

## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: SPP City/County: Carlton Sampling Date: 6/3/2014  
 Applicant/Owner: Enbridge State: MN Sampling Point: CRR51007\_300a1W  
 Investigator(s): LEB/CPF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none) CC  
 Slope (%): 0 - 2% Lat.: 46.580675 Long.: -92.610447 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 504C NWI Classification: PFO/SSB  
 Are climatic/hydrologic conditions of the site typical for this time of the year? ☒ (If no, explain in remarks)  
 Are vegetation ☐, soil ☐, or hydrology ☐ significantly disturbed? Are "normal circumstances" present? ☒  
 Are vegetation ☐, soil ☐, or hydrology ☐ naturally problematic?  
 (If needed, explain any answers in remarks)

### SUMMARY OF FINDINGS

|                                                                                                                                              |                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Hydrophytic vegetation present? <u>Y</u><br>Hydric soil present? <u>Y</u><br>Indicators of wetland hydrology present? <u>Y</u>               | <b>Is the sampled area within a wetland?</b> <u>Y</u><br><br>If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.)<br>The wetland is an alder thicket within an aspen-dominated forest. |                                                                                                      |

### HYDROLOGY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Primary Indicators</b> (minimum of one is required; check all that apply)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Secondary Indicators</b> (minimum of two required)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| <input checked="" type="checkbox"/> Surface Water (A1)<br><input checked="" type="checkbox"/> High Water Table (A2)<br><input checked="" type="checkbox"/> Saturation (A3)<br><input type="checkbox"/> Water Marks (B1)<br><input type="checkbox"/> Sediment Deposits (B2)<br><input type="checkbox"/> Drift Deposits (B3)<br><input type="checkbox"/> Algal Mat or Crust (B4)<br><input type="checkbox"/> Iron Deposits (B5)<br><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)<br><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input checked="" type="checkbox"/> Water-Stained Leaves (B9)<br><input type="checkbox"/> Aquatic Fauna (B13)<br><input type="checkbox"/> Marl Deposits (B15)<br><input type="checkbox"/> Hydrogen Sulfide Odor (C1)<br><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)<br><input type="checkbox"/> Presence of Reduced Iron (C4)<br><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)<br><input type="checkbox"/> Thin Muck Surface (C7)<br><input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6)<br><input type="checkbox"/> Drainage Patterns (B10)<br><input type="checkbox"/> Moss Trim Lines (B16)<br><input type="checkbox"/> Dry-Season Water Table (C2)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input type="checkbox"/> Stunted or Stressed Plants (D1)<br><input checked="" type="checkbox"/> Geomorphic Position (D2)<br><input type="checkbox"/> Shallow Aquitard (D3)<br><input type="checkbox"/> Microtopographic Relief (D4)<br><input checked="" type="checkbox"/> FAC-Neutral Test (D5) |  |
| <b>Field Observations:</b><br>Surface water present? Yes <input checked="" type="checkbox"/><br>Water table present? Yes <input checked="" type="checkbox"/><br>Saturation present? Yes <input checked="" type="checkbox"/><br>(includes capillary fringe)                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Depth (inches): <u>5</u><br>Depth (inches): _____<br>Depth (inches): _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Indicators of wetland hydrology present?</b> <u>Y</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Remarks:<br>The wetland has standing water throughout.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |

**VEGETATION - Use scientific names of plants**
**Sampling Point:**

CRR51007\_300a1W

| Tree Stratum |                    |  |  | Plot Size ( 30 ft ) |    | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|--------------------|--|--|---------------------|----|------------------|------------------|------------------|
| 1            | <i>Acer rubrum</i> |  |  |                     | 20 | Y                | FAC              |                  |
| 2            |                    |  |  |                     |    |                  |                  |                  |
| 3            |                    |  |  |                     |    |                  |                  |                  |
| 4            |                    |  |  |                     |    |                  |                  |                  |
| 5            |                    |  |  |                     |    |                  |                  |                  |
| 6            |                    |  |  |                     |    |                  |                  |                  |
| 7            |                    |  |  |                     |    |                  |                  |                  |
| 8            |                    |  |  |                     |    |                  |                  |                  |
| 9            |                    |  |  |                     |    |                  |                  |                  |
| 10           |                    |  |  |                     |    |                  |                  |                  |
|              |                    |  |  |                     | 20 | =                | Total Cover      |                  |

  

| Sapling/Shrub Stratum |                         |  |  | Plot Size ( 15 ft ) |    | Absolute % Cover | Dominant Species | Indicator Status |
|-----------------------|-------------------------|--|--|---------------------|----|------------------|------------------|------------------|
| 1                     | <i>Alnus incana</i>     |  |  |                     | 40 | Y                | FACW             |                  |
| 2                     | <i>Salix petiolaris</i> |  |  |                     | 20 | Y                | FACW             |                  |
| 3                     |                         |  |  |                     |    |                  |                  |                  |
| 4                     |                         |  |  |                     |    |                  |                  |                  |
| 5                     |                         |  |  |                     |    |                  |                  |                  |
| 6                     |                         |  |  |                     |    |                  |                  |                  |
| 7                     |                         |  |  |                     |    |                  |                  |                  |
| 8                     |                         |  |  |                     |    |                  |                  |                  |
| 9                     |                         |  |  |                     |    |                  |                  |                  |
| 10                    |                         |  |  |                     |    |                  |                  |                  |
|                       |                         |  |  |                     | 60 | =                | Total Cover      |                  |

  

| Herb Stratum |                                 |  |  | Plot Size ( 5 ft ) |    | Absolute % Cover | Dominant Species | Indicator Status |
|--------------|---------------------------------|--|--|--------------------|----|------------------|------------------|------------------|
| 1            | <i>Calamagrostis canadensis</i> |  |  |                    | 35 | Y                | OBL              |                  |
| 2            | <i>Cicuta maculata</i>          |  |  |                    | 5  | N                | OBL              |                  |
| 3            | <i>Alnus incana</i>             |  |  |                    | 5  | N                | FACW             |                  |
| 4            | <i>Carex intumescens</i>        |  |  |                    | 5  | N                | FACW             |                  |
| 5            | <i>Carex lacustris</i>          |  |  |                    | 5  | N                | OBL              |                  |
| 6            | <i>Iris versicolor</i>          |  |  |                    | 5  | N                | OBL              |                  |
| 7            | <i>Equisetum sylvaticum</i>     |  |  |                    | 5  | N                | FACW             |                  |
| 8            |                                 |  |  |                    |    |                  |                  |                  |
| 9            |                                 |  |  |                    |    |                  |                  |                  |
| 10           |                                 |  |  |                    |    |                  |                  |                  |
| 11           |                                 |  |  |                    |    |                  |                  |                  |
| 12           |                                 |  |  |                    |    |                  |                  |                  |
| 13           |                                 |  |  |                    |    |                  |                  |                  |
| 14           |                                 |  |  |                    |    |                  |                  |                  |
| 15           |                                 |  |  |                    |    |                  |                  |                  |
|              |                                 |  |  |                    | 65 | =                | Total Cover      |                  |

  

| Woody Vine Stratum |  |  |  | Plot Size ( 30 ft ) |   | Absolute % Cover | Dominant Species | Indicator Status |
|--------------------|--|--|--|---------------------|---|------------------|------------------|------------------|
| 1                  |  |  |  |                     |   |                  |                  |                  |
| 2                  |  |  |  |                     |   |                  |                  |                  |
| 3                  |  |  |  |                     |   |                  |                  |                  |
| 4                  |  |  |  |                     |   |                  |                  |                  |
| 5                  |  |  |  |                     |   |                  |                  |                  |
|                    |  |  |  |                     | 0 | =                | Total Cover      |                  |

  

**50/20 Thresholds**

|                       |     |     |
|-----------------------|-----|-----|
|                       | 20% | 50% |
| Tree Stratum          | 4   | 10  |
| Sapling/Shrub Stratum | 12  | 30  |
| Herb Stratum          | 13  | 33  |
| Woody Vine Stratum    | 0   | 0   |

  

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

  

**Prevalence Index Worksheet**

Total % Cover of:

|                          |     |             |         |
|--------------------------|-----|-------------|---------|
| OBL species              | 50  | x 1 =       | 50      |
| FACW species             | 75  | x 2 =       | 150     |
| FAC species              | 20  | x 3 =       | 60      |
| FACU species             | 0   | x 4 =       | 0       |
| UPL species              | 0   | x 5 =       | 0       |
| Column totals            | 145 | (A)         | 260 (B) |
| Prevalence Index = B/A = |     | <u>1.79</u> |         |

  

**Hydrophytic Vegetation Indicators:**

☒ Rapid test for hydrophytic vegetation

☒ Dominance test is >50%

☒ Prevalence index is ≤3.0\*

Morphological adaptations\* (provide supporting data in Remarks or on a separate sheet)

☐ Problematic hydrophytic vegetation\* (explain)

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

  

**Definitions of Vegetation Strata:**

**Tree** - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** - Woody plants less than 3 in. DBH and greater than 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?** Y

  

Remarks: (Include photo numbers here or on a separate sheet)  
 The vegetation is dominated by alder.

**SOIL**
**Sampling Point:** CRR51007\_300a1W

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

| Depth<br>(In.) | Matrix        |     |     | Redox Features |     |    |       | Texture | Remarks |
|----------------|---------------|-----|-----|----------------|-----|----|-------|---------|---------|
|                | Color (moist) |     | %   | Color (moist)  |     | %  | Type* |         |         |
| 0-12           | Hue_10YR      | 2/2 | 100 |                |     |    |       | MMI     | sandy   |
| 12-18          | Hue_10YR      | 4/6 | 85  | Hue_7.5YR      | 5/8 | 15 | C     | M       | VFS     |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |
|                |               |     |     |                |     |    |       |         |         |

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

\*\*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

- ☐ 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 Soils:**

- ☐ 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, L)
- ☐ 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)

\*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric soil present?** Y
**Remarks:**

Sandy mucky mineral observed over a layer of fine sand containing redox features.