WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R		Date: 10/15/14
Applicant:	Enbridge		County: Red Lake
Investigators:	BCS/KRG	Subregion (MLRA or LRR): MLRA 56	State: MN
Soil Unit:	I59A	NWI Classification:	
Landform:	Talf	Local Relief: LL	Sample Point: **u-151n42w24-r1**
Slope (%):	0 - 2%	Latitude: 47.880772 Longitude: -95.9716815 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 ☐ gnificantly disturbed?		Are normal circumstances present?	Township:
Are Vegetation ☐ Soil ☐ or Hydrology ☐ aturally problematic?		☑ 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 within a hardwood forest community dominated by quaking aspen, bur oak, chokecherry, and Pennsylvania sedge.

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:	(in.)
Saturation Present?	Yes	☐	Depth:	(in.)

Wetland Hydrology Present? N

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

Remarks: No primary or secondary indicators of wetland hydrology 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)

	Matrix			Mottles						
Depth (In.)	Color (Moist)		%	Color (Moist)		%	Type	Location	Texture	Remarks
0-8	Hue_10YR	2/1	100						SIL	
8-12	Hue_10YR	3/2	100						SC	Gravel fragments present

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: gravel Depth: 12"

Hydric Soil Present? N

Remarks: Soil consists of a black silt loam underlain by a dark grayish-brown sandy clay which contains gravel fragments. A gravel restrictive layer was encountered at 12 inches. The profile does not meet any hydric soil indicators.

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Project/Site: L3R | Sample Point: u-151n42w24-r1

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*	40	Y	FAC
2.	*Quercus macrocarpa*	15	Y	FACU
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Total Cover = 55

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

1.	*Quercus macrocarpa*	15	Y	FACU
2.	*Populus tremuloides*	10	Y	FAC
3.	*Prunus virginiana*	10	Y	FACU
4.	*Cornus racemosa*	5	N	FAC
5.	*Rosa blanda*	2	N	FACU
6.	*Ribes hirtellum*	1	N	FAC
7.				
8.				
9.				
10.				

Total Cover = 43

Herb Stratum (Plot size: 5 ft. radius)

1.	*Carex pensylvanica*	50	Y	NI
2.	*Geum aleppicum*	10	N	FACU
3.	*Zizia aurea*	5	N	FAC
4.	*Pteridium aquilinum*	5	N	FACU
5.	*Thalictrum dioicum*	2	N	FACW
6				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Total Cover = 72

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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ***33.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	61	x 3 =	183
FACU spp.	57	x 4 =	228
UPL spp.	50	x 5 =	250
Total	170 (A)		665 (B)

Prevalence Index = B/A = ***3.912***

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: Vegetation is dominated by quaking aspen and bur oak in the canopy and shrub layers, with chokecherry also common in the shrub layer. Pennsylvania sedge dominates the herbaceous layer. Approximately 30% of the sample area is unvegetated and covered by leaf litter.

Additional Remarks: