WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Wadena Sampling Date: 2015-07-20

Applicant/Owner: Enbridge State: Minnesota Sampling Point: WA002a1U

Investigator(s): BCS/ACM Section, Township, Range:

Landform (hillslope, terrace, etc.): Toeslope Local Relief (concave, convex, none): VL Slope (%): 3-5

Subregion (LRR or MLRA): LRR K Latitude: 46.7985523213... Longitude: -94.91998412... Datum: Minnesota State ...

Soil Map Unit Name: 458E 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 Yes 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?	No	**Is the Sampled Area**	
Hydric Soil Present?	No	**within a Wetland?**	No
Wetland Hydrology Present?	No	If yes, optional Wetland Site ID:	

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

Sample point located in an upland hardwood forest upslope from the associated floodplain wetland.

HYDROLOGY

Wetland Hydrology Indicators:

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/Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches)

Water Table Present? No Depth (inches)

Saturation Present? No Depth (inches)

(includes capillary fringe)

Wetland Hydrology Present? No

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

Remarks:

No primary or secondary wetland hydrology indicators were observed.

VEGETATION - Use scientific names of plants.

Sampling Point: WA002a1U

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus macrocarpa	15.00	Yes	FACU
2. Fraxinus nigra	15.00	Yes	FACW
3. Picea glauca	10.00	No	FACU
4. Fraxinus pennsylvanica	10.00	No	FACW
5.	5.00	No	FACW
6. Populus balsamifera			
7.			
	55	= Total Cover	

Sapling/Shrub Stratum (Plot Size: 15 ft)			
1. Corylus cornuta	30.00	Yes	FACU
2. Fraxinus nigra	5.00	No	FACW
3. Quercus rubra	5.00	No	FACU
4. Viburnum lentago	2.00	No	FAC
5. Fraxinus pennsylvanica	2.00	No	FACW
6.			
7.			
	44	= Total Cover	

Herb Stratum (Plot Size: 5 ft)			
1. Carex pensylvanica	10.00	Yes	
2. Corylus cornuta	10.00	Yes	FACU
3. Sanicula marilandica	5.00	No	FACU
4. Fraxinus nigra	5.00	No	FACW
5. Pteridium aquilinum	5.00	No	FACU
6. Maianthemum racemosum	2.00	No	FACU
7. Maianthemum canadense	2.00	No	FACU
8. Quercus macrocarpa	2.00	No	FACU
9. Lathyrus ochroleucus	2.00	No	
10. Aralia nudicaulis	2.00	No	FACU
11.			
12.			
	45	= Total Cover	

Woody Vine Stratum (Plot Size: 30 ft)			
1.			
2.			
3.			
4.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	42.00	x 2	84
FACU species	2.00	x 3	352
UPL species	12.00	x 4	60
Column Totals	144 (A)		502 (B)

Prevalence Index = B/A = 3.4861111...

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

no 2 - Dominance Test is > 50%

no 3 - Prevalence Index is ≤ 3.0[1]

____ 4 - 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. (.76 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 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? ____

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

Sample area is dominated by black ash and bur oak in the tree stratum, beaked hazel in the shrub stratum, and Pennsylvania sedge and beaked hazel in the herb stratum.

SOIL

Sampling Point: WA002a1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2 1	100					FSL	
14-24	2.5Y 4 3	100					LS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked 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 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[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, 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? No

Remarks:

Profile consists of a dark fine sandy loam underlain by a lighter loamy sand; soil does not meet any hydric soil indicators.