WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Date:	10/01/15
Applicant:	Enbridge	County:	Pennington
Investigators:	RAJ/BJC	State:	MN
Subregion (MLRA or LRR):	MLRA 56		
Soil Unit:	I32A	NWI Classification:	
Landform:	Depression	Local Relief:	LC
Slope (%):	0 - 2%	Latitude: 48.067699 Longitude: -96.241720 Datum:	Sample Point: **w-153n44w13-c1**
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?	Are normal circumstances present?		Township:
Are Vegetation ☑ Soil ☐ or Hydrology ☐ naturally problematic?	☐ Yes ☑ No		Range: Dir:

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes
Wetland Hydrology Present? Yes
Hydric Soils Present? Yes
Is This Sampling Point Within A Wetland? **Yes**

Remarks: A seasonally flooded swale dominated by annual plants within a cultivated field planted to soybeans. The vegetation is disturbed from herbicide use and tillage. The soils are disturbed from tillage. The soil and hydrology parameters are met and the vegetation is problematic.

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 tille
- ☐ 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.)
Saturation Present? Yes ☐ Depth: _____ (in.)

Wetland Hydrology Present? Y

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

Remarks: The wetland is in an obvious swale and has a cracked soil surface with a thin algal crust. Drift deposits of crop suggest a high water level for some period. The area was planted through this year but no soybeans are growing in the wetland area and those near the edge are stunted.

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)	Matrix %	Mottles Color (Moist)	Mottles %	Type	Location	Texture	Remarks
0-7	Hue_10YR 2/1	100					C	
7-18	Hue_2.5Y 5/1	80	Hue_10YR 4/6	20	C	M	C	

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: The soil is a clay with a 7-inch dark surface over depleted clay with redox concentrations. Hydric soil indicators A11 and F3 are met.

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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)

1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Total Cover = 0

Herb Stratum (Plot size: 5 ft. radius)

1.	*Eragrostis pectinacea*	30	Y	FAC
2.	*Eragrostis cilianensis*	20	Y	FACU
3.	*Echinochloa crus-galli*	5	N	FAC
4.	*Rorippa palustris*	5	N	OBL
5.	*Artemisia biennis*	5	N	FACU
6	*Alisma triviale*	1	N	OBL
7.	*Setaria pumila*	1	N	FACU
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Total Cover = 67

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

1.				
2.				
3.				
5.				
4.				

Total Cover = 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	6	x 1 =	6
FACW spp.	0	x 2 =	0
FAC spp.	35	x 3 =	105
FACU spp.	26	x 4 =	104
UPL spp.	0	x 5 =	0
Total	67 (A)		215 (B)

Prevalence Index = B/A = ***3.209***

Hydrophytic Vegetation Indicators:

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is > 50%
_____ Prevalence Index is ≤ 3.0 *
_____ Morphological Adaptations (Explain) *
X 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: An annual, weedy community in a seasonally flooded swale within a cultivated field planted to soybeans. The area was planted through this year but no soybeans are growing in the wetland area. Vegetation is disturbed from tillage and herbicide use. Though vegetation does not meet the dominance test or prevalence index, there are scattered wetland obligates (yellow cress and water plantain) throughout the swale.

Additional Remarks: