WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R		Date:	08/25/14
Applicant:	Enbridge		County:	Pennington
Investigators:	BEH/RAJ	Subregion (MLRA or LRR): MLRA 56	State:	MN
Soil Unit:	I75A	NWI Classification:		
Landform:	Side slope	Local Relief: LL	Sample Point:	u-154n44w18-g1
Slope (%):	8 - 15%	Latitude: 48.15279039 Longitude: -96.3534365 Datum:		

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)   ☑ Yes   ☐ No

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 located in a quaking aspen forest with dense shrub and ground cover. The site is upslope from a forested 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 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?**	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 Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture	Remarks
0-13	Hue_10YR 2/1	100					SIL	
13-19	Hue_10YR 3/1	99	Hue_10YR 5/8	1	C	M	SL	Redox only in transition into lower layer.
19-28	Hue_5Y 6/3	100					S	

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 dark silty loam over slightly lighter sandy loam with redox concentrations in the bottom of the layer. The lowest layer is yellow sand. The profile does not meet any hydric soil indicators.

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Project/Site:	L3R	Sample Point:	u-154n44w18-g1

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	70	Y	FAC
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover =	70		

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

	Species Name	% Cover	Dominant	Ind.Status
1.	Prunus virginiana	20	Y	FACU
2.	Toxicodendron rydbergii	10	Y	FACU
3.	Cornus rugosa	5	N	NI
4.	Rhamnus cathartica	5	N	FACU
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover =	40		

Herb Stratum (Plot size: 5 ft. radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Aralia nudicaulis	35	Y	FACU
2.	Sanicula marilandica	10	N	FACU
3.	Thalictrum dasycarpum	5	N	FAC
4.	Calamagrostis canadensis	5	N	FACW
5.	Bromus inermis	5	N	UPL
6	Elymus repens	5	N	FACU
7.	Zizia aurea	5	N	FAC
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total Cover =	70		

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

	Species Name	% Cover	Dominant	Ind.Status
1.	Celastrus scandens	5	Y	UPL
2.				
3.				
5.				
4.				
	Total Cover =	5		

Dominance Test Worksheet

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

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **20.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	5	x 2 =	10
FAC spp.	80	x 3 =	240
FACU spp.	85	x 4 =	340
UPL spp.	15	x 5 =	75
Total	185 (A)		665 (B)

Prevalence Index = B/A = **3.595**

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 site is dominated by quaking aspen in the canopy, choke cherry and poison ivy in the shrub layer, and wild sarsaparilla in the ground layer. American bittersweet is common at the site.

Additional Remarks: