i>	10	N	FACW
5.	<i>Elymus trachycaulus</i>	10	N	FACU
6.	<i>Cirsium arvense</i>	5	N	FACU
7.	<i>Solidago canadensis</i>	5	N	FACU
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

**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.

Total Cover = 130

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

1.				
2.				
3.				
4.				

**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.

Total Cover = 0

**Hydrophytic Vegetation Present?**   N  

Remarks: **The site is dominated by smooth brome and Kentucky bluegrass. The overall vegetation is composed of a limited number of species; this includes rhizomatous, shallow-rooted composites which prefer wetlands, but thrive in drained peat soils.**

**Additional Remarks:**