

# 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\_20011W  
 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: 47.66857523 Longitude: -95.40396239 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): 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>Shallow marsh dominated by grasses. |            |                                                                                     |

## 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> High Water Table (A2)                      | <u>yes</u> Saturation (A3)                            | <u>yes</u> Surface Soil Cracks (B6)                  |
| <u>yes</u> Water Marks (B1)                                                                                | <u>yes</u> Sediment Deposits (B2)                     | <u>yes</u> Drift Deposits (B3)                        | <u>yes</u> Drainage Patterns (B10)                   |
| <u>yes</u> Algal Mat or Crust (B4)                                                                         | <u>yes</u> Iron Deposits (B5)                         | <u>yes</u> Inundation Visible on Aerial Imagery (B7)  | <u>yes</u> Moss Trim Lines (B16)                     |
| <u>yes</u> Sparsely Vegetated Concave Surface (B8)                                                         | <u>yes</u> Water-Stained Leaves (B9)                  | <u>yes</u> Aquatic Fauna (B13)                        | <u>yes</u> Dry-Season Water Table (C2)               |
| <u>yes</u> Marl Deposits (B15)                                                                             | <u>yes</u> Hydrogen Sulfide Odor (C1)                 | <u>yes</u> Oxidized Rhizospheres on Living Roots (C3) | <u>yes</u> Crayfish Burrows (C8)                     |
| <u>yes</u> Presence of Reduced Iron (C4)                                                                   | <u>yes</u> Recent Iron Reduction in Tilled Soils (C6) | <u>yes</u> Thin Muck Surface (C7)                     | <u>yes</u> Saturation Visible on Aerial Imagery (C9) |
| <u>yes</u> Other (Explain in Remarks)                                                                      | <u>yes</u> Shallow Aquitard (D3)                      | <u>yes</u> Microtopographic Relief (D4)               | <u>yes</u> Stunted/Stressed Plants (D1)              |
| <u>yes</u> FAC-Neutral Test (D5)                                                                           | <u>yes</u> Geomorphic Position (D2)                   | <u>yes</u> Shallow Aquitard (D3)                      | <u>yes</u> Microtopographic Relief (D4)              |
| Field Observations:                                                                                        |                                                       |                                                       |                                                      |
| Surface Water Present?                                                                                     | <u>No</u>                                             | Depth (inches)                                        | <u>3</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)                                                                                |                                                       | Wetland Hydrology Present? <u>Yes</u>                 |                                                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                       |                                                       |                                                      |
| Remarks:<br>Soil is saturated at the surface with a high water table 3 inches below 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: _____)                                                                                                              |                     |                      |                     | <b>Dominance Test worksheet:</b><br>Number of Dominant Species<br>That Are OBL, FACW, or FAC: <u>2</u> (A)<br>Total Number of Dominant<br><u>2</u><br>Species Across All Strata: _____ (B)<br>Percent of Dominant Species<br>That Are OBL, FACW, or FAC: $\frac{100}{\text{Total}} = \frac{100}{2} = 50\%$ (A/B)                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 6. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7. _____                                                                                                                                            | _____               | _____                | _____               | <b>Prevalence Index worksheet:</b><br>Total % Cover of: _____ Multiply by:<br>OBL species <u>55.00</u> x 1 <u>55</u><br>FACW species <u>40.00</u> x 2 <u>80</u><br>FACU species <u>0.00</u> x 3 <u>0</u><br>UPL species <u>0.00</u> x 4 <u>0</u><br>Column Totals <u>95</u> (A) <u>135</u> (B)<br>Prevalence Index = B/A = $\frac{135}{95} = 1.4210526...$                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 0 _____ = Total Cover                                                                                                                               |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Sapling/Shrub Stratum</b> (Plot Size: _____)                                                                                                     |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Hydrophytic Vegetation Indicators:</b><br>yes _____ 1 - Rapid Test for Hydrophytic Vegetation<br>yes _____ 2 - Dominance Test is > 50%<br>yes _____ 3 - Prevalence Index is $\leq 3.0^1$<br>_____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br>Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 6. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7. _____                                                                                                                                            | _____               | _____                | _____               | <b>Definitions of Vegetation Strata:</b><br><b>Tree</b> - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.<br><b>Sapling/Shrub</b> - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.<br><b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.<br><b>Woody vines</b> - All woody vines greater than 3.28 ft in height. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 0 _____ = Total Cover                                                                                                                               |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Herb Stratum</b> (Plot Size: <u>5'</u> _____)                                                                                                    |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Hydrophytic Vegetation Present?</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1. <u>Phalaris arundinacea</u>                                                                                                                      | <u>40.00</u>        | <u>Yes</u>           | <u>FACW</u>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. <u>Glyceria grandis</u>                                                                                                                          | <u>35.00</u>        | <u>Yes</u>           | <u>OBL</u>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3. <u>Panicum punctatum</u>                                                                                                                         | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4. <u>Alisma triviale</u>                                                                                                                           | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5. <u>Scirpus cyperinus</u>                                                                                                                         | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 6. <u>Typha X glauca</u>                                                                                                                            | <u>5.00</u>         | <u>No</u>            | <u>OBL</u>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 8. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 9. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 10. _____                                                                                                                                           | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 11. _____                                                                                                                                           | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 12. _____                                                                                                                                           | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 95 _____ = Total Cover                                                                                                                              |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Woody Vine Stratum</b> (Plot Size: _____)                                                                                                        |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4. _____                                                                                                                                            | _____               | _____                | _____               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 0 _____ = Total Cover                                                                                                                               |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Remarks:</b> (include photo numbers here or on a separate sheet.)<br>The sample site is dominated by reed canary grass and American manna grass. |                     |                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

SOIL

Sampling Point: CLC5004\_...

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> |         |         |
| 0-4               | 10YR 2 1      | 100 |                |   |                   |                  | MMI     |         |
| 4-19              | 10YR 2 1      | 81  |                |   |                   |                  | C       |         |
| 4-19              | 10YR 5 2      | 10  | GLE Y1 5 5G_/1 | 3 | D                 | M                | C       |         |
| 4-19              |               |     | 7.5YR 4 6      | 3 | C                 | M                | C       |         |
| 4-19              |               |     | 10YR 5 8       | 3 | C                 | M                | C       |         |
| 19-28             | 10YR 2 1      | 100 |                |   |                   |                  | M       |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |
|                   |               |     |                |   |                   |                  |         |         |

<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 loamy mucky mineral over a mixed layer of dark clay with gleyed depletions and redox concentrations. The bottom layer is muck. The profile meets hydric soil indicator F1-Loamy Mucky Mineral.