WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 2016-07-18

Applicant/Owner: Enbridge State: Minnesota Sampling Point: u-47n18w2-ab1

Investigator(s): ZCW Section, Township, Range: S 2, T 49N, R 18W

Landform (hillslope, terrace, etc.): Side Slope Local Relief (concave, convex, none): VL Slope (%): 8-15%

Subregion (LRR or MLRA): Latitude: 46.5820885403... Longitude: -92.58301975... Datum: NAD83

Soil Map Unit Name: 355C NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks): Yes

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS - **Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	No	**Is the Sampled Area**	
Hydric Soil Present?	No	**within a Wetland?**	No
Wetland Hydrology Present?	No	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted/Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	No	Depth (inches) _____
Water Table Present?	No	Depth (inches) _____
Saturation Present? (includes capillary fringe)	No	Depth (inches) _____

Wetland Hydrology Present? No

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: u-47n18w...

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	30.00	Yes	UPL
2. Quercus rubra	20.00	Yes	FACU
3. Betula papyrifera	20.00	Yes	FACU
4. Tilia americana	10.00	No	FACU
5.			
6.			
7.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 15)			
1. Corylus cornuta	10.00	Yes	UPL
2. Betula papyrifera	5.00	Yes	FACU
3. Quercus rubra	5.00	Yes	FACU
4. Acer saccharum	5.00	Yes	UPL
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot Size: 5)			
1. Carex woodii	40.00	Yes	
2. Eurybia macrophylla	20.00	Yes	FACU
3. Aralia nudicaulis	10.00	No	FACU
4. Clintonia borealis	10.00	No	FAC
5. Maianthemum canadense	5.00	No	FACU
6. Maianthemum racemosum	5.00	No	FAC
7. Trientalis borealis	5.00	No	FAC
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot Size: 30)			
1.			
2.			
3.			
4.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	0.00	x 2	0
FACU species	95.00	x 3	380
UPL species	85.00	x 4	425
Column Totals	200 (A)		865 (B)

Prevalence Index = B/A = 4.325

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- no 2 - Dominance Test is > 50%
- no 3 - Prevalence Index is ≤ 3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaeceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **No**

Remarks: (include photo numbers here or on a separate sheet.)

SOIL Sampling Point: u-47n18w...

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3 3	100					VFSL	
5-24	10YR 4 4	100					VFSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soil[3]:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, M**)
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Maganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in remarks)

Restrictive Layer (if observed): ☐

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

Site Photograph 1

Sampling Point: u-47n18w2-ab1

Latitude: 46.5821120096804

Longitude: -92.5830372703193

Direction: North

Cowardin Classification:

Circular 39:

Eggers & Reed:

Remarks:

Site Photograph 2

Sampling Point: u-47n18w2-ab1

Latitude: 46.582112135409

Longitude: -92.5830371026812

Direction: East

Cowardin Classification:

Circular 39:

Eggers & Reed:

Remarks: