

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 2015-06-11
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: CRR51010_500a1W
 Investigator(s): KRG/ACM Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local Relief (concave, convex, none): conca... Slope (%): 0-2
 Subregion (LRR or MLRA): _____ Latitude: 46.5846104454... Longitude: -92.59505323... Datum: Minnesota State ...
 Soil Map Unit Name: 530 NWI Classification: PFO/SSB

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>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	<u>Yes</u>	
Wetland Hydrology Present?	<u>Yes</u>	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland is a hardwood swamp dominated by black ash with speckled alder, marsh marigold, and sedges in the understory.		

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<u>_____</u> Surface Water (A1)	<u>_____</u> Water-Stained Leaves (B9)	<u>_____</u> Surface Soil Cracks (B6)	
<u>yes</u> High Water Table (A2)	<u>_____</u> Aquatic Fauna (B13)	<u>_____</u> Drainage Patterns (B10)	
<u>yes</u> Saturation (A3)	<u>_____</u> Marl Deposits (B15)	<u>_____</u> Moss Trim Lines (B16)	
<u>_____</u> Water Marks (B1)	<u>_____</u> Hydrogen Sulfide Odor (C1)	<u>_____</u> Dry-Season Water Table (C2)	
<u>_____</u> Sediment Deposits (B2)	<u>_____</u> Oxidized Rhizospheres on Living Roots (C3)	<u>_____</u> Crayfish Burrows (C8)	
<u>_____</u> Drift Deposits (B3)	<u>_____</u> Presence of Reduced Iron (C4)	<u>_____</u> Saturation Visible on Aerial Imagery (C9)	
<u>_____</u> Algal Mat or Crust (B4)	<u>_____</u> Recent Iron Reduction in Tilled Soils (C6)	<u>_____</u> Stunted/Stressed Plants (D1)	
<u>_____</u> Iron Deposits (B5)	<u>_____</u> Thin Muck Surface (C7)	<u>yes</u> Geomorphic Position (D2)	
<u>_____</u> Inundation Visible on Aerial Imagery (B7)	<u>_____</u> Other (Explain in Remarks)	<u>_____</u> Shallow Aquitard (D3)	
<u>_____</u> Sparsely Vegetated Concave Surface (B8)		<u>_____</u> Microtopographic Relief (D4)	
		<u>yes</u> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? <u>No</u> Depth (inches) _____ Water Table Present? <u>Yes</u> Depth (inches) <u>8</u> Saturation Present? <u>Yes</u> Depth (inches) <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? <u>Yes</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Saturated soils and a high water table were observed. Small pools of shallow standing water are present in other parts of the wetland.			

VEGETATION - Use scientific names of plants.

 Sampling Point: CRR51010...

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot Size: <u>30</u>)				Dominance Test worksheet:
1. <u>Fraxinus nigra</u>	<u>50.00</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species
2. <u>Acer rubrum</u>	<u>5.00</u>	<u>No</u>	<u>FAC</u>	That Are OBL, FACW, or FAC: <u>3</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	<u>3</u>
5. _____	_____	_____	_____	Species Across All Strata: _____ (B)
6. _____	_____	_____	_____	Percent of Dominant Species
7. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
	<u>55</u>	= Total Cover		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot Size: <u>15</u>)				Total % Cover of:
1. <u>Alnus incana</u>	<u>25.00</u>	<u>Yes</u>	<u>FACW</u>	Multiply by:
2. _____	_____	_____	_____	OBL species <u>45.00</u> x 1 <u>45</u>
3. _____	_____	_____	_____	FACW species <u>132.00</u> x 2 <u>264</u>
4. _____	_____	_____	_____	FACU species <u>7.00</u> x 3 <u>40</u>
5. _____	_____	_____	_____	UPL species <u>0.00</u> x 4 <u>0</u>
6. _____	_____	_____	_____	Column Totals <u>194</u> (A) <u>370</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>1.9072164...</u>
	<u>25</u>	= Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: <u>5</u>)				<u>yes</u> 1 - Rapid Test for Hydrophytic Vegetation
1. <u>Caltha palustris</u>	<u>30.00</u>	<u>Yes</u>	<u>OBL</u>	<u>yes</u> 2 - Dominance Test is > 50%
2. <u>Rubus pubescens</u>	<u>20.00</u>	<u>No</u>	<u>FACW</u>	<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
3. <u>Impatiens capensis</u>	<u>10.00</u>	<u>No</u>	<u>FACW</u>	_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carex gracillima</u>	<u>10.00</u>	<u>No</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Carex brunnescens</u>	<u>10.00</u>	<u>No</u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Calamagrostis canadensis</u>	<u>10.00</u>	<u>No</u>	<u>OBL</u>	Definitions of Vegetation Strata:
7. <u>Carex vulpinoidea</u>	<u>5.00</u>	<u>No</u>	<u>OBL</u>	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Alnus incana</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. <u>Equisetum sylvaticum</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Herb - All herbaeaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10. <u>Onoclea sensibilis</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Woody vines - All woody vines greater than 3.28 ft in height.
11. <u>Stellaria longifolia</u>	<u>2.00</u>	<u>No</u>	<u>FACW</u>	Hydrophytic Vegetation Present? _____
12. <u>Ranunculus abortivus</u>	<u>2.00</u>	<u>No</u>	<u>FAC</u>	
	<u>114</u>	= Total Cover		
Woody Vine Stratum (Plot Size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	=Total Cover		
Remarks: (include photo numbers here or on a separate sheet.)				
Vegetation is dominated by black ash in the canopy with speckled alder, marsh marigold, dwarf raspberry, and a mix of sedges in the understory. Mosses cover about 10% of the area.				

SOIL

Sampling Point: CRR51010...

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

[illegible]

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soil ³ :
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	☐ Coast Prairie Redox (A16)(LRR K, L, R)
☐ Black Histic (A3)	☒ Loamy Mucky Mineral (F1) (LRR K, L)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Dark Surface (S7) (LRR K, M)
☐ Stratified Layers (A5)	☐ Depleted Matrix (F3)	☐ Polyvalue Below Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4)		☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)		☐ Red Parent Material (F21)
☐ Stripped Matrix (S6)		☐ Very Shallow Dark Surface (TF12)
☐ Dark Surface (S7) (LRR R, MLRA 149B)		☐ Other (explain in remarks)
Restrictive Layer (if observed): ☐	Hydric Soil Present? Yes ☐	
Type: _____ Depth (inches): _____		
Remarks:		
Soil consists of loamy mucky mineral underlain by clay with redox concentrations. Soil meets hydric indicator F1.		