

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Subregion (MLRA or LRR):	MLRA 56	Date:	09/26/14
Applicant:	Enbridge	County:	Pennington	State:	MN
Investigators:	RAJ/BJC	NWI Classification:		Sample Point:	w-153n44w3-a3
Soil Unit:	I69A	Local Relief:	CC	Latitude:	48.105333
Landform:	Dip	Longitude:	-96.290351	Datum:	
Slope (%):	0 - 2%	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?			Section:		
			Township:		
			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: **A hardwood swamp dominated by quaking aspen, wetland shrubs, and wetland graminoids. All parameters of wetland conditions are present. The sample point is near the edge of the community; toward the center, the shrub layer is thinner and wetland graminoids are more abundant.**

HYDROLOGY

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

<u>Primary:</u> <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)	<u>Secondary:</u> <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.) Water Table Present? Yes <input type="checkbox"/> Depth: _____ (in.) Saturation Present? Yes <input type="checkbox"/> Depth: _____ (in.)	Wetland Hydrology Present? <u>Y</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Wetland hydrology conditions are met.**

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		
0-6	Hue_10YR	2/1	100					SL	
6-10	Hue_10YR	5/2	90	Hue_10YR	6/6	10	C	M	SL
10-18	Hue_2.5Y	7/2	60	Hue_10YR	6/8	40	C	M	S with gravel and cobble

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 checked="" 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)	Indicators for Problematic Soils¹ <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: **The soil has a 6-inch dark surface of sandy loam over a 4-inch depleted layer of sandy loam with abundant redox concentrations. Below 10 inches is depleted sand with redox and abundant gravel and cobble. The profile meets indicator A11, Depleted Below Dark Surface.**

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Great Plains Region

Project/Site: **L3R** Sample Point: **w-153n44w3-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.	<i>Populus tremuloides</i>	50	Y	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		Total Cover =	50	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **7** (A)
 Total Number of Dominant Species Across All Strata: **7** (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.	45	x 1 =	45
FACW spp.	105	x 2 =	210
FAC spp.	80	x 3 =	240
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total		270 (A)	655 (B)
Prevalence Index = B/A = 2.426			

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

1.	<i>Salix bebbiana</i>	30	Y	FACW
2.	<i>Populus tremuloides</i>	30	Y	FAC
3.	<i>Betula pumila</i>	25	Y	OBL
4.	<i>Rhamnus cathartica</i>	20	N	FACU
5.	<i>Viburnum lentago</i>	10	N	FACU
6.	<i>Cornus alba</i>	5	N	FACW
7.	<i>Toxicodendron rydbergii</i>	5	N	FACU
8.				
9.				
10.				
		Total Cover =	125	

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.

Herb Stratum (Plot size: 5 ft. radius)

1.	<i>Phalaris arundinacea</i>	40	Y	FACW
2.	<i>Calamagrostis canadensis</i>	20	Y	FACW
3.	<i>Carex pellita</i>	20	Y	OBL
4.	<i>Anemone canadensis</i>	10	N	FACW
5.	<i>Poa pratensis</i>	5	N	FACU
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
		Total Cover =	95	

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: **A forested wetland dominated by quaking aspen and a mix of shrubs with an herbaceous layer dominated by wetland graminoids. Hydrophytic vegetation is present.**

Additional Remarks: