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: CRC5110b1U

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

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

Subregion (LRR or MLRA): Latitude: 46.5850077895... Longitude: -92.63324637... Datum: Minnesota State ...

Soil Map Unit Name: 1073 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?	Yes	**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 area is located on a rise between two hardwood swamps. The vegetation is dominated by black ash; however, the understory is composed ...

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:

No indicators of wetland hydrology were observed.

VEGETATION - Use scientific names of plants.

Sampling Point: CRC5110b...

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus nigra	50.00	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 15)			
1. Fraxinus nigra	40.00	Yes	FACW
2. Cornus racemosa	25.00	Yes	FAC
3. Viburnum rafinesquianum	5.00	No	
4. Viburnum lentago	5.00	No	FAC
5. Amelanchier humilis	2.00	No	
6.			
7.			
	77	= Total Cover	
Herb Stratum (Plot Size: 5)			
1. Carex gracillima	35.00	Yes	FACU
2. Asarum canadense	15.00	No	UPL
3. Milium effusum	15.00	No	FACU
4. Luzula acuminata	15.00	No	FACU
5. Rhamnus cathartica	10.00	No	FAC
6. Carex peckii	10.00	No	
7. Eurybia macrophylla	10.00	No	UPL
8. Osmorhiza claytonii	5.00	No	FACU
9. Cornus racemosa	5.00	No	FAC
10. Aralia nudicaulis	5.00	No	FACU
11. Thalictrum dioicum	5.00	No	FACU
12. Lactuca biennis	2.00	No	FAC
	132	= 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: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.6666666666... (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	90.00	x 2	180
FACU species	47.00	x 3	320
UPL species	25.00	x 4	125
Column Totals	242 (A)		766 (B)

Prevalence Index = B/A = 3.165289

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- yes 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 canopy is dominated by black ash with an understory composed of mixed shrubs and herbaceous species. The site passes the Dominance Test because black ash was domi...

SOIL

Sampling Point: CRC5110b...

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
0-10	10YR 2 2	100					sicl	
10-15	10YR 2 2	95	10YR 4 4	5	C	M	sicl	

[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? No

Remarks:

The soil profile contains two layers of silty clay loam with redox in the lower layer. No hydric soil indicators were observed in the upper 15 inches; soils could not be sampled any lower due to a restrictive rock layer.