

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Subregion (MLRA or LRR):	MLRA 56	Date:	08/23/14
Applicant:	Enbridge	County:	Pennington	State:	MN
Investigators:	BEH/RAJ				
Soil Unit:	IGp	NWI Classification:			
Landform:	Depression	Local Relief:	CC	Sample Point:	w-154n44w18-f2
Slope (%):	0 - 2%	Latitude:	48.15583745	Longitude:	-96.35824919
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		

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 sample point is located in a narrow strip of willow-dominated Shrub-Carr adjacent to a wheat field and a marsh expanse.**

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 checked="" type="checkbox"/> A2 - High Water Table <input checked="" 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 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 checked="" type="checkbox"/>	Depth: <u>7</u> (in.)	
Saturation Present? Yes <input checked="" type="checkbox"/>	Depth: <u>5</u> (in.)	

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

Remarks: **Saturation is present at five inches, and the water table is present at seven 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			Mottles			Texture	Remarks
	Color (Moist)	%		Color (Moist)	%	Type		
0-2	Hue_10YR	2/1	100					MP
2-9	Hue_10YR	2/1	100					MMI
9-21	Hue_10YR	3/1	100					S

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 type="checkbox"/> A12 - Thick Dark Surface <input checked="" type="checkbox"/> S1 - Sandy Mucky Mineral <input type="checkbox"/> S2 - 2.5 cm Mucky Peat or Peat (LRR G, H) <input checked="" 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 thin layer of mucky peat over sandy mucky mineral, which is underlain by dark brown sand. The profile meets hydric soil indicators S1- Sandy Mucky Mineral and S3- 5cm Mucky Peat.**

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site: **L3R** Sample Point: **w-154n44w18-f2**

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>Salix discolor</i>	5	Y	FACW
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		Total Cover =	5	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
 Total Number of Dominant Species Across All Strata: 4 (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>Salix petiolaris</i>	55	Y	OBL
2.	<i>Salix bebbiana</i>	10	N	FACW
3.	<i>Salix discolor</i>	10	N	FACW
4.	<i>Spiraea alba</i>	5	N	FACW
5.	<i>Rosa blanda</i>	5	N	FACU
6.	<i>Cornus racemosa</i>	1	N	FAC
7.				
8.				
9.				
10.				
		Total Cover =	86	

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	<u>65</u>	x 1 =	<u>65</u>
FACW spp.	<u>100</u>	x 2 =	<u>200</u>
FAC spp.	<u>2</u>	x 3 =	<u>6</u>
FACU spp.	<u>5</u>	x 4 =	<u>20</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>
Total		<u>172</u> (A)	<u>291</u> (B)
Prevalence Index = B/A =		<u>1.692</u>	

Herb Stratum (Plot size: 5 ft. radius)

1.	<i>Phalaris arundinacea</i>	70	Y	FACW
2.	<i>Campanula aparinoides</i>	5	N	OBL
3.	<i>Carex aquatilis</i>	5	N	OBL
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
		Total Cover =	80	

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.	<i>Vitis riparia</i>	1	Y	FAC
2.				
3.				
5.				
4.				
		Total Cover =	1	

Hydrophytic Vegetation Present? Y

Remarks: **Site is dominated by a tree-size pussy willow, meadow willow shrubs, and reed canary grass.**

Additional Remarks: