

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sandpiper City/County: Wadena Sampling Date: 09/12/2014
 Applicant/Owner: Enbridge State: MN Sampling Point: WA021a1W
 Investigator(s): DPT Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave/Concave
 Slope (%): 0 Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 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? Yes
 (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>	<p align="center">Is the sampled area within a wetland? <u>Y</u></p> If yes, optional wetland site ID: <u>WA021a1W</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center">PEM - Type 2, wet meadow</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input 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 Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> 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 <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> 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 <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> Water table present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 20 </u> Saturation present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 10 </u> (includes capillary fringe)	<p align="center">Indicators of wetland hydrology present? <u> Y </u></p>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks:	

VEGETATION - Use scientific names of plants

Sampling Point: WA021a1W

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status																	
1					50/20 Thresholds <table style="width:100%; border-collapse: collapse;"> <tr><td></td><td style="text-align: right;">20%</td><td style="text-align: right;">50%</td></tr> <tr><td>Tree Stratum</td><td style="text-align: right;">0</td><td style="text-align: right;">0</td></tr> <tr><td>Sapling/Shrub Stratum</td><td style="text-align: right;">1</td><td style="text-align: right;">3</td></tr> <tr><td>Herb Stratum</td><td style="text-align: right;">20</td><td style="text-align: right;">50</td></tr> <tr><td>Woody Vine Stratum</td><td style="text-align: right;">0</td><td style="text-align: right;">0</td></tr> </table>			20%	50%	Tree Stratum	0	0	Sapling/Shrub Stratum	1	3	Herb Stratum	20	50	Woody Vine Stratum	0	0
	20%	50%																			
Tree Stratum	0	0																			
Sapling/Shrub Stratum	1	3																			
Herb Stratum	20	50																			
Woody Vine Stratum	0	0																			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10		0	= Total Cover																		
Sapling/Shrub Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)																
1	<i>Salix petiolaris</i>	5	Y	FACW																	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10		5	= Total Cover																		
Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Status	Prevalence Index Worksheet Total % Cover of: OBL species $\frac{100}{5} \times 1 = \frac{100}{5}$ FACW species $\frac{5}{5} \times 2 = \frac{10}{5}$ FAC species $\frac{0}{5} \times 3 = \frac{0}{5}$ FACU species $\frac{0}{5} \times 4 = \frac{0}{5}$ UPL species $\frac{0}{5} \times 5 = \frac{0}{5}$ Column totals <u>105</u> (A) <u>110</u> (B) Prevalence Index = B/A = <u>1.05</u>																
1	<i>Calamagrostis canadensis</i>	60	Y	OBL																	
2	<i>Carex lacustris</i>	20	Y	OBL																	
3	<i>Scirpus cyperinus</i>	20	Y	OBL																	
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15		100	= Total Cover																		
Woody Vine Stratum	Plot Size ()	Absolute % Cover	Dominant Species	Indicator Status	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input checked="" type="checkbox"/> Dominance test is >50% <input checked="" type="checkbox"/> 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																
1																					
2																					
3																					
4																					
5		0	= Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet)					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? <u>Y</u>																

SOIL

Sampling Point: WA021a1W

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*	Loc**		
0-5	10YR 2/1	100					Sandy Loam	
5-16	10YR 2/1	100					Loamy Sand	
16-22	10YR 4/2	90	10YR 4/6	10	C	M	Sand	

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

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (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 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: