

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: SPP City/County: Wadena Sampling Date: 9/8/2014
 Applicant/Owner: Enbridge State: MN Sampling Point: WA004a1W
 Investigator(s): RAJ/BEH Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none) CC
 Slope (%): 0 - 2% Lat.: 46.796629 Long.: -94.911798 Datum: _____
 Soil Map Unit Name: 458C NWI Classification: _____
 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
 Are vegetation , soil , or hydrology naturally problematic? circumstances" present?
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u> | Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) A small sedge meadow community in a depression. Upland trees hang over the wetland perimeter. There is a two-track road running through the wetland area. All parameters of wetland conditions are present. | |

HYDROLOGY

| | | |
|--|---|---|
| Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) Surface (B8) | Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) | Field Observations: Surface water present? Yes <input type="checkbox"/> Depth (inches): _____ Water table present? Yes <input checked="" type="checkbox"/> Depth (inches): <u>3</u> Saturation present? Yes <input checked="" type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) |
| Indicators of wetland hydrology present? <u>Y</u> | | |
| Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |
| Remarks: The wetland area has soils saturated to the surface, a high water table throughout, and surface water in microdepressions. Indicators of wetland hydrology are present. | | |

VEGETATION - Use scientific names of plants

Sampling Point:

WA004a1W

| Tree Stratum | | | Absolute % Cover | | | Dominant Species | | | Indicator Status | | |
|--------------|---------|--|------------------|--|--|------------------|--|--|------------------|--|--|
| Plot Size (| 30 ft) | | | | | | | | | | |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| | | | 0 = Total Cover | | | | | | | | |

| Sapling/Shrub Stratum | | | Absolute % Cover | | | Dominant Species | | | Indicator Status | | |
|-----------------------|---------|--|------------------|--|--|------------------|--|--|------------------|--|--|
| Plot Size (| 15 ft) | | | | | | | | | | |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| | | | 20 = Total Cover | | | | | | | | |

| Herb Stratum | | | Absolute % Cover | | | Dominant Species | | | Indicator Status | | |
|--------------|--------|--|------------------|--|--|------------------|--|--|------------------|--|--|
| Plot Size (| 5 ft) | | | | | | | | | | |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| | | | 81 = Total Cover | | | | | | | | |

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

| 50/20 Thresholds | | |
|-----------------------|-----|-----|
| | 20% | 50% |
| Tree Stratum | 0 | 0 |
| Sapling/Shrub Stratum | 4 | 10 |
| Herb Stratum | 16 | 41 |
| 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: | 6 | (B) |
| Percent of Dominant Species that are OBL, FACW, or FAC: | 66.67% (A/B) | |

| Prevalence Index Worksheet | | |
|----------------------------|---------|----------|
| Total % Cover of: | | |
| OBL species | 63 | x 1 = 63 |
| FACW species | 8 | x 2 = 16 |
| FAC species | 15 | x 3 = 45 |
| FACU species | 15 | x 4 = 60 |
| UPL species | 0 | x 5 = 0 |
| Column totals | 101 (A) | 184 (B) |
| Prevalence Index = B/A = | 1.82 | |

| Hydrophytic Vegetation Indicators: | | |
|---|--|--|
| <input type="checkbox"/> Rapid test for hydrophytic vegetation | | |
| <input checked="" type="checkbox"/> Dominance test is >50% | | |
| <input checked="" type="checkbox"/> Prevalence index is ≤3.0* | | |
| Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) | | |
| <input type="checkbox"/> 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 plot shape was altered to avoid trees in the adjacent upland. The sedge meadow community is dominated by wool-grass bulrush and a mix of Carex spp. and located in a depression within an area of fire-dependent forest. Hydrophytic vegetation is present.

SOIL

Sampling Point:

WA004a1W

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

| Depth (In.) | Matrix | | | Redox Features | | | | Texture | Remarks |
|-------------|---------------|-----|-----|----------------|--------|-------|-------|---------|------------------------|
| | Color (moist) | | % | Color (moist) | % | Type* | Loc** | | |
| 0-6 | Hue_10YR | 2/1 | 100 | | | | | MMI | very black, very mucky |
| 6-14 | Hue_10YR | 2/1 | 100 | | | | | SIC | high organic content |
| 14-17 | Hue_10YR | 3/3 | 80 | | | | | SCL | |
| 14-17 | Hue_10YR | 2/1 | 20 | | | | | SCL | organic streaks |
| 17-21 | Hue_10YR | 5/2 | 96 | Gley1 | 3/10GY | 4 | D | M | LS |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

*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:

The soil has 6 inches of mucky mineral over 8 inches of black silty clay with high organic content. Below the black layers is a 3-inch layer of sandy clay loam, then loamy sand. Hydric soils are indicated.