

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: I3_mainline City/County: Clearwater Sampling Date: 2017-06-12
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-145n36w2-a2
 Investigator(s): SMR, MRG Section, Township, Range: S2, T145N, R36W
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CC Slope (%): 8-15%
 Subregion (LRR or MLRA): _____ Latitude: 47.3989375262... Longitude: -95.22114322... Datum: NAD83
 Soil Map Unit Name: 1272C NWI Classification: PEMC
 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>w-145n36w2-a</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> </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> Inundation Visible on Aerial Imagery (B7)	
<u> </u> Sparsely Vegetated Concave Surface (B8)	

Field Observations:	
Surface Water Present? <u>Yes</u> Depth (inches) <u>4</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: w-145n36w2-a2

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot Size: <u>30</u>)					
1. <u>Ulmus americana</u>	<u>10.00</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. <u>Fraxinus nigra</u>	<u>10.00</u>	<u>Yes</u>	<u>FACW</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>20</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>60.00</u> x 1 <u>60</u> FACW species <u>50.00</u> x 2 <u>100</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>120</u> (A) <u>190</u> (B) Prevalence Index = B/A = <u>1.5833333...</u>	
Sapling/Shrub Stratum (Plot Size: <u>15</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>yes</u> 2 - Dominance Test is > 50% <u>yes</u> 3 - Prevalence Index is ≤ 3.0 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. 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>)					
1. <u>Glyceria striata</u>	<u>30.00</u>	<u>Yes</u>	<u>OBL</u>		
2. <u>Phalaris arundinacea</u>	<u>20.00</u>	<u>Yes</u>	<u>FACW</u>		
3. <u>Acorus calamus</u>	<u>20.00</u>	<u>Yes</u>	<u>OBL</u>		
4. <u>Calamagrostis canadensis</u>	<u>20.00</u>	<u>Yes</u>	<u>FACW</u>		
5. <u>Carex lacustris</u>	<u>10.00</u>	<u>No</u>	<u>OBL</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
<u>100</u> = Total Cover					
Woody Vine Stratum (Plot Size: <u>30</u>)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? <u>Yes</u>	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
<u>0</u> = Total Cover					

Remarks: (include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: w-145n36w2-a2

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 ¹	Loc ²			
0-8	10YR 2 1	100					SL		
8-16	10YR 5 1	80	10YR 5 4	20	C	M	SL		

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 (A1.1)
- 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-Manganese 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)

<p>Restrictive Layer (if observed): <input type="checkbox"/></p> <p>Type: <u>Rock</u></p> <p>Depth (inches): <u>16</u></p>	<p>Hydric Soil Present? <u>Yes</u></p>
<p>Remarks:</p>	