

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Aitkin Sampling Date: 2015-07-23
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: AI029a1W_R
 Investigator(s): ZCW/DPT Section, Township, Range: 25, 49n, 29w
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR K Latitude: 46.438279256661 Longitude: -93.67658888... Datum: Minnesota State ...
 Soil Map Unit Name: 533 NWI Classification: PFO/4Bg

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: <u>AI029a1W</u>
Hydric Soil Present?	<u>Yes</u>	
Wetland Hydrology Present?	<u>Yes</u>	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<u>yes</u> Surface Water (A1)	<u>yes</u> High Water Table (A2)	<u>yes</u> Saturation (A3)	<u>yes</u> Surface Soil Cracks (B6)
<u>yes</u> Water Marks (B1)	<u>yes</u> Sediment Deposits (B2)	<u>yes</u> Drift Deposits (B3)	<u>yes</u> Drainage Patterns (B10)
<u>yes</u> Algal Mat or Crust (B4)	<u>yes</u> Iron Deposits (B5)	<u>yes</u> Inundation Visible on Aerial Imagery (B7)	<u>yes</u> Moss Trim Lines (B16)
<u>yes</u> Sparsely Vegetated Concave Surface (B8)	<u>yes</u> Water-Stained Leaves (B9)	<u>yes</u> Aquatic Fauna (B13)	<u>yes</u> Dry-Season Water Table (C2)
<u>yes</u> Marl Deposits (B15)	<u>yes</u> Hydrogen Sulfide Odor (C1)	<u>yes</u> Oxidized Rhizospheres on Living Roots (C3)	<u>yes</u> Crayfish Burrows (C8)
<u>yes</u> Presence of Reduced Iron (C4)	<u>yes</u> Recent Iron Reduction in Tilled Soils (C6)	<u>yes</u> Thin Muck Surface (C7)	<u>yes</u> Saturation Visible on Aerial Imagery (C9)
<u>yes</u> Other (Explain in Remarks)	<u>yes</u> Shallow Aquitard (D3)	<u>yes</u> Microtopographic Relief (D4)	<u>yes</u> Stunted/Stressed Plants (D1)
<u>yes</u> FAC-Neutral Test (D5)	<u>yes</u> Geomorphic Position (D2)	<u>yes</u> Shallow Aquitard (D3)	<u>yes</u> Microtopographic Relief (D4)
Field Observations:			
Surface Water Present?	<u>No</u>	Depth (inches)	<u>2</u>
Water Table Present?	<u>Yes</u>	Depth (inches)	<u>0</u>
Saturation Present?	<u>Yes</u>	Depth (inches)	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? <u>Yes</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Sampling Point: AI029a1W...

		Absolute	Dominant	Indicator	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: $\frac{2}{}$ (A) Total Number of Dominant $\frac{2}{}$ Species Across All Strata: $\frac{2}{}$ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: $\frac{100}{}$ (A/B)
Tree Stratum	(Plot Size: $\frac{30}{}$)	% Cover	Species?	Status	
1.					Prevalence Index worksheet: Total % Cover of: $\frac{0}{}$ = Total Cover Multiply by: OBL species $\frac{90.00}{}$ x 1 $\frac{90}{}$ FACW species $\frac{0.00}{}$ x 2 $\frac{0}{}$ FACU species $\frac{0.00}{}$ x 3 $\frac{0}{}$ UPL species $\frac{0.00}{}$ x 4 $\frac{0}{}$ Column Totals $\frac{90}{}$ (A) $\frac{90}{}$ (B) Prevalence Index = B/A = $\frac{1}{}$
2.					
3.					
4.					
5.					
6.					
7.					
Sapling/Shrub Stratum (Plot Size: $\frac{15}{}$)					Hydrophytic Vegetation Indicators: $\frac{1}{}$ 1 - Rapid Test for Hydrophytic Vegetation $\frac{yes}{}$ 2 - Dominance Test is > 50% $\frac{yes}{}$ 3 - Prevalence Index is $\leq 3.0^1$ $\frac{1}{}$ 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.					
Herb Stratum (Plot Size: $\frac{5}{}$)					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 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.
1.	Carex trisperma	60.00	Yes	OBL	
2.	Carex lacustris	20.00	Yes	OBL	
3.	Eriophorum angustifolium	10.00	No	OBL	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
Woody Vine Stratum (Plot Size: $\frac{30}{}$)					Hydrophytic Vegetation Present? $\frac{1}{}$
1.					
2.					
3.					
4.					
Remarks: (include photo numbers here or on a separate sheet.)					

SOIL

Sampling Point: AI029a1W...

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 ☐	
Type: _____		
Depth (inches): _____		
Remarks:		



Latitude: 46.8438176159252
Longitude: -93.6765456386783
Direction: East

Cowardin Classification: PEM
Circular 39: 2
Eggers & Reed: Sedge Meadow

Remarks:



Latitude: 46.8438278837566

Cowardin Classification: PEM

Longitude: -93.6765887216606

Circular 39: 2

Direction: West

Eggers & Reed: Sedge Meadow

Remarks: