WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Sandpiper   City/County: Wadena   Sampling Date: 09/12/2014
Applicant/Owner: Enbridge   State: MN   Sampling Point: WA020a1U
Investigator(s): DPT   Section, Township, Range:
Landform (hillslope, terrace, etc.): Rise   Local relief (concave, convex, none): Convex/Convex
Slope (%): 1   Lat.:   Long.:   Datum:
Soil Map Unit Name   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? _____ Yes
(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.)

HYDROLOGY

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

Secondary Indicators (minimum of two required)

Primary Indicators		Secondary Indicators
____ Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Moss Trim Lines (B16)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Dry-Season Water Table (C2)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living	____ Crayfish Burrows (C8)
____ Drift Deposits (B3)	____ Roots (C3)	____ Saturation Visible on Aerial Imagery
____ Algal Mat or Crust (B4)	____ Presence of Reduced Iron (C4)	____ (C9)
____ Iron Deposits (B5)	____ Recent Iron Reduction in Tilled	____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial	____ Soils (C6)	____ Geomorphic Position (D2)
____ Imagery (B7)	____ Thin Muck Surface (C7)	____ Shallow Aquitard (D3)
____ Sparsely Vegetated Concave	____ Other (Explain in Remarks)	____ FAC-Neutral Test (D5)
____ Surface (B8)		____ Microtopographic Relief (D4)

Field Observations:
Surface water present?   Yes _____ No X   Depth (inches): _____
Water table present?   Yes _____ No X   Depth (inches): _____
Saturation present?   Yes _____ No X   Depth (inches): _____
(includes capillary fringe)

Indicators of wetland hydrology present? N

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

Remarks:

VEGETATION - Use scientific names of plants   **Sampling Point:** WA020a1U

Tree Stratum Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Populus tremuloides*	80	Y	FAC
2 *Betula papyrifera*	10	N	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	90	= Total Cover	

Sapling/Shrub Stratum Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Corylus cornuta*	40	Y	FACU
2			
3			
4			
5			
6			
7			
8			
9			
10			
	40	= Total Cover	

Herb Stratum Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Status
1 *Aralia nudicaulis*	40	Y	FACU
2 *Pteridium aquilinum*	25	Y	FACU
3 *Eurybia macrophylla*	20	Y	UPL
4 *Poa pratensis*	10	N	FACU
5 *Rubus hispidus*	5	N	FACW
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
	100	= Total Cover	

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

50/20 Thresholds

	20%	50%
Tree Stratum	18	45
Sapling/Shrub Stratum	8	20
Herb Stratum	20	50
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	80	x 3 =	240
FACU species	125	x 4 =	500
UPL species	20	x 5 =	100
Column totals	230 (A)		850 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ Rapid test for hydrophytic vegetation

___ Dominance test is >50%

___ Prevalence index is ≤3.0*

___ Morphogical 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)

SOIL   **Sampling Point:**   WA020a1U

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*	Loc**	Texture	Remarks
2	10 YR 2/2	100					Sandy loam	
8	10 YR 3/2	100					Loamy sand	
14	10 YR 4/3	95	10 YR 4/6	5	C	M	Sand	
20	10 YR 4/2	90	10 YR 5/6	10	C	M	Sand	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils:**

___ Histisol (A1)	___ Polyvalue Below Surface
___ Histic Epipedon (A2)	(S8) (**LRR R, MLRA 149B**)
___ Black Histic (A3)	___ Thin Dark Surface (S9)
___ Hydrogen Sulfide (A4)	(**LRR R, MLRA 149B**
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)
___ Depleted Below Dark Suface (A11)	___ (**LRR K, L**)
___ Thick Dark Surface (A12)	___ Loamy Gleyed Matrix (F2)
___ Sandy Mucky Mineral (S1)	___ Depleted Matrix (F3)
___ Sandy Gleyed Matrix (S4)	___ Redox Dark Surface (F6)
___ Sandy Redox (S5)	___ Depleted Dark Surface (F7)
___ Stripped Matrix (S6)	___ Redox Depressions (F8)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)	

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 weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric soil present?   N

Remarks: