WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Date:	09/18/14
Applicant:	Enbridge	County:	Pennington
Investigators:	MRK/OTG	Subregion (MLRA or LRR): MLRA 56	State: MN
Soil Unit:	I27A	NWI Classification:	
Landform:	Side slope	Local Relief: LL	Sample Point: u-154n44w33-o1
Slope (%): 3 - 7%	Latitude: 48.11478617	Longitude: -96.3239445000	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?   No   Hydric Soils Present? No

Wetland Hydrology Present?   No   **Is This Sampling Point Within A Wetland?   No**

Remarks: The upland sample point is a forested area located upslope from a hardwood swamp.

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.)	**Wetland Hydrology Present? N**
Saturation Present?	Yes ☐	Depth: _____	(in.)	

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

Remarks: No primary or secondary hydrological indicators were observed.

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			Mottles				Texture	Remarks
	Color (Moist)	%		Color (Moist)	%	Type	Location		
0-4	Hue_10YR	2/2	100					L	
4-18	Hue_10YR	2/1	100					CL	
18-21	Hue_2.5Y	5/2	100					SC	

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?   N**

Remarks: Soil is a layer of dark loam underlain by a layer of dark clay loam. The bottom layer is a light sandy clay, and soil does not meet any hydric indicators.

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Project/Site:	L3R	Sample Point:	u-154n44w33-o1

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

Tree Stratum (Plot size: 30 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Populus tremuloides	60	Y	FAC
2.	Ulmus americana	25	Y	FAC
3.	Quercus macrocarpa	5	N	FACU
4.	Acer negundo	5	N	FAC
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover =	95		

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

	Species Name	% Cover	Dominant	Ind.Status
1.	Cornus racemosa	30	Y	FAC
2.	Viburnum lentago	15	Y	FACU
3.	Quercus macrocarpa	5	N	FACU
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover =	50		

Herb Stratum (Plot size: 5 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Carex pensylvanica	40	Y	NI
2.	Fragaria virginiana	20	Y	FACU
3.	Parthenocissus vitacea	15	N	FAC
4.	Amphicarpaea bracteata	15	N	FACU
5.				
6				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total Cover =	90		

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: **6** (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.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	135	x 3 =	405
FACU spp.	60	x 4 =	240
UPL spp.	40	x 5 =	200
Total	235 (A)		845 (B)

Prevalence Index = B/A = **3.596**

Hydrophytic Vegetation Indicators:

_____ Rapid Test for Hydrophytic Vegetation
_____ Dominance Test is > 50%
_____ 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?　　N

Remarks:　The upland canopy is dominated by quaking aspen and American elm. The shrub layer is predominantly grey dogwood and nannyberry. Pennsylvania sedge and Virginia strawberry dominate the ground cover.

Additional Remarks: