

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site: SPP City/County: Wadena Sampling Date: 2015-06-30
 Applicant/Owner: Enbridge State: Minnesota Sampling Point: WA004_200a2W
 Investigator(s): BEH/BCS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): CC Slope (%): 0-2
 Subregion (LRR or MLRA): LRR K Latitude: 46.7977676 Longitude: -94.91014719 Datum: Minnesota State ...
 Soil Map Unit Name: 458C 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 No 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?	<u>Yes</u>	Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: _____
Hydric Soil Present?	<u>Yes</u>	
Wetland Hydrology Present?	<u>Yes</u>	
Remarks: (Explain alternative procedures here or in a separate report.) The wetland sample point is located in a hardwood swamp surrounded by fire-dependent forest and an adjacent alder thicket.		

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<u>_____</u> Surface Water (A1)	<u>_____</u> Water-Stained Leaves (B9)	<u>_____</u> Surface Soil Cracks (B6)
<u>_____</u> High Water Table (A2)	<u>_____</u> Aquatic Fauna (B13)	<u>_____</u> Drainage Patterns (B10)
<u>yes</u> <u>_____</u> Saturation (A3)	<u>_____</u> Marl Deposits (B15)	<u>_____</u> Moss Trim Lines (B16)
<u>_____</u> Water Marks (B1)	<u>_____</u> Hydrogen Sulfide Odor (C1)	<u>_____</u> Dry-Season Water Table (C2)
<u>_____</u> Sediment Deposits (B2)	<u>_____</u> Oxidized Rhizospheres on Living Roots (C3)	<u>_____</u> Crayfish Burrows (C8)
<u>_____</u> Drift Deposits (B3)	<u>_____</u> Presence of Reduced Iron (C4)	<u>_____</u> Saturation Visible on Aerial Imagery (C9)
<u>_____</u> Algal Mat or Crust (B4)	<u>_____</u> Recent Iron Reduction in Tilled Soils (C6)	<u>yes</u> <u>_____</u> Stunted/Stressed Plants (D1)
<u>_____</u> Iron Deposits (B5)	<u>_____</u> Thin Muck Surface (C7)	<u>yes</u> <u>_____</u> Geomorphic Position (D2)
<u>_____</u> Inundation Visible on Aerial Imagery (B7)	<u>_____</u> Other (Explain in Remarks)	<u>no</u> <u>_____</u> Shallow Aquitard (D3)
<u>_____</u> Sparsely Vegetated Concave Surface (B8)		<u>no</u> <u>_____</u> Microtopographic Relief (D4)
		<u>yes</u> <u>_____</u> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? <u>No</u>	Depth (inches) _____	Wetland Hydrology Present? <u>Yes</u>
Water Table Present? <u>Yes</u>	Depth (inches) <u>14</u>	
Saturation Present? <u>Yes</u> (includes capillary fringe)	Depth (inches) <u>12</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Soil is saturated 12 inches below the surface.		

VEGETATION - Use scientific names of plants.

 Sampling Point: WA004_2...

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot Size: <u>30'</u>)				Dominance Test worksheet:
1. <u>Ulmus americana</u>	<u>55.00</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species
2. <u>Populus tremuloides</u>	<u>10.00</u>	<u>No</u>	<u>FACU</u>	That Are OBL, FACW, or FAC: <u>1</u> (A)
3. <u>Salix discolor</u>	<u>10.00</u>	<u>No</u>	<u>FACW</u>	Total Number of Dominant
4. <u>Alnus incana</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	<u>1</u>
5. <u>Fraxinus pennsylvanica</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Species Across All Strata: _____ (B)
6. <u>Fraxinus nigra</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Percent of Dominant Species
7. _____	_____	_____	_____	That Are OBL, FACW, or FAC: <u>100</u> (A/B)
	<u>90</u>	= Total Cover		Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot Size: <u>15'</u>)				Total % Cover of:
1. <u>Ulmus americana</u>	<u>10.00</u>	<u>Yes</u>	<u>FACW</u>	Multiply by:
2. <u>Quercus macrocarpa</u>	<u>3.00</u>	<u>No</u>	<u>FACU</u>	OBL species <u>0.00</u> x 1 <u>0</u>
3. <u>Prunus virginiana</u>	<u>3.00</u>	<u>No</u>	<u>FACU</u>	FACW species <u>125.00</u> x 2 <u>250</u>
4. _____	_____	_____	_____	FACU species <u>25.00</u> x 3 <u>164</u>
5. _____	_____	_____	_____	UPL species <u>0.00</u> x 4 <u>0</u>
6. _____	_____	_____	_____	Column Totals <u>191</u> (A) <u>489</u> (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.5602094...</u>
	<u>16</u>	= Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (Plot Size: <u>5'</u>)				<u>yes</u> 1 - Rapid Test for Hydrophytic Vegetation
1. <u>Anemone canadensis</u>	<u>15.00</u>	<u>No</u>	<u>FACW</u>	<u>yes</u> 2 - Dominance Test is > 50%
2. <u>Athyrium angustum</u>	<u>15.00</u>	<u>No</u>	<u>FAC</u>	<u>yes</u> 3 - Prevalence Index is ≤ 3.0 ¹
3. <u>Rubus pubescens</u>	<u>15.00</u>	<u>No</u>	<u>FACW</u>	_____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Parthenocissus quinquefolia</u>	<u>10.00</u>	<u>No</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Toxicodendron rydbergii</u>	<u>10.00</u>	<u>No</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Osmorhiza claytonii</u>	<u>10.00</u>	<u>No</u>	<u>FACU</u>	Definitions of Vegetation Strata:
7. <u>Carex gracillima</u>	<u>5.00</u>	<u>No</u>	<u>FACU</u>	Tree - Woody plants 3 in. (.76 cm) or more in diameter at breast height (DBH), regardless of height.
8. <u>Geum macrophyllum</u>	<u>5.00</u>	<u>No</u>	<u>FACW</u>	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. _____	_____	_____	_____	Herb - All herbaeceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10. _____	_____	_____	_____	Woody vines - All woody vines greater than 3.28 ft in height.
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>85</u>	= Total Cover		
Woody Vine Stratum (Plot Size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	=Total Cover		
Remarks: (include photo numbers here or on a separate sheet.)				
The canopy and sapling components are dominated by American elm. Ground cover is a mixture of plants with no species dominating.				

SOIL

Sampling Point: WA004_2...

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soil ³ :
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	☐ Coast Prairie Redox (A16)(LRR K, L, R)
☐ Black Histic (A3)	☒ Loamy Mucky Mineral (F1) (LRR K, L)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)	☐ Dark Surface (S7) (LRR K, M)
☐ Stratified Layers (A5)	☐ Depleted Matrix (F3)	☐ Polyvalue Below Surface (S8) (LRR K, L)
☒ Depleted Below Dark Surface (A11)	☒ Redox Dark Surface (F6)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1)	☒ Redox Depressions (F8)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4)		☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)		☐ Red Parent Material (F21)
☐ Stripped Matrix (S6)		☐ Very Shallow Dark Surface (TF12)
☐ Dark Surface (S7) (LRR R, MLRA 149B)		☐ Other (explain in remarks)
Restrictive Layer (if observed): ☐	Hydric Soil Present? Yes ☐	
Type: _____ Depth (inches): _____		
Remarks:		
Soil is black loamy mucky mineral underlain by a thin E horizon which is above dark sandy loam. The profile meets multiple hydric soil indicators.		