WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Date:	09/12/14
Applicant:	Enbridge	County:	Pennington
Investigators:		State:	MN
Subregion (MLRA or LRR):	MLRA 56		
Soil Unit:	I70A	NWI Classification:	
Landform:	Depression	Local Relief: LC	
Slope (%):	0 - 2%	Latitude: 48.131084 Longitude: -96.370608 Datum:	Sample Point: **w-154n45w25-d1**
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: An emergent wetland of mixed shallow marsh, sedge meadow, and wet meadow community types in a mosaic. West of the sample point the wetland is predominantly shallow marsh dominated by cattail, to the east it is mostly wet meadow dominated by arctic rush, prairie cordgrass, and northern reedgrass. All parameters of wetland conditions are met.

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: 0	(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: The soil is saturated at the surface throughout the wetland area in the ditch. Indicators of wetland hydrology are present.

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 %	Mottles Type	Mottles Location	Texture	Remarks

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 soils cannot be examined due to the position of the wetland in a roadside ditch. Based on vegetation and hydrology, hydric soils can be assumed. Without digging, at least 1 inch of muck is apparent at the surface.

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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.	*Carex utriculata*	40	Y	OBL
2.	*Typha X glauca*	15	Y	OBL
3.	*Schoenoplectus acutus*	15	Y	OBL
4.	*Carex pellita*	5	N	OBL
5.	*Juncus arcticus*	5	N	FACW
6	*Calamagrostis stricta*	5	N	FACW
7.	*Spartina pectinata*	5	N	FACW
8.	*Lycopus asper*	3	N	OBL
9.	*Phalaris arundinacea*	1	N	FACW
10.				
11.				
12.				
13.				
14.				
15.				

Total Cover = 94

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: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (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.	78	x 1 =	78
FACW spp.	16	x 2 =	32
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	94 (A)		110 (B)

Prevalence Index = B/A = ***1.170***

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 at the edge of a shallow marsh and a sedge meadow. The shallow mash is dominated by hybrid cattail and hardstem bulrush and the sedge meadow is dominated by yellow lake sedge. To the east the sedge meadow gradually grades into a wet meadow where cordgrass and northern reedgrass become dominant.

Additional Remarks: