

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

Project/Site: SPP City/County: Aitkin Sampling Date: 2016-08-12  
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-50n26w6-i1  
 Investigator(s): ZCW, MGH Section, Township, Range: S6, T50N, R26W  
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CL Slope (%): 0-2%  
 Subregion (LRR or MLRA): \_\_\_\_\_ Latitude: 46.8455922743... Longitude: -93.68237634... Datum: NAD83  
 Soil Map Unit Name: 292 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>	
Hydric Soil Present?	<u>Yes</u>		<u>Yes</u>
Wetland Hydrology Present?	<u>Yes</u>		If yes, optional Wetland Site ID: <u>w-50n26w6-i</u>
Remarks: (Explain alternative procedures here or in a separate report.) Climatic conditions are "wet" based on the results of a WETS analysis.			

**HYDROLOGY**

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

<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b>	<u>Yes</u>
Surface Water Present?	<u>Yes</u>	Depth (inches) <u>1</u>	
Water Table Present?	<u>Yes</u>	Depth (inches) <u>0</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: w-50n26w...

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot Size: <u>30</u> )				
1. <u>Fraxinus nigra</u>	<u>60</u>		<u>FACW</u>	<b>Dominance Test worksheet:</b> 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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>60</u> = Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot Size: <u>15</u> )				
1. <u>Fraxinus nigra</u>	<u>15.00</u>	<u>Yes</u>	<u>FACW</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: <span style="float:right">Multiply by:</span> OBL species <u>0.00</u> x 1 <u>0</u> FACW species <u>130.00</u> x 2 <u>260</u> FACU species <u>0.00</u> x 3 <u>0</u> UPL species <u>0.00</u> x 4 <u>0</u> Column Totals <u>140</u> (A) <u>290</u> (B) Prevalence Index = B/A = <u>2.0714285...</u>
2. <u>Acer rubrum</u>	<u>10.00</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>25</u> = Total Cover			
<b>Herb Stratum</b> (Plot Size: <u>5</u> )				
1. <u>Calamagrostis canadensis</u>	<u>45.00</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation <u>yes</u> 2 - Dominance Test is > 50% <u>yes</u> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <small><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>
2. <u>Impatiens capensis</u>	<u>10.00</u>	<u>No</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>55</u> = Total Cover			
<b>Woody Vine Stratum</b> (Plot Size: <u>30</u> )				
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b> <b>Tree</b> - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> - All herbaeceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u> = Total Cover			
<b>Hydrophytic Vegetation Present?</b> <span style="float:right"><u>Yes</u></span>				
<b>Remarks:</b> (include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: w-50n26w...

**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>		
0-4	10YR 2 1	100					M	
4-18	10YR 4 2	80	10YR 5 8	20	C	M	LS	
18-24	10YR 5 2	80	10YR 5 8	20	C	M	SCL	

<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> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input checked="" type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soil<sup>2</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16)(LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, M)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Maganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (explain in remarks)</p>
<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>		

Site Photograph 1

Sampling Point: w-50n26w6-i1



Latitude: 46.8455892149795

Cowardin Classification: PFO

Longitude: -93.6823526211955

Circular 39: 7

Direction: West

Eggers & Reed: Hardwood Swamp/Coniferous Swamp

Remarks:

Empty rectangular box for additional remarks or notes.

Site Photograph 2

Sampling Point: w-50n26w6-i1



Latitude: 46.8455938250263

Cowardin Classification: PFO

Longitude: -93.6823721510299

Circular 39: 7

Direction: South

Eggers & Reed: Hardwood Swamp/Coniferous Swamp

Remarks:

Empty rectangular box for recording remarks.