

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: L3R City/County: Marshall Sampling Date: 2015-06-04
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-155n46w2-m1
 Investigator(s): BCS/LEB Section, Township, Range: S2, T155N, R46W
 Landform (hillslope, terrace, etc.): Dip Local Relief (concave, convex, none): LL Slope (%): 0-2
 Subregion (LRR or MLRA): LRR F Latitude: 48.2739649666... Longitude: -96.53000925...
 Datum: Minnesota State Plane North, NAD 83 (2011) U.S. feet

Soil Map Unit Name: I65A NWI Classification: PEMAAd

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? No
 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>
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 small shallow marsh dominated by woolly sedge at the sample point. The wetland is a mapped NWI located within a grassy hay field.			

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot Size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0 _____ = Total Cover				Hydrophytic Vegetation Indicators: <u>yes</u> 1 - Rapid Test for Hydrophytic Vegetation <u>yes</u> 2 - Dominance Test is > 50% <u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot Size: _____)				
1. <u>Salix petiolaris</u>	<u>5.00</u>	<u>Yes</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
5 _____ = Total Cover				
Herb Stratum (Plot Size: _____)				
1. <u>Carex pellita</u>	<u>70.00</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Symphotrichum boreale</u>	<u>10.00</u>	<u>No</u>	<u>OBL</u>	
3. <u>Mentha arvensis</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	
4. <u>Elymus repens</u>	<u>5.00</u>	<u>No</u>	<u>FACU</u>	
5. <u>Typha X glauca</u>	<u>2.00</u>	<u>No</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
92 _____ = Total Cover				
Woody Vine Stratum (Plot Size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 _____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Hydrophytic Vegetation Present? _____				

Remarks:
 The wetland sample area is dominated by woolly sedge in the herbaceous layer with rush aster, field mint, quackgrass, and hybrid cattail interspersed. Meadow willow dominates the...

SOIL

Sampling Point: w-155n46...

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			
0-9	10YR 2 1	100					SCL		
9-20	10YR 5 1	80					FSL		
9-20	10YR 4 1	20					FSL	Mixed matrix.	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16)(LRR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) (LRR G)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	(LRR H outside of MLRA 72 & 73)
<input type="checkbox"/> 1cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Reduced Vertic (F18)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (explain in remarks)
<input type="checkbox"/> 2.5cm Mucky Peat or Peat (S2)(LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> 5cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	

Indicators for Problematic Hydric Soil³:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

The soil profile consists of a black sandy clay loam underlain by a depleted fine sandy loam. The soil meets hydric indicator A11.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<u>yes</u> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<u>yes</u> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)	
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<u>yes</u> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<u>yes</u> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:

Surface Water Present?	<u>No</u>	Depth (inches) _____	Wetland Hydrology Present? <u>Yes</u>
Water Table Present?	<u>Yes</u>	Depth (inches) <u>6</u>	
Saturation Present? (includes capillary fringe)	<u>Yes</u>	Depth (inches) <u>0</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil is saturated to the surface and the water table is present at 6 inches.

Site Photograph 1

Sampling Point: w-155n46w2-m1

