WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 2015-06-12

Applicant/Owner: Enbridge State: Minnesota Sampling Point: CRC51009a1U_R

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

Landform (hillslope, terrace, etc.): Footslope Local Relief (concave, convex, none): VL Slope (%): 3-7

Subregion (LRR or MLRA): LRR K Latitude: 46.5816344926... Longitude: -92.60530941... Datum: Minnesota State ...

Soil Map Unit Name: 504C 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?	Yes	**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 sample area is located along a fence line between an upland hardwood forest and a grazed, shrub-dominated area.

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 primary or secondary wetland hydrology indicators were observed.

VEGETATION - Use scientific names of plants.

Sampling Point: CRC51009...

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	15.00	Yes	FAC
2. Tilia americana	10.00	Yes	FACU
3. Populus tremuloides	10.00	Yes	FACU
4. Abies balsamea	5.00	No	FACU
5.	2.00	No	FAC
6. Quercus rubra			
7.			
	42	= Total Cover	

Sapling/Shrub Stratum (Plot Size: 15 ft)			
1. Acer rubrum	15.00	Yes	FAC
2. Corylus cornuta	15.00	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	

Herb Stratum (Plot Size: 5 ft)			
1. Carex gracillima	15.00	Yes	FACU
2. Poa pratensis	15.00	Yes	FACU
3. Eurybia macrophylla	10.00	No	UPL
4. Dryopteris carthusiana	10.00	No	FACW
5. Rubus pubescens	5.00	No	FACW
6. Aralia nudicaulis	5.00	No	FACU
7. Sanicula marilandica	2.00	No	FACU
8. Milium effusum	2.00	No	FACU
9. Lathyrus ochroleucus	2.00	No	
10. Carex tenera	2.00	No	FAC
11.			
12.			
	68	= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.6666666666... (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	15.00	x 2	30
FACU species	34.00	x 3	316
UPL species	10.00	x 4	50
Column Totals	138 (A)		498 (B)

Prevalence Index = B/A = 3.60869

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 upland sample area is dominated by red maple, basswood, and quaking aspen in the tree stratum, red maple saplings and beaked hazelnut in the shrub stratum, and graceful sed...

SOIL

Sampling Point: CRC51009...

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	7.5YR 3 2	100					SICL	
8-24	7.5YR 4 3	85	7.5YR 4 6	15	C	M	SIC	

[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? Yes

Remarks:

The soil profile consists of a dark silty clay loam epipedon underlain by a lighter silty clay with 15% distinct redox concentrations. The soil meets hydric indicator F21; however, the area lacks hydrophytic vegetation and wetland hydrology.