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: WA004a1U
Investigator(s): BEH/RAJ Section, Township, Range:
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none LV
Slope (%): 3 - 7% Lat.: 46.79672264 Long.: -94.91177731 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 circumstances" present? ☑
Are vegetation ☐, soil ☐, or hydrology ☐ naturally problematic?
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
The upland sample point is located in a fire-dependent forest, upslope from a sedge meadow depression.

HYDROLOGY

Primary Indicators (minimum of one is 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 on 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 two 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 ☐	Depth (inches):	
Water table present?	Yes ☐	Depth (inches):	
Saturation present? (includes capillary fringe)	Yes ☐	Depth (inches):	

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No primary or secondary hydrological indicators were observed.

VEGETATION - Use scientific names of plants **Sampling Point:** WA004a1U

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Populus tremuloides*	60	Y	FAC
2 *Pinus resinosa*	10	N	FACU
3 *Prunus serotina*	5	N	FACU
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	

Sapling/Shrub Stratum (Plot Size: 15 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Corylus americana*	20	Y	FACU
2 *Quercus macrocarpa*	10	Y	FACU
3 *Ostrya virginiana*	3	N	FACU
4			
5			
6			
7			
8			
9			
10			
	33	= Total Cover	

Herb Stratum (Plot Size: 5 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Carex pensylvanica*	50	Y	NI
2 *Corylus americana*	20	Y	FACU
3 *Pteridium aquilinum*	15	N	FACU
4 *Oryzopsis asperifolia*	10	N	NI
5 *Maianthemum canadense*	5	N	FACU
6 *Viola nephrophylla*	5	N	FACW
7 *Vaccinium angustifolium*	5	N	FACU
8			
9			
10			
11			
12			
13			
14			
15			
	110	= 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	15	38
Sapling/Shrub Stratum	7	17
Herb Stratum	22	55
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 20.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:				
OBL species	0	x 1 =	0	
FACW species	5	x 2 =	10	
FAC species	60	x 3 =	180	
FACU species	93	x 4 =	372	
UPL species	0	x 5 =	0	
Column totals	158	(A)	562	(B)

Prevalence Index = B/A = 3.56

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? N

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

The canopy is dominated by quaking aspen with a shrub layer of American hazelnut and bur oak saplings. The ground layer is dominated by Pennsylvania sedge and American hazelnut.

SOIL **Sampling Point:** WA004a1U

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

Depth (In.)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type*	Loc**	Texture	Remarks
0-11	Hue_7.5YR	3/2	100						SL	
11-21	Hue_10YR	6/3	75						LS	
11-21	Hue_10YR	3/2	25						SL	

*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? N

Remarks:
Soil is dark sandy loam underlain by loamy sand mixed with dark sandy loam; the profile does not meet any hydric soil indicators.