

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Clearwater Sampling Date: 2015-07-10
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: CLC5004_200k3W
 Investigator(s): BEH/KAT Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CC Slope (%): 0-2
 Subregion (LRR or MLRA): LRR K Latitude: 47.6683919 Longitude: -95.40062136 Datum: Minnesota State ...
 Soil Map Unit Name: 544 NWI Classification: PEMCd

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: _____
Hydric Soil Present?	<u>Yes</u>	
Wetland Hydrology Present?	<u>Yes</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Sample point in a Willow-Carr area within a large marsh wetland complex.		

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>2</u>	Wetland Hydrology Present? <u>Yes</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: Two inches of standing water are present at the sample point.			

VEGETATION - Use scientific names of plants.

Sampling Point: CLC5004_...

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot Size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant <u>2</u> Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: $\frac{100}{\text{A/B}}$
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>75.00</u> x 1 <u>75</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>125</u> (A) <u>175</u> (B) Prevalence Index = B/A = <u>1.4</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot Size: <u>15'</u>) 1. <u>Salix petiolaris</u>	<u>50.00</u> _____ _____ _____ _____ _____ _____ <u>50</u> = Total Cover	<u>Yes</u> _____ _____ _____ _____ _____ _____ <u>50</u> = Total Cover	<u>FACW</u> _____ _____ _____ _____ _____ _____ <u>50</u> = Total Cover	
Herb Stratum (Plot Size: <u>5'</u>) 1. <u>Carex lacustris</u> 2. <u>Typha latifolia</u> 3. <u>Scutellaria galericulata</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____	<u>60.00</u> <u>10.00</u> <u>5.00</u> _____ _____ _____ _____ _____ _____ _____ _____ <u>75</u> = Total Cover	<u>Yes</u> <u>No</u> <u>No</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ <u>75</u> = Total Cover	<u>OBL</u> <u>OBL</u> <u>OBL</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ <u>75</u> = Total Cover	Hydrophytic Vegetation Indicators: <u>yes</u> 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.
Woody Vine Stratum (Plot Size: _____) 1. _____ 2. _____ 3. _____ 4. _____	_____ _____ _____ _____ <u>0</u> = Total Cover	_____ _____ _____ _____ <u>0</u> = Total Cover	_____ _____ _____ _____ <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. Hydrophytic Vegetation Present? _____
Remarks: (include photo numbers here or on a separate sheet.) The shrub component is dominated by meadow willow, and the herbaceous layer is dominated by lake sedge.				

SOIL

Sampling Point: CLC5004_...

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:		Indicators for Problematic Hydric Soil ³ :
☒ 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)	☐ 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)
Restrictive Layer (if observed): ☐ Type: _____ Depth (inches): _____		Hydric Soil Present? Yes _____
Remarks: Soil is multiple layers of peat and mucky peat; the profile meets hydric soil indicator A1-Histosol.		