

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Subregion (MLRA or LRR):	MLRA 56	Date:	09/18/14
Applicant:	Enbridge	County:	Pennington	State:	MN
Investigators:	MRK/OTG	NWI Classification:		Sample Point:	w-154n44w33-n1
Soil Unit:	I75A	Local Relief:	CL	Section:	
Landform:	Depression	Latitude:	48.11489067	Longitude:	-96.3245473333
Slope (%):	8 - 15%	Datum:		Township:	
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?		Range: Dir:	
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			

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 sample point is within a hardwood swamp downslope from a recently tilled field.

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 checked="" 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 checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" 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.)	Wetland Hydrology Present? <u>Y</u>
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: The wetland is located in a depression. Snail shells 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					SCL	
12-19	Hue_5Y	6/2	85	Hue_10R	5/8	5	C	M	S
				Hue_10YR	6/8	10	C	M	S
									gravel mixed in

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

<input 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 checked="" 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>Indicators for Problematic Soils¹</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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¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer Type: _____	Depth: _____	Hydric Soil Present? <u>Y</u>
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Remarks: Soil is a layer of dark sandy clay loam underlain by a layer of lighter sand with prominent redox concentrations. Soil meets hydric indicator A12- Thick Dark Surface.

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Project/Site: **L3R** Sample Point: **w-154n44w33-n1**

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>Ulmus americana</i>	20	Y	FAC
3.	<i>Populus balsamifera</i>	10	N	FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		Total Cover =	60	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **5** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

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

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

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Cornus alba</i>	35	Y	FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		Total Cover =	35	

Prevalence Index Worksheet

Total % Cover of:	Multiply by:	
OBL spp. 35	x 1 =	35
FACW spp. 90	x 2 =	180
FAC spp. 75	x 3 =	225
FACU spp. 0	x 4 =	0
UPL spp. 0	x 5 =	0
Total 200 (A)		440 (B)
Prevalence Index = B/A =		2.200

Herb Stratum (Plot size: 5 ft. radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Calamagrostis canadensis</i>	45	Y	FACW
2.	<i>Carex pellita</i>	30	Y	OBL
3.	<i>Petasites frigidus</i>	15	N	FAC
4.	<i>Thalictrum dasycarpum</i>	10	N	FAC
5.	<i>Carex atherodes</i>	5	N	OBL
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
		Total Cover =	105	

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 =	0	

Hydrophytic Vegetation Present? Y

Remarks: **The canopy is dominated by quaking aspen and American elm. The understory is predominantly red osier dogwood. Canada blue joint and woolly sedge dominate the ground cover.**

Additional Remarks: