

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: I3_mainline City/County: Aitkin Sampling Date: 2017-06-03
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: AI138_340a20W
 Investigator(s): SMR, TDT Section, Township, Range: S13, T48N, R24W

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): LC Slope (%): 3-7%
 Subregion (LRR or MLRA): _____ Latitude: 46.641520718156 Longitude: -93.33271779... Datum: NAD83
 Soil Map Unit Name: 202 NWI Classification: PSS1/EM5B

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks): No

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	
Hydric Soil Present?	<u>Yes</u>	within a Wetland?	<u>Yes</u>
Wetland Hydrology Present?	<u>Yes</u>	If yes, optional Wetland Site ID:	<u>AI138aW</u>

Remarks: (Explain alternative procedures here or in a separate report.)

WETS analysis shows antecedent precipitation below normal. Hay field

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> Water Marks (B1)
<u>yes</u> Sediment Deposits (B2)	<u>yes</u> Drift Deposits (B3)	<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> Sparsely Vegetated Concave Surface (B8)	<u>yes</u> Water-Stained Leaves (B9)	<u>yes</u> Aquatic Fauna (B13)
<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> 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> Other (Explain in Remarks)	<u>yes</u> Surface Soil Cracks (B6)
<u>yes</u> Drainage Patterns (B10)	<u>yes</u> Moss Trim Lines (B16)	<u>yes</u> Dry-Season Water Table (C2)	<u>yes</u> Crayfish Burrows (C8)
<u>yes</u> Saturation Visible on Aerial Imagery (C9)	<u>yes</u> Stunted/Stressed Plants (D1)	<u>yes</u> Geomorphic Position (D2)	<u>yes</u> Shallow Aquitard (D3)
<u>yes</u> Microtopographic Relief (D4)	<u>yes</u> FAC-Neutral Test (D5)		

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?	<u>Yes</u>	Depth (inches) <u>0</u> _____		
(includes capillary fringe)				

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

Remarks:

VEGETATION - Use scientific names of plants.

 Sampling Point: Al138_340a20W

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot Size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
	<u>0</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>60.00</u></td> <td>x 1 <u>60</u></td> </tr> <tr> <td>FACW species <u>25.00</u></td> <td>x 2 <u>50</u></td> </tr> <tr> <td>FACU species <u>15.00</u></td> <td>x 3 <u>60</u></td> </tr> <tr> <td>UPL species <u>0.00</u></td> <td>x 4 <u>0</u></td> </tr> <tr> <td>Column Totals <u>100</u> (A)</td> <td><u>170</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.7</u></td> </tr> </table>		Multiply by:	OBL species <u>60.00</u>	x 1 <u>60</u>	FACW species <u>25.00</u>	x 2 <u>50</u>	FACU species <u>15.00</u>	x 3 <u>60</u>	UPL species <u>0.00</u>	x 4 <u>0</u>	Column Totals <u>100</u> (A)	<u>170</u> (B)	Prevalence Index = B/A = <u>1.7</u>	
	Multiply by:																	
OBL species <u>60.00</u>	x 1 <u>60</u>																	
FACW species <u>25.00</u>	x 2 <u>50</u>																	
FACU species <u>15.00</u>	x 3 <u>60</u>																	
UPL species <u>0.00</u>	x 4 <u>0</u>																	
Column Totals <u>100</u> (A)	<u>170</u> (B)																	
Prevalence Index = B/A = <u>1.7</u>																		
Sapling/Shrub Stratum (Plot Size: <u>15</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation yes 2 - Dominance Test is > 50% yes 3 - Prevalence Index is ≤ 3.0 ¹ <u> </u> 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. _____	_____	_____	_____															
	<u>0</u>	= Total Cover		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.														
Herb Stratum (Plot Size: <u>5</u>)					Hydrophytic Vegetation Present? <u>Yes</u>													
1. <u>Carex stricta</u>	<u>40.00</u>	<u>Yes</u>	<u>OBL</u>															
2. <u>Phalaris arundinacea</u>	<u>25.00</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Salix pedicellaris</u>	<u>20.00</u>	<u>Yes</u>	<u>OBL</u>															
4. <u>Poa pratensis</u>	<u>15.00</u>	<u>No</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
	<u>100</u>	= Total Cover																
Woody Vine Stratum (Plot Size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
	<u>0</u>	=Total Cover																
Remarks: (include photo numbers here or on a separate sheet.) 																		

SOIL

Sampling Point: AI138_340a20W

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:

- ☐ 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 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 Soil³:

- ☐ 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, M**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Maganese 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)

Restrictive Layer (if observed):

7

Type: _____

Depth (inches):

Hydric Soil Present? Yes

Remarks: