## WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

**Project/Site:** RSA 22 **City/County:** Aitkin **Sampling Date:** 30-Aug-17

**Applicant/Owner:** Enbridge **State:** MN **Sampling Point:** **AI025a51W**

**Investigator(s):** DPT **Section, Township, Range:** **S.** 31 **T.** 51N **R.** 26W

**Landform (hillslope, terrace, etc.):** Lowland **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °

**Subregion (LRR or MLRA):** LRR K **Lat.:** 46 52.1916 **Long.:** -93 40.8318 **Datum:** NAD 83

**Soil Map Unit Name:** 625 **NWI classification:** N/A

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes ○ No ◉ **(If no, explain in Remarks.)**

**Are Vegetation** ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

**Are Vegetation** ☐ **, Soil** ☐ **, or Hydrology** ☐ **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?** | Yes ◉ No ○ | **Is the Sampled Area within a Wetland?** | Yes ◉ No ○ |
| **Hydric Soil Present?** | Yes ◉ No ○ | | |
| **Wetland Hydrology Present?** | Yes ◉ No ○ | | |

**Remarks: (Explain alternative procedures here or in a separate report.)**

WETS analysis shows precipitation below normal.

## Hydrology

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☑ FAC-neutral Test (D5)

**Field Observations:**

| | | | | |
|---|---|---|---|---|
| Surface Water Present? | Yes ○ No ◉ | Depth (inches): | 0 | |
| Water Table Present? | Yes ◉ No ○ | Depth (inches): | 15 | |
| Saturation Present? (includes capillary fringe) | Yes ◉ No ○ | Depth (inches): | 10 | **Wetland Hydrology Present?** Yes ◉ No ○ |

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## VEGETATION - Use scientific names of plants

**Sampling Point:** AI025a51W

| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | 0 | ☐ | |
| 2. | 0 | ☐ | |
| 3. | 0 | ☐ | |
| 4. | 0 | ☐ | |
| 5. | 0 | ☐ | |
| 6. | 0 | ☐ | |
| 7. | 0 | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 15) | | | |
| 1. *Salix petiolaris* | 50 | ☑ | FACW |
| 2. *Alnus incana* | 30 | ☑ | FACW |
| 3. | 0 | ☐ | |
| 4. | 0 | ☐ | |
| 5. | 0 | ☐ | |
| 6. | 0 | ☐ | |
| 7. | 0 | ☐ | |
| | 80 | = Total Cover | |
| **Herb Stratum** (Plot size: 5) | | | |
| 1. *Calamagrostis canadensis* | 100 | ☑ | OBL |
| 2. *Solidago gigantea* | 5 | ☐ | FACW |
| 3. | 0 | ☐ | |
| 4. | 0 | ☐ | |
| 5. | 0 | ☐ | |
| 6. | 0 | ☐ | |
| 7. | 0 | ☐ | |
| 8. | 0 | ☐ | |
| 9. | 0 | ☐ | |
| 10. | 0 | ☐ | |
| 11. | 0 | ☐ | |
| 12. | 0 | ☐ | |
| | 105 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30) | | | |
| 1. | 0 | ☐ | |
| 2. | 0 | ☐ | |
| 3. | 0 | ☐ | |
| 4. | 0 | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

| | Total % Cover of: | | Multiply by: | |
|---|---|---|---|---|
| OBL species | 100 | x 1 = | 100 | |
| FACW species | 85 | x 2 = | 170 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 0 | x 4 = | 0 | |
| UPL species | 0 | x 5 = | 0 | |
| Column Totals: | 185 | (A) | 270 | (B) |

Prevalence Index = B/A = 1.459

**Hydrophytic Vegetation Indicators:**

- ☑ **Rapid Test for Hydrophytic Vegetation**
- ☑ **Dominance Test is > 50%**
- ☑ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **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 (1m) tall..

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ◉ No ○

**Remarks: (Include photo numbers here or on a separate sheet.)**

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

## Soil

**Sampling Point:** AI025a51W

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

| Depth (inches) | Matrix Color (moist) | | % | Redox Features Color (moist) | | % | Type [1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR | 2/1 | 100 | | | | | | Loam | |
| 4-15 | 10YR | 3/1 | 90 | 10YR | 3/6 | 10 | C | M | Sandy Clay Loam | |
| 15-20 | 10YR | 4/2 | 90 | 10YR | 4/6 | 10 | C | M | Loamy Sand | |

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]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 Muck 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 Soils :** [3]

- ☐ 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, M)
- ☐ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ◉ No ○

Remarks: