

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 2015-06-23
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: CRR51010_640b1U
 Investigator(s): LEB/ACM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): sideslope Local Relief (concave, convex, none): VL Slope (%): 3-7
 Subregion (LRR or MLRA): _____ Latitude: 46.59852553629 Longitude: -92.32807578... Datum: Minnesota State ...
 Soil Map Unit Name: 976C 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?	<u>No</u>	Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: _____
Hydric Soil Present?	<u>No</u>	
Wetland Hydrology Present?	<u>No</u>	
Remarks: (Explain alternative procedures here or in a separate report.) The upland sample point is located upslope from the wetland on an open, grassy sideslope near a planted coniferous forest.		

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)
☐ 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)	☐ Geomorphic Position (D2)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)
		☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? ☐ Depth (inches) _____ Water Table Present? ☐ Depth (inches) _____ Saturation Present? ☐ Depth (inches) _____ (includes capillary fringe)		Wetland Hydrology Present? <u>No</u>
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: CRR51010...

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot Size: <u>30 ft</u>)				Dominance Test worksheet:
1. <u>Picea glauca</u>	<u>10.00</u>	<u>Yes</u>	<u>FACU</u>	Number of Dominant Species
2. <u>Pinus resinosa</u>	<u>2.00</u>	<u>No</u>	<u>FACU</u>	That Are OBL, FACW, or FAC: <u>1</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	<u>3</u>
5. _____	_____	_____	_____	Species Across All Strata: _____ (B)
6. _____	_____	_____	_____	Percent of Dominant Species
7. _____	_____	_____	_____	<u>33.3333333333...</u>
				That Are OBL, FACW, or FAC: _____ (A/B)
<u>Sapling/Shrub Stratum</u> (Plot Size: <u>15 ft</u>)				Prevalence Index worksheet:
1. <u>Cornus alba</u>	<u>10.00</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0.00</u> x 1 <u>0</u>
3. _____	_____	_____	_____	FACW species <u>12.00</u> x 2 <u>24</u>
4. _____	_____	_____	_____	FACU species <u>4.00</u> x 3 <u>260</u>
5. _____	_____	_____	_____	UPL species <u>50.00</u> x 4 <u>250</u>
6. _____	_____	_____	_____	Column Totals <u>131</u> (A) <u>546</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>4.1679389...</u>
	<u>12</u>	= Total Cover		
<u>Herb Stratum</u> (Plot Size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators:
1. <u>Bromus inermis</u>	<u>50.00</u>	<u>Yes</u>	<u>UPL</u>	_____ 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Poa pratensis</u>	<u>20.00</u>	<u>No</u>	<u>FACU</u>	<u>no</u> 2 - Dominance Test is > 50%
3. <u>Tanacetum vulgare</u>	<u>15.00</u>	<u>No</u>	<u>FACU</u>	<u>no</u> 3 - Prevalence Index is ≤ 3.0 ¹
4. <u>Rosa acicularis</u>	<u>5.00</u>	<u>No</u>	<u>FACU</u>	_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Rubus idaeus</u>	<u>5.00</u>	<u>No</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u>Cirsium arvense</u>	<u>2.00</u>	<u>No</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. <u>Dactylis glomerata</u>	<u>2.00</u>	<u>No</u>	<u>FACU</u>	Definitions of Vegetation Strata:
8. <u>Ranunculus acris</u>	<u>2.00</u>	<u>No</u>	<u>FAC</u>	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
9. <u>Fragaria virginiana</u>	<u>2.00</u>	<u>No</u>	<u>FACU</u>	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10. <u>Equisetum arvense</u>	<u>2.00</u>	<u>No</u>	<u>FAC</u>	Herb - All herbaeaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11. <u>Lotus corniculatus</u>	<u>2.00</u>	<u>No</u>	<u>FACU</u>	Woody vines - All woody vines greater than 3.28 ft in height.
12. <u>Solidago gigantea</u>	<u>2.00</u>	<u>No</u>	<u>FACW</u>	
	<u>109</u>	= Total Cover		Hydrophytic Vegetation Present? _____
<u>Woody Vine Stratum</u> (Plot Size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	=Total Cover		
Remarks: (include photo numbers here or on a separate sheet.)				
The vegetation is dominated by smooth brome. There is sparse cover of white spruce and red osier dogwood.				

SOIL

Sampling Point: CRR51010...

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	5YR 4 4	90					c	
0-16	10YR 3 2	10					sic	small dark inclusions mixed throughout cla...

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: 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 Soil³:

☐ 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: dense clay

Depth (inches): 16

Hydric Soil Present? No

Remarks:

The soil is predominantly dense red clay with some dark silty clay inclusions. Soils could only be sampled to 16 inches due to very dense clay.