WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: l3_mainline City/County: Clearwater Sampling Date: 2017-06-20

Applicant/Owner: Enbridge State: Minnesota Sampling Point: CLC5013b21W

Investigator(s): DPT, SMR Section, Township, Range: S20, T148N, R37W

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CC Slope (%): 0-2%

Subregion (LRR or MLRA): Latitude: 47.6301078591... Longitude: -95.40085659... Datum: NAD83

Soil Map Unit Name: 737 NWI Classification: PFO1C

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?	Yes	**Is the Sampled Area**	
Hydric Soil Present?	Yes	**within a Wetland?**	Yes
Wetland Hydrology Present?	Yes	If yes, optional Wetland Site ID:	CLC5013b1W

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)

yes Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
yes High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
yes Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Saturation Visible on Aerial Imagery (C9)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Stunted/Stressed Plants (D1)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	yes Geomorphic Position (D2)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Shallow Aquitard (D3)
____ Sparsely Vegetated Concave Surface (B8)		____ Microtopographic Relief (D4)
		yes FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes	Depth (inches)	4
Water Table Present?	Yes	Depth (inches)	0
Saturation Present? (includes capillary fringe)	Yes	Depth (inches)	0

Wetland Hydrology Present? Yes

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: CLC5013b21W

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
Herb Stratum (Plot Size: 5)			
1. Carex lacustris	60.00	Yes	OBL
2. Phalaris arundinacea	40.00	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = 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: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60.00	x 1	60
FACW species	40.00	x 2	80
FACU species	0.00	x 3	0
UPL species	0.00	x 4	0
Column Totals	100 (A)		140 (B)

Prevalence Index = B/A = 1.4

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

yes 2 - Dominance Test is > 50%

yes 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 herbaceous (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? **Yes**

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

SOIL Sampling Point: CLC5013b21W

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
0-8	10YR 2	100					MM	
8-15	GLEY1 4 10Y	100					SCL	

[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: Rock

Depth (inches): 15

Hydric Soil Present? Yes

Remarks: