

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Clearwater Sampling Date: 2015-07-09
Applicant/Owner: Enbridge State: Minnesota Sampling Point: CLC5004_200e1W
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: 47.67103977 Longitude: -95.39113309 Datum: Minnesota State ...
Soil Map Unit Name: 718C NWI Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks):

YesAre Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? YesAre 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.) Shallow marsh depression located in grazed pastureland.		

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>yes</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:		Wetland Hydrology Present? <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? <u>Yes</u> (includes capillary fringe)	Depth (inches) <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: 1 inch of standing water is present at the sample point.		

Sampling Point: CLC5004_...

		Absolute	Dominant	Indicator	Dominance Test worksheet:
		% Cover	Species?	Status	
<u>Tree Stratum</u> (Plot Size: _____)					Number of Dominant Species
1. _____					That Are OBL, FACW, or FAC: ¹ _____ (A)
2. _____					Total Number of Dominant
3. _____					¹ _____ (B)
4. _____					Percent of Dominant Species
5. _____					That Are OBL, FACW, or FAC: ¹⁰⁰ _____ (A/B)
6. _____					Prevalence Index worksheet:
7. _____					
0 _____ = Total Cover					Total % Cover of: _____ Multiply by: _____
<u>Sapling/Shrub Stratum</u> (Plot Size: _____)					OBL species <u>85.00</u> x 1 <u>85</u>
1. _____					FACW species <u>10.00</u> x 2 <u>20</u>
2. _____					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>95</u> (A) <u>105</u> (B)
5. _____					Prevalence Index = B/A = <u>1.1052631...</u>
6. _____					Hydrophytic Vegetation Indicators:
7. _____					
0 _____ = Total Cover					<u>yes</u> 1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot Size: <u>5'</u> _____)					<u>yes</u> 2 - Dominance Test is > 50%
1. <u>Typha X glauca</u>					<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
2. <u>Scirpus cyperinus</u>					_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. <u>Phalaris arundinacea</u>					Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Carex lacustris</u>					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Iris versicolor</u>					Definitions of Vegetation Strata:
6. _____					
7. _____					Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
8. _____					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. _____					Herb - All herbaeceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10. _____					Woody vines - All woody vines greater than 3.28 ft in height.
11. _____					Hydrophytic Vegetation Present? _____
12. _____					
95 _____ = Total Cover					
<u>Woody Vine Stratum</u> (Plot Size: _____)					
1. _____					
2. _____					
3. _____					
4. _____					
0 _____ =Total Cover					
Remarks: (include photo numbers here or on a separate sheet.)					
The sample point is dominated by hybrid cattail.					

SOIL

Sampling Point: CLC5004_...

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		
0-1	10YR 2 1	100					MP	
1-3	10YR 2 1	100					MMI	
3-13	10YR 2 1	100					SC	
13-17	10YR 3 1	90	7.5YR 4 6	10	C	M	SC	
17-25	10YR 4 1	85	7.5YR 4 6	15	C	M	SC	

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):

☐

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____

Remarks:

Top 13" of soil are black layers of mucky peat, loamy mucky mineral, and sandy clay. Below is a dark layer of sandy clay with redox underlain by a depleted layer of sandy clay with abundant redox concentrations; the profile meets hydric soil indicator A12-Thick Dark Surface.