

# WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Clearwater Sampling Date: 2015-07-11  
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: CLC5004\_200m2W  
 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: 47.66883571 Longitude: -95.39811163 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<br>within a Wetland?<br>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.)<br>Shrub-Carr sample point dominated by willows and sedges. The wetland is located within a larger 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>yes</u> Water-Stained Leaves (B9)                  | <u>yes</u> Surface Soil Cracks (B6)                  |
| <u>yes</u> High Water Table (A2)                                                                           | <u>yes</u> Aquatic Fauna (B13)                        | <u>yes</u> Drainage Patterns (B10)                   |
| <u>yes</u> Saturation (A3)                                                                                 | <u>yes</u> Marl Deposits (B15)                        | <u>yes</u> Moss Trim Lines (B16)                     |
| <u>yes</u> Water Marks (B1)                                                                                | <u>yes</u> Hydrogen Sulfide Odor (C1)                 | <u>yes</u> Dry-Season Water Table (C2)               |
| <u>yes</u> Sediment Deposits (B2)                                                                          | <u>yes</u> Oxidized Rhizospheres on Living Roots (C3) | <u>yes</u> Crayfish Burrows (C8)                     |
| <u>yes</u> Drift Deposits (B3)                                                                             | <u>yes</u> Presence of Reduced Iron (C4)              | <u>yes</u> Saturation Visible on Aerial Imagery (C9) |
| <u>yes</u> Algal Mat or Crust (B4)                                                                         | <u>yes</u> Recent Iron Reduction in Tilled Soils (C6) | <u>yes</u> Stunted/Stressed Plants (D1)              |
| <u>yes</u> Iron Deposits (B5)                                                                              | <u>yes</u> Thin Muck Surface (C7)                     | <u>yes</u> Geomorphic Position (D2)                  |
| <u>yes</u> Inundation Visible on Aerial Imagery (B7)                                                       | <u>yes</u> Other (Explain in Remarks)                 | <u>yes</u> Shallow Aquitard (D3)                     |
| <u>yes</u> Sparsely Vegetated Concave Surface (B8)                                                         |                                                       | <u>yes</u> Microtopographic Relief (D4)              |
|                                                                                                            |                                                       | <u>yes</u> FAC-Neutral Test (D5)                     |
| Field Observations:                                                                                        |                                                       |                                                      |
| Surface Water Present?                                                                                     | <u>No</u> Depth (inches) _____                        | Wetland Hydrology Present? <u>Yes</u>                |
| Water Table Present?                                                                                       | <u>Yes</u> Depth (inches) <u>0</u>                    |                                                      |
| Saturation Present?<br>(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:<br>Soil is saturated at the surface.                                                              |                                                       |                                                      |

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

 Sampling Point: CLC5004\_...

|                                                                                                                                            | Absolute<br>% Cover | Dominant<br>Species? | Indicator<br>Status |                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|---------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Tree Stratum</b> (Plot Size: <u>30'</u> )                                                                                               |                     |                      |                     | <b>Dominance Test worksheet:</b>                                                                               |
| 1. <u>Salix discolor</u>                                                                                                                   | <u>15.00</u>        | <u>Yes</u>           | <u>FACW</u>         | Number of Dominant Species                                                                                     |
| 2. <u>Ulmus americana</u>                                                                                                                  | <u>5.00</u>         | <u>No</u>            | <u>FACW</u>         | That Are OBL, FACW, or FAC: <u>3</u> (A)                                                                       |
| 3. <u>Populus tremuloides</u>                                                                                                              | <u>3.00</u>         | <u>No</u>            | <u>FACU</u>         | Total Number of Dominant                                                                                       |
| 4. _____                                                                                                                                   | <u>3.00</u>         | <u>No</u>            | <u>FACW</u>         | <u>3</u>                                                                                                       |
| 5. _____                                                                                                                                   |                     |                      |                     | Species Across All Strata: _____ (B)                                                                           |
| 6. <u>Populus balsamifera</u>                                                                                                              |                     |                      |                     | Percent of Dominant Species                                                                                    |
| 7. _____                                                                                                                                   |                     |                      |                     | That Are OBL, FACW, or FAC: <u>100</u> (A/B)                                                                   |
|                                                                                                                                            | <u>26</u>           | <u>= Total Cover</u> |                     | <b>Prevalence Index worksheet:</b>                                                                             |
| <b>Sapling/Shrub Stratum</b> (Plot Size: <u>15'</u> )                                                                                      |                     |                      |                     | <b>Total % Cover of:</b>                                                                                       |
| 1. <u>Salix discolor</u>                                                                                                                   | <u>30.00</u>        | <u>Yes</u>           | <u>FACW</u>         | <b>Multiply by:</b>                                                                                            |
| 2. <u>Ribes americanum</u>                                                                                                                 | <u>5.00</u>         | <u>No</u>            | <u>FACW</u>         | OBL species <u>75.00</u> x 1 <u>75</u>                                                                         |
| 3. <u>Populus balsamifera</u>                                                                                                              | <u>5.00</u>         | <u>No</u>            | <u>FACW</u>         | FACW species <u>103.00</u> x 2 <u>206</u>                                                                      |
| 4. _____                                                                                                                                   |                     |                      |                     | FACU species <u>0.00</u> x 3 <u>12</u>                                                                         |
| 5. _____                                                                                                                                   |                     |                      |                     | UPL species <u>0.00</u> x 4 <u>0</u>                                                                           |
| 6. _____                                                                                                                                   |                     |                      |                     | Column Totals <u>181</u> (A) <u>293</u> (B)                                                                    |
| 7. _____                                                                                                                                   |                     |                      |                     | Prevalence Index = B/A = <u>1.6187845...</u>                                                                   |
|                                                                                                                                            | <u>40</u>           | <u>= Total Cover</u> |                     | <b>Hydrophytic Vegetation Indicators:</b>                                                                      |
| <b>Herb Stratum</b> (Plot Size: <u>5'</u> )                                                                                                |                     |                      |                     | <u>yes</u> 1 - Rapid Test for Hydrophytic Vegetation                                                           |
| 1. <u>Carex lacustris</u>                                                                                                                  | <u>35.00</u>        | <u>Yes</u>           | <u>OBL</u>          | <u>yes</u> 2 - Dominance Test is > 50%                                                                         |
| 2. <u>Impatiens capensis</u>                                                                                                               | <u>25.00</u>        | <u>Yes</u>           | <u>FACW</u>         | <u>yes</u> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>                                                          |
| 3. <u>Sparganium eurycarpum</u>                                                                                                            | <u>10.00</u>        | <u>No</u>            | <u>OBL</u>          | _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)   |
| 4. <u>Carex atherodes</u>                                                                                                                  | <u>10.00</u>        | <u>No</u>            | <u>OBL</u>          | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                                      |
| 5. <u>Poa palustris</u>                                                                                                                    | <u>10.00</u>        | <u>No</u>            | <u>FACW</u>         | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 6. <u>Typha latifolia</u>                                                                                                                  | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          | <b>Definitions of Vegetation Strata:</b>                                                                       |
| 7. <u>Mentha arvensis</u>                                                                                                                  | <u>5.00</u>         | <u>No</u>            | <u>FACW</u>         | <b>Tree</b> - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.    |
| 8. <u>Eutrochium maculatum</u>                                                                                                             | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          | <b>Sapling/Shrub</b> - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.       |
| 9. <u>Symphyotrichum puniceum</u>                                                                                                          | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          | <b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  |
| 10. <u>Iris versicolor</u>                                                                                                                 | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          | <b>Woody vines</b> - All woody vines greater than 3.28 ft in height.                                           |
| 11. _____                                                                                                                                  |                     |                      |                     | <b>Hydrophytic Vegetation Present?</b> _____                                                                   |
| 12. _____                                                                                                                                  |                     |                      |                     |                                                                                                                |
|                                                                                                                                            | <u>115</u>          | <u>= Total Cover</u> |                     |                                                                                                                |
| <b>Woody Vine Stratum</b> (Plot Size: _____)                                                                                               |                     |                      |                     |                                                                                                                |
| 1. _____                                                                                                                                   |                     |                      |                     |                                                                                                                |
| 2. _____                                                                                                                                   |                     |                      |                     |                                                                                                                |
| 3. _____                                                                                                                                   |                     |                      |                     |                                                                                                                |
| 4. _____                                                                                                                                   |                     |                      |                     |                                                                                                                |
|                                                                                                                                            | <u>0</u>            | <u>=Total Cover</u>  |                     |                                                                                                                |
| <b>Remarks:</b> (include photo numbers here or on a separate sheet.)                                                                       |                     |                      |                     |                                                                                                                |
| Scattered tree cover and the shrub component are dominated by pussy willow. The herbaceous layer is dominated by lake sedge and jewelweed. |                     |                      |                     |                                                                                                                |

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|---------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |         |         |
| 0-14              | 10YR 2 1      | 100 |                |    |                   |                  | M       |         |
| 14-19             | 10YR 3 1      | 100 |                |    |                   |                  | SCL     |         |
| 19-28             | 2.5Y 6 2      | 75  | 10YR 6 8       | 20 | C                 | M                | SC      |         |
|                   |               |     | GLE Y1 6 5GY   | 5  | D                 | M                | SC      |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |
|                   |               |     |                |    |                   |                  |         |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: 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 Soil<sup>3</sup>:

☐ 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:

Soil is black muck underlain by slighty lighter sandy clay loam. The bottom layer is depleted sandy clay with redox concentrations ans depletions; the profile meets three hydric soil indicators.