WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site: **L3R**		Date: **09/25/14**
Applicant: **Enbridge**		County: **Marshall**
Investigators: **NTT/BEH**	Subregion (MLRA or LRR): **MLRA 56**	State: **MN**
Soil Unit: **I707A**	NWI Classification:	
Landform: **Depression**	Local Relief: **CC**	Sample Point: **w-154n45w11-c1**
Slope (%): **0 - 2%**	Latitude: **48.177221** Longitude: **-96.390897** 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 is a seasonally-flooded basin located adjacent to a roadside and extending into a farmed soybean field with little vegetation growing within the wetland. The only vegetation throughout the wetland is sparse patches of barnyard grass an bog yellowcress. Most vegetation has been killed off by herbicide.

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: No primary hydrology indicators are present. Wetland hydrology is assumed based on soil cracking and landscape 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
0-12	Hue_10YR 2/1	100					CL	
12-20	Hue_10YR 5/1	60	Hue_10YR 5/8	20	C	M	C	
			Hue_10YR 2/1	20	C	M	C	Mixed matrix.

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: Soils meet indicator A12.

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Project/Site:	L3R		Sample Point:	w-154n45w11-c1

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)

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

Herb Stratum (Plot size: 5 ft. radius)

		% Cover	Dominant	Ind.Status
1.	Echinochloa crus-galli	10	Y	FAC
2.	Rorippa palustris	5	Y	OBL
3.				
4.				
5.				
6				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total Cover =	15		

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

		% 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: 2   (A)

Total Number of Dominant Species Across All Strata: 2   (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.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	15 (A)		35 (B)

Prevalence Index = B/A =   **2.333**

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: The majority of the ground layer is bare soil besides very sparse amounts of herbicide-treated bog yellowcress and barnyard grass.

Additional Remarks: