WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R		Date: 06/30/14
Applicant:	Enbridge		County: Kittson
Investigators:	EAB/RAJ	Subregion (MLRA or LRR): MLRA 56	State: MN
Soil Unit:	I132A	NWI Classification: PUBGx	
Landform:	Depression	Local Relief: CC	Sample Point: **w-159n49w26-b1**
Slope (%):	0 - 2%	Latitude: 48.571722 Longitude: -96.935047 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 ☐ignificantly disturbed?		Are normal circumstances present?	Township:
Are Vegetation ☐ Soil ☐ or Hydrology ☐aturally problematic?		☑ 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 shallow marsh dominated by cattail surrounding a pond of shallow, open water. There are clusters of willows on the fringe of the marsh, east of the survey corridor. An electricity substation is directly adjacent to the wetland.

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 till
- ☐ 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: 6	(in.)
Saturation Present?	Yes	☑	Depth: 0	(in.)

Wetland Hydrology Present? Y

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

Remarks: Surface water is present throughout most of the wetland, but not at the sample point. Recent and ongoing rains have elevated the water table and saturation levels.

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
0-3	Hue_2.5Y	2.5/1	100						C	
3-5	Hue_2.5Y	2.5/1	60	Hue_2.5Y	4/1	30	D	M	C	
3-5				Hue_2.5Y	4/4	10	C	M	C	
5-11	Hue_10YR	2/1	60	Hue_2.5Y	5/1	38	D	M	C	
5-11				Hue_2.5Y	4/4	2	C	M	C	
11-18	Hue_2.5Y	2.5/1	98	Hue_2.5Y	3/3	2	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 - Cost Prairie Redox (LRR F, G, H)
- ☐ S7 - Dark Surface (LRR G)
- ☐ F16 - High Plains Depressions (LRR H, outisde 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: Redox features are present throughout most of the profile.

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Project/Site: L3R | Sample Point: **w-159n49w26-b1**

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.	*Lemna trisulca*	30	Y	OBL
2.	*Typha angustifolia*	30	Y	OBL
3.	*Poa pratensis*	30	Y	FACU
4.	*Eleocharis palustris*	10	N	OBL
5.	*Mentha arvensis*	10	N	FACW
6	*Rumex stenophyllus*	5	N	FACW
7.	*Potamogeton gramineus*	5	N	OBL
8.	*Symphyotrichum lanceolatum*	5	N	FACW
9.	*Elymus repens*	5	N	FACU
10.	*Alisma triviale*	5	N	OBL
11.				
12.				
13.				
14.				
15.				
	Total Cover =	135		

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: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***66.7%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	20	x 2 =	40
FAC spp.	0	x 3 =	0
FACU spp.	35	x 4 =	140
UPL spp.	0	x 5 =	0
Total	135 (A)		260 (B)

Prevalence Index = B/A = ***1.926***

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 sample point is dominated by narrow-leaf cattail and duckweed. Some Kentucky bluegrass is creeping in from the adjacent upland.

Additional Remarks: