

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 6/10/2014
 Applicant/Owner: Enbridge State: MN Sampling Point: CR101d1W
 Investigator(s): JRT/KJA Section, Township, Range: _____
 Landform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none) CC
 Slope (%): 0 - 2% Lat.: 46.635054 Long.: -92.459451 Datum: _____
 Soil Map Unit Name: 355C NWI Classification: PSS/EM1F
 Are climatic/hydrologic conditions of the site typical for this time of the year? (If no, explain in remarks)
 Are vegetation , soil , or hydrology significantly disturbed? Are "normal
 Are vegetation , soil , or hydrology naturally problematic? circumstances" present?
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) The wetland contains abnormally high water levels due to observed beaver activity. The upland edges are inundated and drown-out is occurring in the wetland. Dead speckled alder is present around the wetland fringe.	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	Field Observations: Surface water present? Yes <input checked="" type="checkbox"/> Depth (inches): <u>2</u> Water table present? Yes <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Saturation present? Yes <input checked="" type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: The soil pit was dug at the edge of the wetland, in a few inches of standing water. Three primary indicators of hydrology were observed.			

VEGETATION - Use scientific names of plants

Sampling Point:

CR101d1W

Tree Stratum				Plot Size (30 ft)		
	Absolute % Cover	Dominant Species	Indicator Status			
1	20	Y	FACU			
2						
3						
4						
5						
6						
7						
8						
9						
10						
	20	= Total Cover				

Sapling/Shrub Stratum				Plot Size (15 ft)		
	Absolute % Cover	Dominant Species	Indicator Status			
1	60	Y	FACW			
2						
3						
4						
5						
6						
7						
8						
9						
10						
	60	= Total Cover				

Herb Stratum				Plot Size (5 ft)		
	Absolute % Cover	Dominant Species	Indicator Status			
1	20	Y	FAC			
2	20	Y	FACW			
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
	40	= Total Cover				

Woody Vine Stratum				Plot Size (30 ft)		
	Absolute % Cover	Dominant Species	Indicator Status			
1	15	Y	FAC			
2						
3						
4						
5						
	15	= Total Cover				

Woody Vine Stratum				Plot Size (30 ft)		
	Absolute % Cover	Dominant Species	Indicator Status			
1						
2						
3						
4						
5						

50/20 Thresholds		
	20%	50%
Tree Stratum	4	10
Sapling/Shrub Stratum	12	30
Herb Stratum	8	20
Woody Vine Stratum	3	8

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	4 (A)
Total Number of Dominant Species Across all Strata:	5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC:	80.00% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	0 x 1 = 0
FACW species	80 x 2 = 160
FAC species	35 x 3 = 105
FACU species	20 x 4 = 80
UPL species	0 x 5 = 0
Column totals	135 (A) 345 (B)
Prevalence Index = B/A =	2.56

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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? Y

Remarks: (Include photo numbers here or on a separate sheet)
 The area is dominated by speckled alder with ostrich and sensitive fern common in the ground layer. Approximately 50 percent bare ground is present at the sample point.

SOIL

Sampling Point: CR101d1W

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

Depth (In.)	Matrix			Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)		%	Type*		
0-3	Hue_7.5YR	3/2	100					SIL	
3-18	Hue_7.5YR	3/2	90	Hue_2.5YR	3/6	10	C	M	LS

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**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

- 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 Soils:

- 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, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese 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)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? Y

Remarks:
 The wetland soils meet hydric soil indicator S5 (sandy redox).