WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Date:	08/06/14
Applicant:	Enbridge	County:	Marshall
Investigators:	KRG/MRK	Subregion (MLRA or LRR): MLRA 56	State: MN
Soil Unit:	I55A	NWI Classification: PSS1B	
Landform:	Dip	Local Relief: CV	Sample Point: **w-155n45w20-a1**
Slope (%): 0 - 2%	Latitude: 48.239041	Longitude: -96.471344	Datum:

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No   Section:

Are Vegetation ☐ Soil ☐, or Hydrology ☐ significantly disturbed?   Township:
Are Vegetation ☐ Soil ☐, or Hydrology ☐ naturally problematic?   Are normal circumstances present? ☑ Yes ☐ No   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: The wetland consists of a Shrub-Carr community dominated by willows and quaking aspen saplings. It is part of a larger complex which also includes a shallow marsh and wet meadow.

HYDROLOGY

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

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B9 - Water-Stained Leaves

- ☐ B11 - Salt Crust
- ☐ B13 - Aquatic Fauna
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C2 - Dry Season Water Table
- ☐ C3 - Oxidized Rhizospheres on Living Roots (not tilled)
- ☐ C4 - Presence of Reduced Iron
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ B8 - Sparsely Vegetated Concave Surface
- ☐ B10 - Drainage Patterns
- ☐ C3 - Oxidized Rhizospheres on Living Roots (tilled)
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☑ D2 - Geomorphic Position
- ☑ D5 - FAC-Neutral Test
- ☐ D7 - Frost-Heaved Hummocks (LRR F)

Field Observations:

Surface Water Present?	Yes	☐	Depth: _____ (in.)	
Water Table Present?	Yes	☐	Depth: _____ (in.)	**Wetland Hydrology Present?** Y
Saturation Present?	Yes	☐	Depth: _____ (in.)	

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

Remarks: Hydrology is indicated by the dominance of hydrophytic vegetation and geomorphic 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 Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture	Remarks
0-5	Hue_10YR 2/1	100					SICL	
5-18	Hue_10YR 6/2	100					FS	

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

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers (LRR F)
- ☐ A9 - 1 cm Muck (LRR FGH)
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Mucky Mineral
- ☐ S2 - 2.5 cm Mucky Peat or Peat (LRR G, H)
- ☐ S3 - 5 cm Mucky Peat or Peat (LRR F)
- ☐ S4 - Sandy Gleyed Matrix

- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Mucky Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions
- ☐ F16 - High Plains Depressions (MLRA 72, 73 of LRR H)

Indicators for Problematic Soils[1]
- ☐ A9 - 1 cm Muck (LRR I, J)
- ☐ A16 - Coast Prairie Redox (LRR F, G, H)
- ☐ S7 - Dark Surface (LRR G)
- ☐ F16 - High Plains Depressions (LRR H, outside MLRA 72, 73)
- ☐ F18 - Reduced Vertic
- ☐ TF2 - Red Parent Material
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer	Type: _____	Depth: _____	**Hydric Soil Present?** Y

Remarks: Soil consists of a dark silty clay loam over depleted fine sand. Soil meets indicator A11- Depleted Below Dark Surface.

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Project/Site:	L3R	Sample Point:	w-155n45w20-a1

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

Tree Stratum (Plot size: 30 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover =	0		

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

	Species Name	% Cover	Dominant	Ind.Status
1.	Salix discolor	35	Y	FACW
2.	Populus tremuloides	25	Y	FAC
3.	Populus balsamifera	10	N	FACW
4.	Salix petiolaris	5	N	OBL
5.	Salix eriocephala	5	N	FACW
6.	Cornus alba	5	N	FACW
7.	Rosa blanda	5	N	FACU
8.				
9.				
10.				
	Total Cover =	90		

Herb Stratum (Plot size: 5 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Rubus idaeus	40	Y	FACU
2.	Rubus pubescens	25	Y	FACW
3.	Eutrochium maculatum	5	N	OBL
4.	Solidago gigantea	5	N	FAC
5.				
6				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total Cover =	75		

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

	Species Name	% Cover	Dominant	Ind.Status
1.				
2.				
3.				
5.				
4.				
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3   (A)

Total Number of Dominant Species Across All Strata: 4   (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **75.0%**   (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	10	x 1 =	10
FACW spp.	80	x 2 =	160
FAC spp.	30	x 3 =	90
FACU spp.	45	x 4 =	180
UPL spp.	0	x 5 =	0
Total	165 (A)		440 (B)

Prevalence Index = B/A =   **2.667**

Hydrophytic Vegetation Indicators:

	Rapid Test for Hydrophytic Vegetation
X	Dominance Test is > 50%
X	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.

Hydrophytic Vegetation Present?   Y

Remarks: Vegetation is dominated by willows and quaking aspen saplings in a dense shrub layer with raspberries beneath.

Additional Remarks: