

**WETLAND DETERMINATION DATA FORM - North Central and Northeast Region**

Project/Site: I3\_mainline City/County: Aitkin Sampling Date: 2017-06-07  
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: AIC5300a10W  
 Investigator(s): SMR, TDT Section, Township, Range: S6, T47N, R22W  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): LC Slope (%): 3-7%  
 Subregion (LRR or MLRA): \_\_\_\_\_ Latitude: 46.5869852900... Longitude: -93.16440138... Datum: NAD83  
 Soil Map Unit Name: 546 NWI Classification: N/A  
 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>	<b>Is the Sampled Area within a Wetland?</b>	<u>Yes</u>
Hydric Soil Present?	<u>Yes</u>		If yes, optional Wetland Site ID: <u>AIC5303c1W</u>
Wetland Hydrology Present?	<u>Yes</u>		
Remarks: (Explain alternative procedures here or in a separate report.) WETS analysis shows antecedent precipitation below normal.			

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted/Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>	<u>Yes</u>
Surface Water Present?	<u>No</u>	Depth (inches)	_____
Water Table Present?	<u>Yes</u>	Depth (inches)	<u>4</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:

**VEGETATION** - Use scientific names of plants.

Sampling Point: AIC5300a10W

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot Size: <u>30</u> )				<b>Dominance Test worksheet:</b>
1. <u>Populus tremuloides</u>	<u>5.00</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>
5. _____	_____	_____	_____	Total % Cover of: _____ Multiply by:
6. _____	_____	_____	_____	OBL species <u>85.00</u> x 1 <u>85</u>
7. _____	_____	_____	_____	FACW species <u>35.00</u> x 2 <u>70</u>
	<u>5</u> = Total Cover			FACU species <u>0.00</u> x 3 <u>0</u>
<b>Sapling/Shrub Stratum</b> (Plot Size: <u>15</u> )				UPL species <u>0.00</u> x 4 <u>0</u>
1. <u>Salix petiolaris</u>	<u>25.00</u>	<u>Yes</u>	<u>OBL</u>	Column Totals <u>125</u> (A) <u>170</u> (B)
2. <u>Alnus incana</u>	<u>15.00</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>1.36</u>
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>
4. _____	_____	_____	_____	_____ 1 - Rapid Test for Hydrophytic Vegetation
5. _____	_____	_____	_____	<u>yes</u> 2 - Dominance Test is > 50%
6. _____	_____	_____	_____	<u>yes</u> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>
7. _____	_____	_____	_____	_____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
	<u>40</u> = Total Cover			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Herb Stratum</b> (Plot Size: <u>5</u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Carex lacustris</u>	<u>60.00</u>	<u>Yes</u>	<u>OBL</u>	<b>Definitions of Vegetation Strata:</b>
2. <u>Equisetum hyemale</u>	<u>20.00</u>	<u>Yes</u>	<u>FACW</u>	<b>Tree</b> - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
3. _____	_____	_____	_____	<b>Sapling/Shrub</b> - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
4. _____	_____	_____	_____	<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
5. _____	_____	_____	_____	<b>Woody vines</b> - All woody vines greater than 3.28 ft in height.
6. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> <u>Yes</u>
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>80</u> = Total Cover			
<b>Woody Vine Stratum</b> (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: AIC5300a10W

**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 <sup>1</sup>	Loc <sup>2</sup>			
0-8	10YR 2 1	100					MM		
8-24	10YR 5 1	90	10YR 5 6	10	C	M	cl		

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

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A1.1) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<p><b>Indicators for Problematic Hydric Soil<sup>3</sup>:</b></p> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16)(LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, M) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (explain in remarks)	
<p>Restrictive Layer (if observed): <input type="checkbox"/></p> <p>Type: _____</p> <p>Depth (inches): _____</p>			<p>Hydric Soil Present? Yes _____</p>		
<p>Remarks:</p>					