

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Aitkin Sampling Date: 2015-06-30
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: AIC5311a1W_R
 Investigator(s): BJC/DGL Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Conca... Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Latitude: 46.5885260096... Longitude: -93.12692991... Datum: Minnesota State ...
 Soil Map Unit Name: 625 NWI Classification: _____

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? 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 fresh wet meadow dominated by reed canary grass and quill sedge. It is located in a swale within a hayfield.		

HYDROLOGY

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

VEGETATION - Use scientific names of plants.

Sampling Point: AIC5311a1...

	Absolute % Cover	Dominant Species?	Indicator Status		
<u>Tree Stratum</u> (Plot Size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant <u>2</u> Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: $\frac{100}{\text{Total}} = \frac{100}{2} = 50$ (A/B)	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species $\frac{15.00}{\text{Total}} \times 1 = \frac{15.00}{2} = 7.5$ FACW species $\frac{50.00}{\text{Total}} \times 2 = \frac{100.00}{2} = 50.0$ FACU species $\frac{20.00}{\text{Total}} \times 3 = \frac{60.00}{2} = 30.0$ UPL species $\frac{0.00}{\text{Total}} \times 4 = \frac{0.00}{2} = 0.0$ Column Totals <u>95</u> (A) <u>215</u> (B) Prevalence Index = B/A = $\frac{215}{95} = 2.2631578...$	
0 _____ = Total Cover					
<u>Sapling/Shrub Stratum</u> (Plot Size: _____)					Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation yes _____ 2 - Dominance Test is > 50% yes _____ 3 - Prevalence Index is $\leq 3.0^1$ _____ 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.
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaaceous (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.	
0 _____ = Total Cover					
<u>Herb Stratum</u> (Plot Size: <u>5 ft</u> _____)					Hydrophytic Vegetation Present? _____
1. <u>Phalaris arundinacea</u>	<u>50.00</u>	<u>Yes</u>	<u>FACW</u>		
2. <u>Carex tenera</u>	<u>20.00</u>	<u>Yes</u>	<u>FAC</u>		
3. <u>Carex stipata</u>	<u>15.00</u>	<u>No</u>	<u>OBL</u>		
4. <u>Poa pratensis</u>	<u>10.00</u>	<u>No</u>	<u>FACU</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
95 _____ = Total Cover					
<u>Woody Vine Stratum</u> (Plot Size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
0 _____ = Total Cover					
0 _____ = Total Cover					
0 _____ = Total Cover					
Remarks: (include photo numbers here or on a separate sheet.) The wetland sample point is dominated by reed canary grass and quill sedge.					

SOIL

Sampling Point: AIC5311a...

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:		
A depleted matrix was observed under a dark surface layer with redox concentrations.		