

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 2015-06-30
Applicant/Owner: Enbridge State: Minnesota Sampling Point: CR163d1W_R
Investigator(s): ACM/LEB Section, Township, Range: _____
Landform (hillslope, terrace, etc.): depression Local Relief (concave, convex, none): Conca... Slope (%): 0-2
Subregion (LRR or MLRA): _____ Latitude: 46.596458726606 Longitude: -92.29312618... Datum: Minnesota State ...
Soil Map Unit Name: 303 NWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks):

YesAre Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? YesAre 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? 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 located within a larger forest and dominated by black ash, speckled alder, Canada bluejoint, and sedges.		

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:		Wetland Hydrology Present? <u>Yes</u>
Surface Water Present? <u>No</u>	Depth (inches) _____	
Water Table Present? <u>Yes</u>	Depth (inches) <u>1</u>	
Saturation Present? <u>Yes</u>	Depth (inches) <u>0</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The soils are saturated at the surface and the water table is 1 inch below the surface.		

VEGETATION - Use scientific names of plants.

 Sampling Point: CR163d1...

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot Size: <u>30 ft</u>)				Dominance Test worksheet:
1. <u>Fraxinus nigra</u>	<u>30.00</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species
2. <u>Populus tremuloides</u>	<u>15.00</u>	<u>Yes</u>	<u>FACU</u>	That Are OBL, FACW, or FAC: <u>4</u> (A)
3. <u>Salix discolor</u>	<u>10.00</u>	<u>No</u>	<u>FACW</u>	Total Number of Dominant
4. _____	_____	_____	_____	<u>4</u>
5. _____	_____	_____	_____	Species Across All Strata: _____ (B)
6. _____	_____	_____	_____	Percent of Dominant Species
7. _____	_____	_____	_____	<u>100</u>
	<u>55</u>	<u>= Total Cover</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>Alnus incana</u>	<u>15.00</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Populus tremuloides</u>	<u>10.00</u>	<u>Yes</u>	<u>FACU</u>	OBL species <u>85.00</u> x 1 <u>85</u>
3. <u>Fraxinus nigra</u>	<u>10.00</u>	<u>Yes</u>	<u>FACW</u>	FACW species <u>100.00</u> x 2 <u>200</u>
4. <u>Cornus alba</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	FACU species <u>25.00</u> x 3 <u>28</u>
5. <u>Corylus cornuta</u>	<u>5.00</u>	<u>No</u>	<u>FACU</u>	UPL species <u>0.00</u> x 4 <u>0</u>
6. _____	_____	_____	_____	Column Totals <u>217</u> (A) <u>388</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>1.7880184...</u>
	<u>45</u>	<u>= Total Cover</u>		
<u>Herb Stratum</u> (Plot Size: <u>5 ft</u>)				Hydrophytic Vegetation Indicators:
1. <u>Carex crinita</u>	<u>40.00</u>	<u>Yes</u>	<u>OBL</u>	_____ 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Calamagrostis canadensis</u>	<u>20.00</u>	<u>No</u>	<u>OBL</u>	<u>yes</u> 2 - Dominance Test is > 50%
3. <u>Poa palustris</u>	<u>15.00</u>	<u>No</u>	<u>FACW</u>	<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
4. <u>Ribes triste</u>	<u>10.00</u>	<u>No</u>	<u>OBL</u>	_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Cicuta maculata</u>	<u>10.00</u>	<u>No</u>	<u>OBL</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
6. <u>Carex stipata</u>	<u>5.00</u>	<u>No</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. <u>Equisetum pratense</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	
8. <u>Carex projecta</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Definitions of Vegetation Strata:
9. <u>Rubus pubescens</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
10. <u>Solidago canadensis</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.
11. _____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
12. _____	_____	_____	_____	Woody vines - All woody vines greater than 3.28 ft in height.
	<u>117</u>	<u>= Total Cover</u>		
<u>Woody Vine Stratum</u> (Plot Size: _____)				Hydrophytic Vegetation Present? _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	<u>=Total Cover</u>		
Remarks: (include photo numbers here or on a separate sheet.)				
Vegetation is dominated by black ash, quaking aspen, speckled alder, and sedges.				

SOIL

Sampling Point: CR163d1...

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 ☐	
Remarks:		
The soils are silty clay over clay and meet hydric soil indicators A11 and F3.		