WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Clearwater Sampling Date: 2015-07-07

Applicant/Owner: Enbridge State: Minnesota Sampling Point: CLC5103a1U

Investigator(s): ACM/LEB Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local Relief (concave, convex, none): Conve... Slope (%): 20

Subregion (LRR or MLRA): Latitude: 47.3237620387... Longitude: -95.19691902... Datum: Minnesota State ...

Soil Map Unit Name: 267C NWI Classification:

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.)

The upland is a hardwood forest located on a hillside and dominated by white spruce, red maple, and Pennsylvania sedge.

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? No Depth (inches)

(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

No wetland hydrology indicators were observed.

VEGETATION - Use scientific names of plants.

Sampling Point: CLC5103a1U

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40.00	Yes	FACU
2. Populus tremuloides	25.00	Yes	FACU
3. Populus balsamifera	5.00	No	FACW
4.			
5.			
6.			
7.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 15 ft)			
1. Acer rubrum	40.00	Yes	FAC
2. Cornus rugosa	15.00	No	
3. Fraxinus nigra	15.00	No	FACW
4. Fraxinus pennsylvanica	10.00	No	FACW
5.			
6.			
7.			
	80	= Total Cover	
Herb Stratum (Plot Size: 5 ft)			
1. Carex pensylvanica	50.00	Yes	
2. Euphorbia maculata	15.00	No	FACU
3. Cornus rugosa	10.00	No	
4. Dirca palustris	5.00	No	FAC
5. Maianthemum canadense	2.00	No	FACU
6. Thalictrum dioicum	2.00	No	FACU
7. Galium triflorum	2.00	No	FACU
8.			
9.			
10.			
11.			
12.			
	86	= Total Cover	
Woody Vine Stratum (Plot Size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	30.00	x 2	60
FACU species	45.00	x 3	344
UPL species	75.00	x 4	375
Column Totals	236 (A)		914 (B)

Prevalence Index = B/A = 3.8728813...

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 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? ____

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

The vegetation is dominated by white spruce, quaking aspen, red maple, and Pennsylvania sedge.

SOIL

Sampling Point: CLC5103a...

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
0-6	10YR 3 2	100					FSL	fine sandy loam
6-24	10YR 6 3	100					FSL	fine sandy loam

[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:

The soils are fine sandy loam with no hydric soil indicators.