WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: SPP   City/County: Clearwater   Sampling Date: 6/5/2014
Applicant/Owner: Enbridge   State: MN   Sampling Point: CLC5092b9W
Investigator(s): EAB/RAJ   Section, Township, Range:
Landform (hillslope, terrace, etc.) Depression   Local relief (concave, convex, none) CL
Slope (%): 0 - 2%   Lat.: 47.354851   Long.: -95.219633   Datum:
Soil Map Unit Name: 672   NWI Classification:
Are climatic/hydrologic conditions of the site typical for this time of the year? ☑ (If no, explain in remarks)
Are vegetation ☐ , soil ☐ , or hydrology ☐ significantly disturbed?   Are "normal
Are vegetation ☐ , soil ☐ , or hydrology ☐ naturally problematic?   circumstances" present? ☑
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Y	**Is the sampled area within a wetland?** Y
Hydric soil present? Y	
Indicators of wetland hydrology present? Y	If yes, optional wetland site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The community is a white spruce swamp that lies north of a roadside sedge meadow.

HYDROLOGY

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 or Stressed Plants (D1)
☑ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☑ Microtopographic Relief (D4)
☑ FAC-Neutral Test (D5)

Field Observations:
Surface water present? Yes ☐   Depth (inches):
Water table present? Yes ☑   Depth (inches): 0
Saturation present? Yes ☑   Depth (inches): 0
(includes capillary fringe)

Indicators of wetland hydrology present?   Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
The water table extends to the surface.

VEGETATION - Use scientific names of plants   **Sampling Point:**   CLC5092b9W

Tree Stratum Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 Picea glauca	80	Y	FACU
2 Populus balsamifera	20	N	FACW
3 Ulmus americana	5	N	FACW
4			
5			
6			
7			
8			
9			
10			
	105 = Total Cover		

Sapling/Shrub Stratum Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 Alnus incana	10	Y	FACW
2 Populus balsamifera	10	Y	FACW
3			
4			
5			
6			
7			
8			
9			
10			
	20 = Total Cover		

Herb Stratum Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 Carex stricta	50	Y	OBL
2 Symphyotrichum lanceolatum	20	Y	FACW
3 Equisetum arvense	5	N	FAC
4 Caltha palustris	5	N	OBL
5 Impatiens capensis	1	N	FACW
6 Cicuta maculata	1	N	OBL
7 Ribes triste	1	N	OBL
8			
9			
10			
11			
12			
13			
14			
15			
	83 = Total Cover		

Woody Vine Stratum Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		

50/20 Thresholds

	20%	50%
Tree Stratum	21	53
Sapling/Shrub Stratum	4	10
Herb Stratum	17	42
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4   (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00%   (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	57 x 1 =	57
FACW species	66 x 2 =	132
FAC species	5 x 3 =	15
FACU species	80 x 4 =	320
UPL species	0 x 5 =	0
Column totals	208 (A)	524 (B)

Prevalence Index = B/A =   2.52

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

X Dominance test is >50%

X Prevalence index is ≤3.0*

___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

___ Problematic 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. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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?   Y

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

The community features a continuous canopy of white spruce interspersed with balsam poplar. Microtopographic variation resulting from large tree roots supports a diverse hydrophytic understory.

SOIL   **Sampling Point:**   CLC5092b9W

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

Depth	Matrix			Redox Features				Texture	Remarks
(In.)	Color (moist)	%		Color (moist)	%	Type*	Loc**		
0-18	Hue_10YR 2/1	100						MMI	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Suface (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**

- ☐ 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)

- ☐ 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, L**
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present? ___Y___

Remarks:
  Mucky mineral soil extends down to 18 inches.

US Army Corps of Engineers   Northcentral and Northeast Region