

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: I3_mainline City/County: Aitkin Sampling Date: 2017-06-06
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: AI126_200a22W
 Investigator(s): DPT, MRG Section, Township, Range: S2, T48N, R24W

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CL Slope (%): 0-2%
 Subregion (LRR or MLRA): _____ Latitude: 46.6792395338... Longitude: -93.35675558... Datum: NAD83
 Soil Map Unit Name: 1983 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? 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	
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>AI126_200aW</u>

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

WETS analysis shows precipitation below normal.

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> </u> Water-Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)	
<u>yes</u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)	
<u>yes</u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Moss Trim Lines (B16)	
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Dry-Season Water Table (C2)	
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Crayfish Burrows (C8)	
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Saturation Visible on Aerial Imagery (C9)	
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Stunted/Stressed Plants (D1)	
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>yes</u> Geomorphic Position (D2)	
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Shallow Aquitard (D3)	
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u> </u> Microtopographic Relief (D4)	
		<u>yes</u> FAC-Neutral Test (D5)	

Field Observations:

Surface Water Present?	<u>Yes</u>	Depth (inches) <u>6</u>	Wetland Hydrology Present? <u>Yes</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)

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

Remarks:

VEGETATION - Use scientific names of plants.

 Sampling Point: Al126_200a22W

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot Size: <u>30</u>)				Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species
2. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>4</u> (A)
3. _____	_____	_____	_____	Total Number of Dominant
4. _____	_____	_____	_____	Species Across All Strata: <u>4</u> (B)
5. _____	_____	_____	_____	Percent of Dominant Species
6. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
7. _____	_____	_____	_____	Prevalence Index worksheet:
	0 = Total Cover			Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot Size: <u>15</u>)				OBL species <u>25.00</u> x 1 <u>25</u>
1. <u>Spiraea alba</u>	<u>10.00</u>	<u>Yes</u>	<u>FACW</u>	FACW species <u>90.00</u> x 2 <u>180</u>
2. <u>Salix petiolaris</u>	<u>5.00</u>	<u>Yes</u>	<u>OBL</u>	FACU species <u>0.00</u> x 3 <u>0</u>
3. _____	_____	_____	_____	UPL species <u>0.00</u> x 4 <u>0</u>
4. _____	_____	_____	_____	Column Totals <u>115</u> (A) <u>205</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>1.7826086...</u>
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:
7. _____	15 = Total Cover			_____ 1 - Rapid Test for Hydrophytic Vegetation
				<u>yes</u> 2 - Dominance Test is > 50%
				<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
Herb Stratum (Plot Size: <u>5</u>)				_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
1. <u>Calamagrostis canadensis</u>	<u>80.00</u>	<u>Yes</u>	<u>FACW</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Carex lacustris</u>	<u>20.00</u>	<u>Yes</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	Definitions of Vegetation Strata:
4. _____	_____	_____	_____	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
5. _____	_____	_____	_____	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6. _____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
7. _____	_____	_____	_____	Woody vines - All woody vines greater than 3.28 ft in height.
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	100 = Total Cover			
Woody Vine Stratum (Plot Size: <u>30</u>)				Hydrophytic Vegetation Present? <u>Yes</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	0 = Total Cover			
Remarks: (include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: AI126_200a22W

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: