

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>	Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>			County: <b>Ashland</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>C. Rogers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Tula-Gogebic complex, 0 to 6 percent slopes, s</b>		NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WA-1002</b>
Landform: <b>Side slope</b>		Local Relief: <b>Convex</b>	Sample Point: <b>WA-1002-01u</b>
Slope (%): <b>3</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			Community ID: <b>upland HW forest/mostly logged</b>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Section: <b>31</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: <b>45N</b>	
		Range: <b>1</b> Dir: <b>W</b>	

<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Conditions wetter than normal. Area recently clearcut, vegetation and soils significantly disturbed.</b>	

### HYDROLOGY

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

<b>Primary:</b> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary:</b> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks: **Recent logging disturbance**

### SOILS

Map Unit Name: **Tula-Gogebic complex, 0 to 6 percent slopes, stony** Series Drainage Class: **#N/A**

Taxonomy (Subgroup): **#N/A**

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix		Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%	Color (Moist)	%	Type	Location		
0	7	1	7.5YR 3/3	100	--	--	--	--	sandy loam	
7	9	2	7.5YR 3/4	100	--	--	--	--	sandy loam	
9	11	2	7.5YR 4/4	100	--	--	--	--	loamy sand	
--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	
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--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):		<b>Indicators for Problematic Soils</b> <sup>1</sup>
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>Rock</b>	Depth: <b>11 inches</b>	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **Gogebic Taconite Mine**

 Wetland ID: **WA-1002**

 Sample Point: **WA-1002-01u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Acer rubrum</i>	30	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		50		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Fraxinus americana</i>	15	Y	FACU
2.	<i>Acer saccharum</i>	10	Y	FACU
3.	<i>Abies balsamea</i>	5	N	FAC
4.	<i>Prunus serotina</i>	5	N	FACU
5.	<i>Populus tremuloides</i>	2	N	FAC
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		37		

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Prunus serotina</i>	30	Y	FACU
2.	<i>Eurybia macrophylla</i>	40	Y	UPL
3.	<i>Fraxinus americana</i>	20	N	FACU
4.	<i>Carex gracillima</i>	35	Y	FACU
5.	<i>Pteridium aquilinum</i>	20	N	FACU
6.	<i>Onoclea sensibilis</i>	5	N	FACW
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		150		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

**Dominance Test Worksheet**

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

 Total Number of Dominant Species Across All Strata: 7 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>5</u>	x 2 =	<u>10</u>
FAC spp.	<u>37</u>	x 3 =	<u>111</u>
FACU spp.	<u>155</u>	x 4 =	<u>620</u>
UPL spp.	<u>40</u>	x 5 =	<u>200</u>

 Total 237 (A) 941 (B)

 Prevalence Index = B/A = 3.970
**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>	Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>			County: <b>Ashland</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>C. Rogers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Tula-Gogebic complex, 0 to 6 percent slopes, s</b>		NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WA-1002</b>
Landform: <b>Logging depression</b>		Local Relief: <b>Concave</b>	Sample Point: <b>WA-1002-01w</b>
Slope (%): <b>1</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>Sedge Meadow</b>
Datum: <b>N/A</b>			Section: <b>31</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: <b>1</b> Dir: <b>W</b>	

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Conditions wetter than normal. Wetland appears to be recently created due to logging activity.**

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

Primary:

- ☐ A1 - Surface Water
- ☒ A2 - High Water Table
- ☒ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☒ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:

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

**Field Observations:**

Surface Water Present? ☐ Yes ☒ No      Depth:      (in.)  
 Water Table Present? ☒ Yes ☐ No      Depth: **9** (in.)  
 Saturation Present? ☒ Yes ☐ No      Depth: **5** (in.)

**Wetland Hydrology Present?** ☒ Yes ☐ No

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

Remarks: **Recent logging disturbance**

**SOILS**

Map Unit Name: **Tula-Gogebic complex, 0 to 6 percent slopes, stony Series Drainage Class: #N/A**

Taxonomy (Subgroup): **#N/A**

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features			Type	Location	Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%			
<b>0</b>	<b>2</b>	<b>1</b>	<b>7.5YR</b>	<b>3/2</b>	<b>85</b>	<b>7.5YR</b>	<b>4/4</b>	<b>15</b>	<b>c</b>	<b>m</b>	<b>loam</b>
<b>2</b>	<b>11</b>	<b>2</b>	<b>7.5YR</b>	<b>3/4</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>loam</b>
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**NRCS Hydric Soil Field Indicators** (check here if indicators are not present ☐ ):

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> A1 - Histosol</li> <li><input type="checkbox"/> A2 - Histic Epipedon</li> <li><input type="checkbox"/> A3 - Black Histic</li> <li><input type="checkbox"/> A4 - Hydrogen Sulfide</li> <li><input type="checkbox"/> A5 - Stratified Layers</li> <li><input type="checkbox"/> A11 - Depleted Below Dark Surface</li> <li><input type="checkbox"/> A12 - Thick Dark Surface</li> <li><input type="checkbox"/> S1 - Sandy Muck Mineral</li> <li><input type="checkbox"/> S4 - Sandy Gleyed Matrix</li> <li><input type="checkbox"/> S5 - Sandy Redox</li> <li><input type="checkbox"/> S6 - Stripped Matrix</li> <li><input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)</li> <li><input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)</li> <li><input type="checkbox"/> F2 - Loamy Gleyed Matrix</li> <li><input type="checkbox"/> F3 - Depleted Matrix</li> <li><input type="checkbox"/> F6 - Redox Dark Surface</li> <li><input type="checkbox"/> F7 - Depleted Dark Surface</li> <li><input checked="" type="checkbox"/> F8 - Redox Depressions</li> </ul> |
|---|---|

**Indicators for Problematic Soils<sup>1</sup>**

- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **Rock** Depth: **11 inches**

**Hydric Soil Present?** ☒ Yes ☐ No

Remarks: **Evidence that hydric soil is forming.**

Project/Site: **Gogebic Taconite Mine**

 Wetland ID: **WA-1002** Sample Point **WA-1002-01w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **0**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **0**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Schoenoplectus tabernaemontani</i>	20	N	OBL
2.	<i>Scirpus cyperinus</i>	40	Y	OBL
3.	<i>Carex cristatella</i>	30	Y	FACW
4.	<i>Carex gracillima</i>	50	Y	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **140**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>60</b>	x 1 =	<b>60</b>
FACW spp.	<b>30</b>	x 2 =	<b>60</b>
FAC spp.	<b>0</b>	x 3 =	<b>0</b>
FACU spp.	<b>50</b>	x 4 =	<b>200</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **140** (A) **320** (B)

 Prevalence Index = B/A = **2.286**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**

Project/Site: <b>Gogebic Taconite Mine</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/25/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>M. Knickelbine</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Dishno-Gogebic-Peshekee-Rock outcrop comp</b>	NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WC-1-20</b>
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WC-1-20-06u</b>
Slope (%): <b>5</b>	Latitude: <b>N/A</b>	Community ID: <b>upland HW forest</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>5</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>1</b> Dir: <b>W</b>

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Conditions wetter than normal.****HYDROLOGY****Wetland Hydrology Indicators** (Check here if indicators are not present ☒ ):Primary:

- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:

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

**Field Observations:**

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)

**Wetland Hydrology Present?** ☐ Yes ☒ NoDescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks:

**SOILS**Map Unit Name: **Dishno-Gogebic-Peshekee-Rock outcrop complex, Series Drainage Class: #N/A**Taxonomy (Subgroup): **#N/A****Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	5	1	7.5YR	3/2	100	--	--	--	--	--	sandy loam
5	24	2	7.5YR	4/4	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

**NRCS Hydric Soil Field Indicators** (check here if indicators are not present ☒ ):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)

- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☐ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

**Indicators for Problematic Soils <sup>1</sup>**

- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:



Project/Site: **Gogebic Taconite Mine**

 Wetland ID: **WC-1-20** Sample Point **WC-1-20-06u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	85	Y	FACU
2.	<i>Betula alleghaniensis</i>	20	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **105**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Quercus rubra</i>	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **25**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Carex pensylvanica</i>	30	Y	UPL
2.	<i>Quercus rubra</i>	10	N	FACU
3.	<i>Trientalis borealis</i>	5	N	FAC
4.	<i>Maianthemum canadense</i>	20	Y	FACU
5.	<i>Carex gracillima</i>	10	N	FACU
6.	<i>Abies balsamea</i>	10	N	FAC
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **85**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **0** (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **0.0%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>35</b>	x 3 =	<b>105</b>
FACU spp.	<b>150</b>	x 4 =	<b>600</b>
UPL spp.	<b>30</b>	x 5 =	<b>150</b>

 Total **215** (A) **855** (B)

 Prevalence Index = B/A = **3.977**
**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/25/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>M. Knickelbine</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Foxpaw-Gay, stony complex, 0 to 2 percent slop</b>	NWII/WWI Classification: <b>T3/8K</b>		Wetland ID: <b>WC-1-20</b>	
Landform: <b>Toeslope</b>	Local Relief: <b>Concave</b>		Sample Point: <b>WC-1-20-06w</b>	
Slope (%): <b>1</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>Evergreen Swamp</b>	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>5</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Conditions wetter than normal.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input checked="" type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input checked="" type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input checked="" type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input checked="" type="checkbox"/> D5 - FAC-Neutral Test	

<b>Field Observations:</b>			
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)		
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>	
Remarks:	

SOILS											
Map Unit Name: Foxpaw-Gay, stony complex, 0 to 2 percent slopes Series Drainage Class: #N/A											
Taxonomy (Subgroup): #N/A											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	8	1	10YR	2/1	100	--	--	--	--	--	muck
8	9	2	7.5YR	3/1	100	--	--	--	--	--	sandy loam
9	18	3	7.5YR	4/4	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):			<b>Indicators for Problematic Soils <sup>1</sup></b>		
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)			
<input checked="" type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)			
<input checked="" type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)			
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)			
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)			
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)			
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)			
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)			
<input type="checkbox"/> S4 - Sandy Gleyed Matrix		<input type="checkbox"/> F21 - Red Parent Material			
<input type="checkbox"/> S5 - Sandy Redox		<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)			
<input type="checkbox"/> S6 - Stripped Matrix		<input type="checkbox"/> TF12 - Very Shallow Dark Surface			
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: <b>Rock</b>	Depth: <b>18 inches</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:
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Project/Site: **Gogebic Taconite Mine**

 Wetland ID: **WC-1-20** Sample Point **WC-1-20-06w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	20	N	FACU
2.	<i>Thuja occidentalis</i>	50	Y	FACW
3.	<i>Tsuga canadensis</i>	20	N	FACU
4.	<i>Betula alleghaniensis</i>	25	Y	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **115**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Fraxinus americana</i>	5	N	FACU
3.	<i>Quercus rubra</i>	2	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **27**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Carex crinita</i>	25	Y	OBL
3.	<i>Dryopteris carthusiana</i>	25	Y	FACW
4.	<i>Trientalis borealis</i>	5	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **75**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **4** (A)

 Total Number of Dominant Species Across All Strata: **6** (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>25</b>	x 1 =	<b>25</b>
FACW spp.	<b>75</b>	x 2 =	<b>150</b>
FAC spp.	<b>30</b>	x 3 =	<b>90</b>
FACU spp.	<b>87</b>	x 4 =	<b>348</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **217** (A) **613** (B)

 Prevalence Index = B/A = **2.825**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/10/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>P. Pieper</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic, very stony-Pence, very stony-Cathro c</b>	NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WC-3-13</b>
Landform: <b>Saddle</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WC-3-13-01u</b>
Slope (%): <b>3</b>	Latitude: <b>N/A</b>	Community ID: <b>upland HW forest</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>9</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Conditions wetter than normal.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input type="checkbox"/> D5 - FAC-Neutral Test	
<b>Field Observations:</b>			
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)		
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks:			

<b>SOILS</b>											
Map Unit Name: <b>Gogebic, very stony-Pence, very stony-Cathro complex</b> Series Drainage Class: <b>#N/A</b>											
Taxonomy (Subgroup): <b>#N/A</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type	Location	
<b>0</b>	<b>5</b>	<b>1</b>	<b>7.5YR</b>	<b>2.5/3</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>silt loam</b>
<b>5</b>	<b>24</b>	<b>2</b>	<b>5YR</b>	<b>3/4</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>sandy loam</b>
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):						<b>Indicators for Problematic Soils <sup>1</sup></b>					
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)									
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)									
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)									
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)									
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)									
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)									
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)									
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)									
<input type="checkbox"/> S4 - Sandy Gleyed Matrix		<input type="checkbox"/> F21 - Red Parent Material									
<input type="checkbox"/> S5 - Sandy Redox		<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)									
<input type="checkbox"/> S6 - Stripped Matrix		<input type="checkbox"/> TF12 - Very Shallow Dark Surface									
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)									
<small><sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</small>											
<b>Restrictive Layer (If Observed)</b>		Type: <b>N/A</b>	Depth: <b>N/A</b>		<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Remarks:											

Project/Site: Gogebic Taconite Mine

Wetland ID: WC-3-13 Sample Point WC-3-13-01u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Populus tremuloides</i>	40	Y	FAC
3.	<i>Abies balsamea</i>	5	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 85

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Corylus cornuta</i>	15	N	FACU
2.	<i>Acer saccharum</i>	25	Y	FACU
3.	<i>Acer rubrum</i>	15	N	FAC
4.	<i>Populus tremuloides</i>	40	Y	FAC
5.	<i>Prunus serotina</i>	5	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 100

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	15	N	FACU
2.	<i>Coptis trifolia</i>	35	Y	FACW
3.	<i>Maianthemum canadense</i>	20	N	FACU
4.	<i>HIERACIUM AURANTIACUM</i>	25	Y	UPL
5.	<i>Mitchella repens</i>	25	Y	FACU
6.	<i>Trientalis borealis</i>	5	N	FAC
7.	<i>Lonicera canadensis</i>	25	Y	FACU
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 150

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	35	x 2 =	70
FAC spp.	105	x 3 =	315
FACU spp.	170	x 4 =	680
UPL spp.	25	x 5 =	125

Total 335 (A) 1190 (B)

Prevalence Index = B/A = 3.552

**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/10/14</b>						
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>						
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>						
Soil Unit: <b>Minocqua-Pleine-Cathro complex, 0 to 2 percent</b>		NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WC-3-01</b>						
Landform: <b>Toeslope</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WC-3-01-13w</b>						
Slope (%): <b>1</b>		Latitude: <b>N/A</b>		Community ID: <b>HW/Evergreen swamp</b>						
		Longitude: <b>N/A</b>		Section: <b>9</b>						
		Datum: <b>N/A</b>		Township: <b>44N</b>						
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>						
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?								
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
<b>SUMMARY OF FINDINGS</b>										
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?						
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Remarks: <b>Conditions wetter than normal.</b>										
<b>HYDROLOGY</b>										
Wetland Hydrology Indicators (Check here if indicators are not present <input type="checkbox"/> ):										
Primary:			Secondary:							
<input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface			<input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)							
			<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test							
<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>2</b> (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>0</b> (in.)			<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>										
Remarks:										
<b>SOILS</b>										
Map Unit Name: <b>Minocqua-Pleine-Cathro complex, 0 to 2 percent slopes</b> Series Drainage Class: <b>#N/A</b>										
Taxonomy (Subgroup): <b>#N/A</b>										
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)										
Top Depth	Bottom Depth	Horizon	Matrix		Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%	Color (Moist)	%	Type	Location		
0	5	1	N	2/0	100	--	--	--	--	muck
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input checked="" type="checkbox"/> A1 - Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)           </div> <div style="width: 30%;"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input type="checkbox"/> F3 - Depleted Matrix  <input type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions           </div> <div style="width: 30%;"> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)           </div> </div>										
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>Restrictive Layer</b> (If Observed) Type: <b>N/A</b> Depth: <b>N/A</b> </div> <div style="width: 50%;"> <b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No           </div> </div>										
Remarks:										

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **Gogebic Taconite Mine**

Wetland ID: **WC-3-01**

Sample Point: **-3-01-1**

**VEGETATION** (Species identified in all uppercase are non-native species.)

**Tree Stratum** (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Betula alleghaniensis</i>	60	Y	FAC
2.	<i>Fraxinus nigra</i>	30	Y	FACW
3.	<i>Thuja occidentalis</i>	25	N	FACW
4.	<i>Abies balsamea</i>	15	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **130**

**Sapling/Shrub Stratum** (Plot size: 5 meter radius)

1.	<i>Alnus incana</i>	50	Y	FACW
2.	<i>Corylus cornuta</i>	20	Y	FACU
3.	<i>Picea mariana</i>	5	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **75**

**Herb Stratum** (Plot size: 2 meter radius)

1.	<i>Rubus pubescens</i>	20	Y	FACW
2.	<i>Cornus canadensis</i>	40	Y	FAC
3.	<i>Dryopteris carthusiana</i>	10	N	FACW
4.	<i>Equisetum sylvaticum</i>	5	N	FACW
5.	<i>Fraxinus nigra</i>	10	N	FACW
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **85**

**Woody Vine Stratum** (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: **5** (A)

Total Number of Dominant Species Across All Strata: **6** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **83.3%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>155</b>	x 2 =	<b>310</b>
FAC spp.	<b>115</b>	x 3 =	<b>345</b>
FACU spp.	<b>20</b>	x 4 =	<b>80</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **290** (A) **735** (B)

Prevalence Index = B/A = **2.534**

**Hydrophytic Vegetation Indicators:**

- ☐ Yes ☒ No Rapid Test for Hydrophytic Vegetation  
☒ Yes ☐ No Dominance Test is > 50%  
☒ Yes ☐ No Prevalence Index is ≤ 3.0 \*  
☐ Yes ☒ No Morphological Adaptations (Explain) \*  
☐ Yes ☒ No Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/10/14</b>							
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>							
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>							
Soil Unit: <b>Gogebic, very stony-Pence, very stony-Cathro c</b>		NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WC-3-44</b>							
Landform: <b>Saddle</b>		Local Relief: <b>Convex</b>		Sample Point: <b>WC-3-44-01u</b>							
Slope (%): <b>3</b>		Latitude: <b>N/A</b>		Community ID: <b>upland HW forest</b>							
		Longitude: <b>N/A</b>		Section: <b>9</b>							
		Datum: <b>N/A</b>		Township: <b>44N</b>							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?									
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
<b>SUMMARY OF FINDINGS</b>											
Hydrophytic Vegetation Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present?							
Wetland Hydrology Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b>							
Remarks: <b>Conditions wetter than normal.</b>				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):											
<u>Primary:</u>			<u>Secondary:</u>								
<input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface			<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)								
			<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test								
<b>Field Observations:</b>											
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: (in.)								
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: (in.)								
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: (in.)								
			<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>											
Remarks:											
<b>SOILS</b>											
Map Unit Name: <b>Gogebic, very stony-Pence, very stony-Cathro comp</b> Series Drainage Class: <b>#N/A</b>											
Taxonomy (Subgroup): <b>#N/A</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix		Redox Features				Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	5	1	7.5YR	2.5/3	100	--	--	--	--	silt loam	
5	24	2	5YR	3/4	100	--	--	--	--	sandy loam	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):						<b>Indicators for Problematic Soils</b> <sup>1</sup>					
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)						<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions					
						<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)					
						<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer</b> (If Observed)			Type: <b>N/A</b>			Depth: <b>N/A</b>			<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Remarks:											

Project/Site: **Gogebic Taconite Mine**

Wetland ID: **WC-3-44**

Sample Point: **>3-44-0**

**VEGETATION** (Species identified in all uppercase are non-native species.)

**Tree Stratum** (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Populus tremuloides</i>	40	Y	FAC
3.	<i>Abies balsamea</i>	5	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **85**

**Sapling/Shrub Stratum** (Plot size: 5 meter radius)

1.	<i>Corylus cornuta</i>	15	N	FACU
2.	<i>Acer saccharum</i>	25	Y	FACU
3.	<i>Acer rubrum</i>	15	N	FAC
4.	<i>Populus tremuloides</i>	40	Y	FAC
5.	<i>Prunus serotina</i>	5	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **100**

**Herb Stratum** (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	15	N	FACU
2.	<i>Coptis trifolia</i>	35	Y	FACW
3.	<i>Maianthemum canadense</i>	20	N	FACU
4.	<i>HIERACIUM AURANTIACUM</i>	25	Y	UPL
5.	<i>Mitchella repens</i>	25	Y	FACU
6.	<i>Trientalis borealis</i>	5	N	FAC
7.	<i>Lonicera canadensis</i>	25	Y	FACU
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **150**

**Woody Vine Stratum** (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

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

Total Number of Dominant Species Across All Strata: **8** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **37.5%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>35</b>	x 2 =	<b>70</b>
FAC spp.	<b>105</b>	x 3 =	<b>315</b>
FACU spp.	<b>170</b>	x 4 =	<b>680</b>
UPL spp.	<b>25</b>	x 5 =	<b>125</b>

Total **335** (A) **1190** (B)

Prevalence Index = B/A = **3.552**

**Hydrophytic Vegetation Indicators:**

- ☐ Yes ☒ No Rapid Test for Hydrophytic Vegetation  
☐ Yes ☒ No Dominance Test is > 50%  
☐ Yes ☒ No Prevalence Index is ≤ 3.0 \*  
☐ Yes ☒ No Morphological Adaptations (Explain) \*  
☐ Yes ☒ No Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/10/14</b>							
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>							
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>							
Soil Unit: <b>Gogebic, very stony-Pence, very stony-Cathro c</b>		NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WC-3-44</b>							
Landform: <b>Toeslope</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WC-3-44-01w</b>							
Slope (%): <b>0</b>		Latitude: <b>N/A</b>		Community ID: <b>shallow marsh</b>							
		Longitude: <b>N/A</b>		Section: <b>9</b>							
		Datum: <b>N/A</b>		Township: <b>44N</b>							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?									
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
<b>SUMMARY OF FINDINGS</b>											
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?							
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Remarks: <b>Conditions wetter than normal.</b>											
<b>HYDROLOGY</b>											
Wetland Hydrology Indicators (Check here if indicators are not present <input type="checkbox"/> ):											
Primary:			Secondary:								
<input checked="" type="checkbox"/> A1 - Surface Water	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks									
<input checked="" type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns									
<input checked="" type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines									
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table									
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows									
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery									
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants									
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input checked="" type="checkbox"/> D2 - Geomorphic Position									
<input checked="" type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard									
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief									
		<input checked="" type="checkbox"/> D5 - FAC-Neutral Test									
Field Observations:			Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>8</b> (in.)											
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>0</b> (in.)											
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>0</b> (in.)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>											
Remarks:											
<b>SOILS</b>											
Map Unit Name: <b>Gogebic, very stony-Pence, very stony-Cathro comp</b> Series Drainage Class: <b>#N/A</b>											
Taxonomy (Subgroup): <b>#N/A</b>											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix		Redox Features					Texture (e.g. clay, sand, loam)	
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	2	1	7.5YR	4/2	100	--	--	--	--	--	sandy clay loam
2	20	2	7.5YR	4/3	95	7.5YR	4/6	5	c	m	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):						<b>Indicators for Problematic Soils <sup>1</sup></b>					
<input type="checkbox"/> A1 - Histosol			<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)			<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)					
<input type="checkbox"/> A2 - Histic Epipedon			<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)			<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)					
<input type="checkbox"/> A3 - Black Histic			<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)			<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)					
<input type="checkbox"/> A4 - Hydrogen Sulfide			<input type="checkbox"/> F2 - Loamy Gleyed Matrix			<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)					
<input type="checkbox"/> A5 - Stratified Layers			<input type="checkbox"/> F3 - Depleted Matrix			<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)					
<input type="checkbox"/> A11 - Depleted Below Dark Surface			<input type="checkbox"/> F6 - Redox Dark Surface			<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)					
<input type="checkbox"/> A12 - Thick Dark Surface			<input type="checkbox"/> F7 - Depleted Dark Surface			<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)					
<input type="checkbox"/> S1 - Sandy Muck Mineral			<input type="checkbox"/> F8 - Redox Depressions			<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)					
<input type="checkbox"/> S4 - Sandy Gleyed Matrix									<input type="checkbox"/> F21 - Red Parent Material		
<input type="checkbox"/> S5 - Sandy Redox									<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)		
<input type="checkbox"/> S6 - Stripped Matrix									<input type="checkbox"/> TF12 - Very Shallow Dark Surface		
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)									<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<small><sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</small>											
Restrictive Layer (If Observed)			Type: <b>N/A</b> Depth: <b>N/A</b>			Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Remarks: <b>Does not meet hydric soils indicators but hydrology indicators and hydric vegetation present. Best professional judgment used.</b>											

Project/Site: **Gogebic Taconite Mine**

Wetland ID: **WC-3-44**

Sample Point: **-3-44-0**

**VEGETATION** (Species identified in all uppercase are non-native species.)

**Tree Stratum** (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		<b>0</b>		

**Sapling/Shrub Stratum** (Plot size: 5 meter radius)

1.	<i>Spiraea alba</i>	5	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		<b>5</b>		

**Herb Stratum** (Plot size: 2 meter radius)

1.	<i>Scirpus cyperinus</i>	50	Y	OBL
2.	<i>Dulichium arundinaceum</i>	10	N	OBL
3.	<i>Carex magellanica</i>	25	Y	OBL
4.	<i>Carex canescens</i>	5	N	OBL
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		<b>90</b>		

**Woody Vine Stratum** (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		<b>0</b>		

Remarks:

**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 spp.	<b>90</b>	x 1 =	<b>90</b>
FACW spp.	<b>5</b>	x 2 =	<b>10</b>
FAC spp.	<b>0</b>	x 3 =	<b>0</b>
FACU spp.	<b>0</b>	x 4 =	<b>0</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **95** (A) **100** (B)

Prevalence Index = B/A = **1.053**

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/04/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>P. Pieper</b>			State: <b>Wisconsin</b>
Soil Unit: <b>Dishno-Gogebic-Peshekee-Rock outcrop comp</b>	NWII/WWI Classification: <b>N/A</b>			Wetland ID: <b>WD-09</b>
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>			Sample Point: <b>WD-09-01u</b>
Slope (%): <b>8</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>upland HW forest</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>4</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Conditions wetter than normal.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input type="checkbox"/> D5 - FAC-Neutral Test	

<b>Field Observations:</b>			
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)		
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)		

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

Remarks:

<b>SOILS</b>	
Map Unit Name: <b>Dishno-Gogebic-Peshekee-Rock outcrop complex, S</b>	Series Drainage Class: <b>#N/A</b>
Taxonomy (Subgroup): <b>#N/A</b>	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	3	1	7.5YR	2.5/2	100	--	--	--	--	--	silt loam
3	24	2	7.5YR	3/4	100	--	--	--	--	--	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):			<b>Indicators for Problematic Soils <sup>1</sup></b>		
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)			
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)			
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)			
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)			
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)			
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)			
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)			
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)			
<input type="checkbox"/> S4 - Sandy Gleyed Matrix		<input type="checkbox"/> F21 - Red Parent Material			
<input type="checkbox"/> S5 - Sandy Redox		<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)			
<input type="checkbox"/> S6 - Stripped Matrix		<input type="checkbox"/> TF12 - Very Shallow Dark Surface			
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	-------------------	---

Remarks:

Project/Site: **Groundwater Drawdown Project**Wetland ID: **WD-09** Sample Point **WD-09-01u****VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	75	Y	FACU
2.	<i>Betula alleghaniensis</i>	25	Y	FAC
3.	<i>Ostrya virginiana</i>	15	N	FACU
4.	<i>Abies balsamea</i>	10	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **125**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Tilia americana</i>	10	N	FACU
3.	<i>Abies balsamea</i>	10	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **60**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	25	Y	FACU
2.	<i>Dryopteris intermedia</i>	10	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **35**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)Total Number of Dominant Species Across All Strata: **5** (B)Percent of Dominant Species That Are OBL, FACW, or FAC: **40.0%** (A/B)**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>55</b>	x 3 =	<b>165</b>
FACU spp.	<b>165</b>	x 4 =	<b>660</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **220** (A) **825** (B)Prevalence Index = B/A = **3.750****Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>	Date: <b>06/04/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>			County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Dishno-Gogebic-Peshekee-Rock outcrop comp</b>	NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WD-09</b>
Landform: <b>Terrace</b>	Local Relief: <b>Concave</b>		Sample Point: <b>WD-09-01w</b>
Slope (%): <b>2</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>Wooded Swamp</b>
Datum: <b>N/A</b>			Section: <b>4</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: <b>1</b> Dir: <b>W</b>	

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Conditions wetter than normal. Ruts are present from historic logging but this is the new normal circumstance. Vegetation problematic due to dominance of FACU species but hydric soils, hydrology indicators, and topographic position considered. BPJ was used.</b>	

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

<b>Primary:</b> <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<b>Secondary:</b> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input checked="" type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth:      (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>6</b> (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>0</b> (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks: **Hummocky due to rocks/logging ruts**

**SOILS**

Map Unit Name: **Dishno-Gogebic-Peshekee-Rock outcrop complex, Series Drainage Class: #N/A**

Taxonomy (Subgroup): **#N/A**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	8	1	7.5YR	3/2	95	7.5YR	4/6	5	c	m	silty clay loam
8	12	2	7.5YR	4/2	95	7.5YR	4/6	5	c	m	sandy loam
12	24	3	7.5YR	3/4	90	7.5YR	4/6	10	c	m	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ): <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input checked="" type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input checked="" type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input checked="" type="checkbox"/> F8 - Redox Depressions	<b>Indicators for Problematic Soils</b> <sup>1</sup> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks: **A11 applied based on professional judgement.**

Project/Site: **Groundwater Drawdown Project**

 Wetland ID: **WD-09** Sample Point **WD-09-01w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Acer saccharum</i>	35	Y	FACU
2.	<i>Betula alleghaniensis</i>	30	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **65**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	15	Y	FAC
2.	<i>Ostrya virginiana</i>	10	N	FACU
3.	<i>Acer saccharum</i>	30	Y	FACU
4.	<i>Fraxinus nigra</i>	10	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **65**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	25	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **25**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **40.0%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>10</b>	x 2 =	<b>20</b>
FAC spp.	<b>45</b>	x 3 =	<b>135</b>
FACU spp.	<b>100</b>	x 4 =	<b>400</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **155** (A) **555** (B)

 Prevalence Index = B/A = **3.581**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**

hydric soils, hydrology indicators and topographic position were evident and relied upon to make the wetland/upland boundary determination.



Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/05/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WD-17</b>	
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>		Sample Point: <b>WD-17-03u</b>	
Slope (%): <b>NA</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>logged HW forest</b>	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Section: <b>33</b>	
Are Vegetation <input checked="" type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Recently logged-most tree layer is removed with few shrubs and herbaceous species remaining. Surface soils also disturbed in most areas.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input type="checkbox"/> D5 - FAC-Neutral Test	
<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.)		<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks: <b>The site had wetter than average conditions at the time of the visit.</b>			

<b>SOILS</b>											
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky</b>						Series Drainage Class: <b>#N/A</b>					
Taxonomy (Subgroup): <b>#N/A</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)	%	Type	Location		
<b>0</b>	<b>4</b>	<b>1</b>	<b>7.5YR</b>	<b>3/2</b>	<b>100</b>	--	--	--	--	--	<b>silt loam</b>
<b>4</b>	<b>24</b>	<b>2</b>	<b>7.5YR</b>	<b>4/3</b>	<b>100</b>	--	--	--	--	--	<b>sandy loam</b>
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):						<b>Indicators for Problematic Soils <sup>1</sup></b>					
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)									
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)									
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)									
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)									
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)									
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)									
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)									
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)									
<input type="checkbox"/> S4 - Sandy Gleyed Matrix		<input type="checkbox"/> F21 - Red Parent Material									
<input type="checkbox"/> S5 - Sandy Redox		<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)									
<input type="checkbox"/> S6 - Stripped Matrix		<input type="checkbox"/> TF12 - Very Shallow Dark Surface									
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)									
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
Restrictive Layer (If Observed) Type: <b>N/A</b>		Depth: <b>N/A</b>		<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Remarks: <b>Soils and vegetation are significantly disturbed due to recent logging activities at this site which have removed most of the tree and shrub layer and created significant rutting and mixing of soils in most areas.</b>											

Project/Site: Groundwater Drawdown Project

Wetland ID: WD-17 Sample Point WD-17-03u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	5	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 5

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	15	Y	FACU
2.	<i>Fraxinus americana</i>	20	Y	FACU
3.	<i>Betula alleghaniensis</i>	15	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 50

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Allium tricoccum</i>	40	Y	FACU
2.	<i>Acer saccharum</i>	15	Y	FACU
3.	<i>Rubus idaeus var. strigosus</i>	5	N	FAC
4.	<i>Rubus allegheniensis</i>	5	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 65

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	20	x 3 =	60
FACU spp.	100	x 4 =	400
UPL spp.	0	x 5 =	0

Total 120 (A) 460 (B)

Prevalence Index = B/A = 3.833

**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/05/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>		NW/WWI Classification: <b>N/A</b>		Wetland ID: <b>WD-17</b>
Landform: <b>Side slope</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WD-17-03w</b>
Slope (%): <b>2</b>		Latitude: <b>N/A</b>		Community ID: <b>logged HW swamp</b>
		Longitude: <b>N/A</b>		Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>33</b>
Are Vegetation <input checked="" type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Recently logged-most tree layer is removed with few shrubs and herbaceous species remaining. Surface soils also disturbed in most areas.**
**HYDROLOGY**
**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

Primary:

- ☒ A1 - Surface Water
- ☒ A2 - High Water Table
- ☒ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☒ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:

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

**Field Observations:**

Surface Water Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>3</b> (in.)
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)

**Wetland Hydrology Present?** ☒ Yes ☐ No

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

Remarks: **The site had wetter than average conditions at the time of the visit.**
**SOILS**

Map Unit Name: **Gogebic silt loam, 6 to 18 percent slopes, very stony, rocky** Series Drainage Class: **#N/A**

Taxonomy (Subgroup): **#N/A**
**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	12	1	7.5YR	2.5/2	100	--	--	--	--	--	mucky silt loam
12	14	2	7.5YR	5/2	90	7.5YR	4/4	10	c	m	silty clay loam
14	24	3	7.5YR	4/4	100	--	--	--	--	--	loamy mucky sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

**NRCS Hydric Soil Field Indicators** (check here if indicators are not present ☐ ):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ S7 - Dark Surface (LRR R, MLRA 149B)

- ☐ S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
- ☐ S9 - Thin Dark Surface (LRR R, MLRA 149B)
- ☒ F1 - Loamy Mucky Mineral (LRR K, L)
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

**Indicators for Problematic Soils <sup>1</sup>**

- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	-------------------	---

Remarks:



Project/Site: **Groundwater Drawdown Project**

 Wetland ID: **WD-17**

 Sample Point **WD-17-03w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Ostrya virginiana</i>	5	Y	FACU
2.	<i>Ulmus americana</i>	5	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		10		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharum</i>	10	Y	FACU
2.	<i>Fraxinus nigra</i>	5	Y	FACW
3.	<i>Ulmus americana</i>	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		25		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Carex stricta</i>	15	Y	OBL
2.	<i>Equisetum sylvaticum</i>	15	Y	FACW
3.	<i>Fraxinus nigra</i>	5	N	FACW
4.	<i>Dryopteris carthusiana</i>	5	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		40		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **5** (A)

 Total Number of Dominant Species Across All Strata: **7** (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: **71.4%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>15</b>	x 1 =	<b>15</b>
FACW spp.	<b>45</b>	x 2 =	<b>90</b>
FAC spp.	<b>0</b>	x 3 =	<b>0</b>
FACU spp.	<b>15</b>	x 4 =	<b>60</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **75** (A) **165** (B)

 Prevalence Index = B/A = **2.200**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>C. Rogers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Tula-Gogebic complex, 0 to 6 percent slopes, stony</b>	NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WD-30</b>
Landform: <b>Shoulder slope</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WD-30-01u</b>
Slope (%): <b>1</b>	Latitude: <b>N/A</b>	Community ID: <b>upland HW forest</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>5</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Conditions wetter than normal.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input type="checkbox"/> D5 - FAC-Neutral Test	
<b>Field Observations:</b>			
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth:	(in.)
		<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks:			

<b>SOILS</b>											
Map Unit Name: <b>Tula-Gogebic complex, 0 to 6 percent slopes, stony</b> Series Drainage Class: <b>#N/A</b>											
Taxonomy (Subgroup): <b>#N/A</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type	Location	
<b>0</b>	<b>3</b>	<b>1</b>	<b>7.5YR</b>	<b>3/2</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>loam</b>
<b>3</b>	<b>16</b>	<b>2</b>	<b>7.5YR</b>	<b>3/3</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>loamy sand</b>
<b>16</b>	<b>24</b>	<b>3</b>	<b>7.5YR</b>	<b>4/4</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>sand</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):						<b>Indicators for Problematic Soils <sup>1</sup></b>						
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	
<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	
<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)	<input type="checkbox"/> F21 - Red Parent Material	<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)	<input type="checkbox"/> TF12 - Very Shallow Dark Surface	<input type="checkbox"/> Other (Explain in Remarks)					
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.												
<b>Restrictive Layer (If Observed)</b> Type: <b>N/A</b> Depth: <b>N/A</b>						<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Remarks:												

Project/Site: **Gogebic Taconite Mine** Wetland ID: **WD-30** Sample Point **WD-30-01u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	50	Y	FACU
2.	<i>Fraxinus nigra</i>	20	Y	FACW
3.	<i>Betula alleghaniensis</i>	10	N	FAC
4.	<i>Prunus serotina</i>	10	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **90**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Corylus cornuta</i>	15	Y	FACU
3.	<i>Fraxinus nigra</i>	20	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **75**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Pteridium aquilinum</i>	15	Y	FACU
2.	<i>Acer saccharum</i>	20	Y	FACU
3.	<i>Thalictrum dasycarpum</i>	10	N	FACW
4.	<i>Fraxinus nigra</i>	10	N	FACW
5.	<i>Maianthemum canadense</i>	15	Y	FACU
6.	<i>Trillium cernuum</i>	5	N	FAC
7.	<i>Dryopteris intermedia</i>	5	N	FAC
8.	<i>Carex pensylvanica</i>	20	Y	UPL
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **100**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

 Total Number of Dominant Species Across All Strata: **9** (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: **22.2%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>60</b>	x 2 =	<b>120</b>
FAC spp.	<b>20</b>	x 3 =	<b>60</b>
FACU spp.	<b>165</b>	x 4 =	<b>660</b>
UPL spp.	<b>20</b>	x 5 =	<b>100</b>

 Total **265** (A) **940** (B)

 Prevalence Index = B/A = **3.547**
**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>	Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>			County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>C. Rogers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Bowstring-Arnheim complex, 0 to 1 percent slope</b>	NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WD-30</b>
Landform: <b>Floodplain</b>	Local Relief: <b>Concave</b>		Sample Point: <b>WD-30-01w</b>
Slope (%): <b>1</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>Alder Thicket</b>
Datum: <b>N/A</b>			Section: <b>5</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: <b>1</b> Dir: <b>W</b>	

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Conditions wetter than normal. Floodplain wetland along Tyler Forks.</b>	

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

Primary:

- ☒ A1 - Surface Water
- ☒ A2 - High Water Table
- ☒ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☒ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B15 - Marl Deposits
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary:

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

**Field Observations:**

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>0</b> (in.)	

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

Remarks:

**SOILS**

Map Unit Name: **Bowstring-Arnheim complex, 0 to 1 percent slopes, Series Drainage Class: #N/A**

Taxonomy (Subgroup): **#N/A**

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features			Type	Location	Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%			
0	3	1	10YR	3/2	100	--	--	--	--	--	sandy loam
3	18	2	7.5YR	3/2	90	7.5YR	3/4	10	c	m	sandy loam
18	24	3	7.5YR	4/2	90	7.5YR	4/6	10	c	m	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

**NRCS Hydric Soil Field Indicators** (check here if indicators are not present ☐ ):

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

**Indicators for Problematic Soils<sup>1</sup>**

- ☐ A10 - 2 cm Muck (LRR K, L, MLRA 149B)
- ☐ A16 - Coast Prairie Redox (LRR K, L, R)
- ☐ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
- ☐ S7 - Dark Surface (LRR K, L, M)
- ☐ S8 - Polyvalue Below Surface (LRR K, L)
- ☐ S9 - Thin Dark Surface (LRR K, L)
- ☐ F12 - Iron-Manganese Masses (LRR K, L, R)
- ☐ F19 - Piedmont Floodplain Soils (MLRA 149B)
- ☐ F21 - Red Parent Material
- ☐ TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
- ☐ TF12 - Very Shallow Dark Surface
- ☒ Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Soils are problematic. Don't meet hydric soil indicators which is common in floodplains. Wetland boundary based off of topographic position, vegetation, and hydrology.</b>		

Project/Site: **Gogebic Taconite Mine**

 Wetland ID: **WD-30** Sample Point **WD-30-01w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	<i>Abies balsamea</i>	5	Y	FAC
2.	<i>Fraxinus nigra</i>	15	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **20**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Ulmus americana</i>	60	Y	FACW
2.	<i>Fraxinus nigra</i>	20	Y	FACW
3.	<i>Acer saccharum</i>	15	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **95**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Thalictrum dasycarpum</i>	60	Y	FACW
2.	<i>Ranunculus hispidus</i>	20	N	FAC
3.	<i>Carex crinita</i>	15	N	OBL
4.	<i>Carex bromoides</i>	30	Y	FACW
5.	<i>Solidago gigantea</i>	5	N	FACW
6.	<i>Rubus pubescens</i>	15	N	FACW
7.	<i>Fraxinus nigra</i>	10	N	FACW
8.	<i>Galium asprellum</i>	3	N	OBL
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **158**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **6** (A)

 Total Number of Dominant Species Across All Strata: **6** (B)

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

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>18</b>	x 1 =	<b>18</b>
FACW spp.	<b>215</b>	x 2 =	<b>430</b>
FAC spp.	<b>25</b>	x 3 =	<b>75</b>
FACU spp.	<b>15</b>	x 4 =	<b>60</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **273** (A) **583** (B)

 Prevalence Index = B/A = **2.136**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Groundwater Drawdown Project</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/04/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>P. Pieper</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	NWI/WWI Classification:	Wetland ID: <b>WE-07</b>
Landform: <b>Shoulder slope</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WE-07-02u</b>
Slope (%): <b>2</b>	Latitude: <b>N/A</b>	Community ID: <b>upland HW forest</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>33</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>1</b> Dir: <b>W</b>

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **An old logging road with some recent disturbance runs through this wetland from S. to N. but the sample site was undisturbed.****HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☒ ):

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

<b>Field Observations:</b>	
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Depth: (in.)	
Depth: (in.)	
Depth: (in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**Remarks: **The site had wetter than average conditions at the time of the visit.****SOILS**

Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	Series Drainage Class:
Taxonomy (Subgroup):	

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	
0	4	1	7.5YR	2.5/3	100	--	--	--	--	silt loam
4	10	2	7.5YR	3/3	100	--	--	--	--	silt loam
10	24	3	7.5YR	3/4	100	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):	<b>Indicators for Problematic Soils</b> <sup>1</sup>
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)
<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> F21 - Red Parent Material
<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> TF12 - Very Shallow Dark Surface
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer</b> (If Observed) Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	-------------------	---

Remarks:



Project/Site: **Groundwater Drawdown Project**

 Wetland ID: **WE-07** Sample Point **WE-07-02u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	60	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		60		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharum</i>	80	Y	FACU
2.	<i>Fraxinus nigra</i>	10	N	FACW
3.	<i>Ostrya virginiana</i>	15	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		105		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Fraxinus nigra</i>	10	N	FACW
3.	<i>Sanguinaria canadensis</i>	15	N	FACU
4.	<i>Tilia americana</i>	10	N	FACU
5.	<i>Uvularia sessilifolia</i>	5	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		80		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>20</u>	x 2 =	<u>40</u>
FAC spp.	<u>0</u>	x 3 =	<u>0</u>
FACU spp.	<u>225</u>	x 4 =	<u>900</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>

 Total 245 (A) 940 (B)

 Prevalence Index = B/A = 3.837
**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**

Project/Site: Groundwater Drawdown Project		Stantec Project #: 193701133		Date: 06/04/14
Applicant: Gogebic Taconite, LLC				County: Iron
Investigator #1: A. Michalski		Investigator #2: P. Pieper		State: Wisconsin
Soil Unit: Tula-Gogebic complex, 0 to 6 percent slopes, st		NWI/WWI Classification: T3/S3K		Wetland ID: WE-07
Landform: Terrace		Local Relief: Concave		Sample Point: WE-07-02w
Slope (%): 1		Latitude: N/A Longitude: N/A		Community ID: wet meadow/shrub carr
Datum: N/A				Section: 33
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Township: 45N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: This sample site is within an old logging road but this area has no been disturbed in many years and has developed into a wet meadow/shrub-carr. This is the new normal circumstance.			

<b>HYDROLOGY</b>			
Wetland Hydrology Indicators (Check here if indicators are not present <input type="checkbox"/> ):			
Primary:		Secondary:	
<input checked="" type="checkbox"/> A1 - Surface Water	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input checked="" type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input checked="" type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input checked="" type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input checked="" type="checkbox"/> D5 - FAC-Neutral Test	
Field Observations:			
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)		
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: The site had wetter than average conditions at the time of the visit.			

<b>SOILS</b>											
Map Unit Name: Tula-Gogebic complex, 0 to 6 percent slopes, stony Series Drainage Class:											
Taxonomy (Subgroup):											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	1	1	N	2/1	100	--	--	--	--	--	mucky silt loam
1	6	2	7.5YR	2.5/1	100	--	--	--	--	--	mucky silt loam
6	24	3	7.5YR	3/4	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):				<b>Indicators for Problematic Soils</b> <sup>1</sup>			
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)					
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)					
<input type="checkbox"/> A3 - Black Histic	<input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)					
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)					
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)					
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)					
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)					
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)					
<input type="checkbox"/> S4 - Sandy Gleyed Matrix		<input type="checkbox"/> F21 - Red Parent Material					
<input type="checkbox"/> S5 - Sandy Redox		<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)					
<input type="checkbox"/> S6 - Stripped Matrix		<input type="checkbox"/> TF12 - Very Shallow Dark Surface					
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)					

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:			

Project/Site: Groundwater Drawdown Project

Wetland ID: WE-07 Sample Point WE-07-02w

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 0

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	Salix discolor	20	Y	FACW
2.	Fraxinus nigra	15	Y	FACW
3.	Betula alleghaniensis	15	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 50

Herb Stratum (Plot size: 2 meter radius)

1.	Osmunda claytoniana	15	N	FAC
2.	Onoclea sensibilis	80	Y	FACW
3.	Equisetum sylvaticum	25	N	FACW
4.	Euthamia graminifolia	15	N	FAC
5.	Carex gracillima	15	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 150

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

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

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

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	140	x 2 =	280
FAC spp.	45	x 3 =	135
FACU spp.	15	x 4 =	60
UPL spp.	0	x 5 =	0

Total 200 (A) 475 (B)

Prevalence Index = B/A = 2.375

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No



Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/04/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>A. Michalski</b>	Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	NWII/WWI Classification: <b>N/A</b>		Wetland ID: <b>WE-08</b>	
Landform: <b>Shoulder</b>	Local Relief: <b>Convex</b>		Sample Point: <b>WE-08-01u</b>	
Slope (%): <b>8</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Community ID: <b>upland HW forest</b>	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Section: <b>33</b>	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>An old logging road with some recent disturbance runs through this wetland from S. to N. but the sample site was undisturbed.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <u>Primary:</u>  <input type="checkbox"/> A1 - Surface Water  <input type="checkbox"/> A2 - High Water Table  <input type="checkbox"/> A3 - Saturation  <input type="checkbox"/> B1 - Water Marks  <input type="checkbox"/> B2 - Sediment Deposits  <input type="checkbox"/> B3 - Drift Deposits  <input type="checkbox"/> B4 - Algal Mat or Crust  <input type="checkbox"/> B5 - Iron Deposits  <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery  <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface         </div> <div style="width: 30%;"> <input type="checkbox"/> B9 - Water-Stained Leaves  <input type="checkbox"/> B13 - Aquatic Fauna  <input type="checkbox"/> B15 - Marl Deposits  <input type="checkbox"/> C1 - Hydrogen Sulfide Odor  <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots  <input type="checkbox"/> C4 - Presence of Reduced Iron  <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils  <input type="checkbox"/> C7 - Thin Muck Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> <div style="width: 30%;"> <u>Secondary:</u>  <input type="checkbox"/> B6 - Surface Soil Cracks  <input type="checkbox"/> B10 - Drainage Patterns  <input type="checkbox"/> B16 - Moss Trim Lines  <input type="checkbox"/> C2 - Dry-Season Water Table  <input type="checkbox"/> C8 - Crayfish Burrows  <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery  <input type="checkbox"/> D1 - Stunted or Stressed Plants  <input type="checkbox"/> D2 - Geomorphic Position  <input type="checkbox"/> D3 - Shallow Aquitard  <input type="checkbox"/> D4 - Microtopographic Relief  <input type="checkbox"/> D5 - FAC-Neutral Test         </div> </div>			
<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.)		<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks: <b>The site had wetter than average conditions at the time of the visit.</b>			

SOILS											
Map Unit Name:			Gogebic silt loam, 6 to 18 percent slopes, very stony								
Taxonomy (Subgroup):			Series Drainage Class:								
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	8	1	7.5YR	3/1	100	--	--	--	--	--	silt loam
8	18	2	7.5YR	3/3	100	--	--	--	--	--	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> A1- Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)         </div> <div style="width: 30%;"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input type="checkbox"/> F3 - Depleted Matrix  <input type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions         </div> <div style="width: 30%;"> <b>Indicators for Problematic Soils <sup>1</sup></b>  <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>			
<div style="font-size: small;"> <sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         </div>			
<b>Restrictive Layer</b> (If Observed) Type: <b>rock</b>		Depth: <b>18 in</b>	
		<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:			

Project/Site: **Groundwater Drawdown Project** Wetland ID: **WE-08** Sample Point **WE-08-01u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	75	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **75**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Fraxinus americana</i>	20	Y	FACU
3.	<i>Ostrya virginiana</i>	15	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **75**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	25	Y	FACU
2.	<i>Fraxinus americana</i>	5	N	FACU
3.	<i>Uvularia sessilifolia</i>	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **35**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **0** (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **0.0%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>0</b>	x 3 =	<b>0</b>
FACU spp.	<b>185</b>	x 4 =	<b>740</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **185** (A) **740** (B)

 Prevalence Index = B/A = **4.000**
**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

**Additional Remarks:**



Project/Site: Groundwater Drawdown Project		Stantec Project #: 193701133		Date: 06/04/14
Applicant: Gogebic Taconite, LLC				County: Iron
Investigator #1: A. Michalski		Investigator #2: P. Pieper		State: Wisconsin
Soil Unit: Tula-Gogebic complex, 0 to 6 percent slopes, st		NWI/WWI Classification: T3K		Wetland ID: WE-08
Landform: Toeslope		Local Relief: Concave		Sample Point: WE-08-01w
Slope (%): 1		Latitude: N/A Longitude: N/A		Community ID: Hardwood Swamp
Datum: N/A				Section: 33
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Township: 45N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: Javorsky Creek flows through this wetland but flow patterns were not evident right at the sample site location.			

<b>HYDROLOGY</b>			
Wetland Hydrology Indicators (Check here if indicators are not present <input type="checkbox"/> ):			
Primary:		Secondary:	
<input checked="" type="checkbox"/> A1 - Surface Water		<input type="checkbox"/> B6 - Surface Soil Cracks	
<input checked="" type="checkbox"/> A2 - High Water Table		<input type="checkbox"/> B10 - Drainage Patterns	
<input checked="" type="checkbox"/> A3 - Saturation		<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks		<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits		<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits		<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust		<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits		<input checked="" type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery		<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input checked="" type="checkbox"/> D5 - FAC-Neutral Test	
Field Observations:			
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Depth: 3 (in.)			
Depth: 0 (in.)			
Depth: 0 (in.)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A			
Remarks: The site had wetter than average conditions at the time of the visit.			

<b>SOILS</b>											
Map Unit Name: Tula-Gogebic complex, 0 to 6 percent slopes, stony Series Drainage Class:											
Taxonomy (Subgroup):											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)	%	Type	Location		
0	5	1	7.5YR	2.5/1	100	--	--	--	--	mucky silt loam	
5	9	2	7.5YR	3/1	100	--	--	--	--	clay loam	
9	18	3	7.5YR	3/1	100	--	--	--	--	clay loam with gravel	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	
--	--	--	--	--	--	--	--	--	--	--	

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):			<b>Indicators for Problematic Soils</b> <sup>1</sup>		
<input type="checkbox"/> A1- Histosol			<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)		
<input type="checkbox"/> A2 - Histic Epipedon			<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)		
<input type="checkbox"/> A3 - Black Histic			<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)		
<input type="checkbox"/> A4 - Hydrogen Sulfide			<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)		
<input type="checkbox"/> A5 - Stratified Layers			<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)		
<input type="checkbox"/> A11 - Depleted Below Dark Surface			<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)		
<input type="checkbox"/> A12 - Thick Dark Surface			<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)		
<input type="checkbox"/> S1 - Sandy Muck Mineral			<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)		
<input type="checkbox"/> S4 - Sandy Gleyed Matrix			<input type="checkbox"/> F21 - Red Parent Material		
<input type="checkbox"/> S5 - Sandy Redox			<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)		
<input type="checkbox"/> S6 - Stripped Matrix			<input type="checkbox"/> TF12 - Very Shallow Dark Surface		
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)			<input type="checkbox"/> Other (Explain in Remarks)		
			<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		

Restrictive Layer (If Observed)	Type: rock	Depth: 18 in	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:
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Project/Site: Groundwater Drawdown Project

Wetland ID: WE-08

Sample Point WE-08-01w

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Fraxinus nigra</i>	60	Y	FACW
2.	<i>Ostrya virginiana</i>	20	Y	FACU
3.	<i>Betula alleghaniensis</i>	10	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 90

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	30	Y	FAC
2.	<i>Acer saccharum</i>	5	N	FACU
3.	<i>Fraxinus nigra</i>	15	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 50

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Osmunda claytoniana</i>	20	Y	FAC
2.	<i>Caltha palustris</i>	10	Y	OBL
3.	<i>Rubus pubescens</i>	5	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 35

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	10	x 1 =	10
FACW spp.	80	x 2 =	160
FAC spp.	60	x 3 =	180
FACU spp.	25	x 4 =	100
UPL spp.	0	x 5 =	0

Total 175 (A) 450 (B)

Prevalence Index = B/A = 2.571

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/04/14</b>	
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>	
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>		NWI/WWI Classification: <b>N/A</b>		Wetland ID: <b>WE-09</b>	
Landform: <b>Terrace</b>		Local Relief: <b>Convex</b>		Sample Point: <b>WE-09-01u</b>	
Slope (%): <b>0</b>		Latitude: <b>N/A</b>		Community ID: <b>upland HW forest</b>	
		Longitude: <b>N/A</b>		Datum: <b>N/A</b>	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: <b>33</b>	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: <b>45N</b>	
				Range: <b>1</b> Dir: <b>W</b>	
<b>SUMMARY OF FINDINGS</b>					
Hydrophytic Vegetation Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:					
<b>HYDROLOGY</b>					
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):					
<div><div><u>Primary:</u><div><input type="checkbox"/> A1 - Surface Water<input type="checkbox"/> A2 - High Water Table<input type="checkbox"/> A3 - Saturation<input type="checkbox"/> B1 - Water Marks<input type="checkbox"/> B2 - Sediment Deposits<input type="checkbox"/> B3 - Drift Deposits<input type="checkbox"/> B4 - Algal Mat or Crust<input type="checkbox"/> B5 - Iron Deposits<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</div></div><div><input type="checkbox"/> B9 - Water-Stained Leaves<input type="checkbox"/> B13 - Aquatic Fauna<input type="checkbox"/> B15 - Marl Deposits<input type="checkbox"/> C1 - Hydrogen Sulfide Odor<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots<input type="checkbox"/> C4 - Presence of Reduced Iron<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils<input type="checkbox"/> C7 - Thin Muck Surface<input type="checkbox"/> Other (Explain in Remarks)</div></div> <div><u>Secondary:</u><div><input type="checkbox"/> B6 - Surface Soil Cracks<input type="checkbox"/> B10 - Drainage Patterns<input type="checkbox"/> B16 - Moss Trim Lines<input type="checkbox"/> C2 - Dry-Season Water Table<input type="checkbox"/> C8 - Crayfish Burrows<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery<input type="checkbox"/> D1 - Stunted or Stressed Plants<input type="checkbox"/> D2 - Geomorphic Position<input type="checkbox"/> D3 - Shallow Aquitard<input type="checkbox"/> D4 - Microtopographic Relief<input type="checkbox"/> D5 - FAC-Neutral Test</div></div>					



Project/Site: Groundwater Drawdown Project

Wetland ID: WE-09

Sample Point WE-09-01u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	70	Y	FACU
2.	<i>Betula alleghaniensis</i>	40	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 110

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	50	Y	FAC
2.	<i>Acer saccharum</i>	15	N	FACU
3.	<i>Fraxinus americana</i>	15	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 80

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Trillium grandiflorum</i>	15	Y	UPL
2.	<i>Acer saccharum</i>	10	Y	FACU
3.	<i>Fraxinus americana</i>	3	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 28

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	90	x 3 =	270
FACU spp.	113	x 4 =	452
UPL spp.	15	x 5 =	75

Total 218 (A) 797 (B)

Prevalence Index = B/A = 3.656

**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Groundwater Drawdown Project</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/04/14</b>					
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>					
Investigator #1: <b>A. Michalski</b>		Investigator #2: <b>P. Pieper</b>		State: <b>Wisconsin</b>					
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very</b>		NW1/WW1 Classification: <b>N/A</b>		Wetland ID: <b>WE-09</b>					
Landform: <b>Terrace</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WE-09-01w</b>					
Slope (%): <b>0</b>		Latitude: <b>N/A</b>		Community ID: <b>Hardwood Swamp</b>					
		Longitude: <b>N/A</b>		Section: <b>33</b>					
		Datum: <b>N/A</b>		Township: <b>45N</b>					
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>					
Are Vegetation <input checked="" type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input checked="" type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
<b>SUMMARY OF FINDINGS</b>									
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?					
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland?					
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Remarks: <b>An old logging road runs through this wetland from SW to NE but no disturbance has occurred in years and this is the new normal circumstance. Hydrology is problematic due to lack of saturation with upper 12 inches of soil profile but other hydrology indicators were present along with hydric soils indicating this area is wetland.</b>									
<b>HYDROLOGY</b>									
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> ):									
<u>Primary:</u>			<u>Secondary:</u>						
<input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface			<input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)						
			<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input checked="" type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test						
<b>Field Observations:</b>									
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: (in.)						
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: (in.)						
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Depth: <b>15</b> (in.)						
			<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>									
Remarks: <b>The site had wetter than average conditions at the time of the visit. Hummocky but no saturation present within 12 inches.</b>									
<b>SOILS</b>									
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b> Series Drainage Class:									
Taxonomy (Subgroup):									
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)									
Top Depth	Bottom Depth	Horizon	Matrix		Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%	Color (Moist)	%	Type	Location	
<b>0</b>	<b>15</b>	<b>1</b>	<b>7.5YR</b>	<b>2.5/1</b>	<b>100</b>	--	--	--	<b>mucky silt loam</b>
<b>15</b>	<b>17</b>	<b>2</b>	<b>7.5YR</b>	<b>5/2</b>	<b>100</b>	--	--	--	<b>fine sandy loam</b>
<b>17</b>	<b>24</b>	<b>3</b>	<b>7.5YR</b>	<b>3/4</b>	<b>100</b>	--	--	--	<b>sandy loam</b>
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):									
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input checked="" type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)			<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L, MLRA 149B) <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions						
<b>Indicators for Problematic Soils</b> <sup>1</sup>									
<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)									
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.									
<b>Restrictive Layer</b> (If Observed)			<b>Hydric Soil Present?</b>						
Type: <b>N/A</b> Depth: <b>N/A</b>			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Remarks:									



Project/Site: **Groundwater Drawdown Project**

Wetland ID: **WE-09**

Sample Point **WE-09-01w**

**VEGETATION** (Species identified in all uppercase are non-native species.)

**Tree Stratum** (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Betula alleghaniensis</i>	30	Y	FAC
2.	<i>Acer saccharum</i>	50	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **80**

**Sapling/Shrub Stratum** (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	25	Y	FAC
2.	<i>Fraxinus americana</i>	5	N	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **30**

**Herb Stratum** (Plot size: 2 meter radius)

1.	<i>Dryopteris intermedia</i>	15	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **15**

**Woody Vine Stratum** (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: **75.0%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>70</b>	x 3 =	<b>210</b>
FACU spp.	<b>55</b>	x 4 =	<b>220</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **125** (A) **430** (B)

Prevalence Index = B/A = **3.440**

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/03/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Ashland</b>
Investigator #1: <b>N. Molstad</b>	Investigator #2: <b>C. Rogers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Dishno-Gogebic-Peshekee-Rock outcrop comp</b>	NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WA-01, WA-05</b>
Landform: <b>--</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WA-01-04u, WA-05-01u</b>
Slope (%): <b>NA</b>	Latitude: <b>N/A</b>	Community ID: <b>upland</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>2</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>2</b> Dir: <b>W</b>

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Conditions wetter than normal. Shared upland point.****HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☒ ):

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

<b>Field Observations:</b>	
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth: (in.)	
Depth: (in.)	
Depth: <b>15</b> (in.)	

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

Remarks:

**SOILS**

Map Unit Name: <b>Dishno-Gogebic-Peshekee-Rock outcrop complex, Series</b>	Drainage Class: <b>#N/A</b>
Taxonomy (Subgroup): <b>#N/A</b>	

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	
<b>0</b>	<b>4</b>	<b>1</b>	<b>7.5YR</b>	<b>2.5/1</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>loam</b>
<b>4</b>	<b>10</b>	<b>2</b>	<b>7.5YR</b>	<b>4/4</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>loam</b>
<b>10</b>	<b>18</b>	<b>3</b>	<b>5YR</b>	<b>4/3</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>sandy loam</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):	<b>Indicators for Problematic Soils <sup>1</sup></b>
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)
<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> F21 - Red Parent Material
<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> TF12 - Very Shallow Dark Surface
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	
<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	
<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	
<input type="checkbox"/> F2 - Loamy Gleyed Matrix	
<input type="checkbox"/> F3 - Depleted Matrix	
<input type="checkbox"/> F6 - Redox Dark Surface	
<input type="checkbox"/> F7 - Depleted Dark Surface	
<input type="checkbox"/> F8 - Redox Depressions	

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (If Observed)</b>	Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	------------------	-------------------	---

Remarks:

Project/Site: **Gogebic Taconite Mine**Wetland ID: **WA-01, WA-05** Sample Point: **WA-01-04u  
WA-05-04u****VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	70	Y	FACU
2.	<i>Ostrya virginiana</i>	20	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **90**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Fraxinus americana</i>	10	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **30**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	15	Y	FACU
2.	<i>Fraxinus americana</i>	10	N	FACU
3.	<i>Cardamine concatenata</i>	20	Y	FACU
4.	<i>Allium tricoccum</i>	20	Y	FACU
5.	<i>Dryopteris intermedia</i>	10	N	FAC
6.	<i>Maianthemum canadense</i>	10	N	FACU
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **85**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**Number of Dominant Species that are OBL, FACW, or FAC: **0** (A)Total Number of Dominant Species Across All Strata: **7** (B)Percent of Dominant Species That Are OBL, FACW, or FAC: **0.0%** (A/B)**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>10</b>	x 3 =	<b>30</b>
FACU spp.	<b>195</b>	x 4 =	<b>780</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **205** (A) **810** (B)Prevalence Index = B/A = **3.951****Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Ashland</b>
Investigator #1: <b>N. Molstad</b>		Investigator #2: <b>C. Rogers</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Dishno-Gogebic-Peshekee-Rock outcrop comp</b>	NWII/WWI Classification: <b>N/A</b>			Wetland ID: <b>WA-01</b>
Landform: <b>--</b>	Local Relief: <b>Concave</b>			Sample Point: <b>WA-01-04w</b>
Slope (%): <b>NA</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>hardwood swamp</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>2</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>44N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>2</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Conditions wetter than normal.</b>			

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

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

<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>14</b> (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks:

**SOILS**

Map Unit Name: **Dishno-Gogebic-Peshekee-Rock outcrop complex, Series Drainage Class: #N/A**

Taxonomy (Subgroup): **#N/A**

**Profile Description** (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	5	1	7.5YR	2.5/1	100	--	--	--	--	--	mucky silt lloam
5	9	2	7.5YR	3/1	100	--	--	--	--	--	loam
9	18	3	7.5YR	4/3	100	--	--	--	--	--	loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):		<b>Indicators for Problematic Soils <sup>1</sup></b>
<input type="checkbox"/> A1- Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: <b>N/A</b>	Depth: <b>N/A</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **Gogebic Taconite Mine** Wetland ID: **WA-01** Sample Point: **WA-01-04w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	25	Y	FACU
2.	<i>Fraxinus nigra</i>	40	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **65**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Fraxinus nigra</i>	10	Y	FACW
2.	<i>Ostrya virginiana</i>	30	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

 Total Cover = **40**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Dryopteris carthusiana</i>	10	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

 Total Cover = **10**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

 Total Cover = **0**

Remarks:

**Dominance Test Worksheet**

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

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **60.0%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>60</b>	x 2 =	<b>120</b>
FAC spp.	<b>0</b>	x 3 =	<b>0</b>
FACU spp.	<b>55</b>	x 4 =	<b>220</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **115** (A) **340** (B)

 Prevalence Index = B/A = **2.957**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/12/2014 1:34:01 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-60-01u, WA-   
 Investigator(s): NEM DAH Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): VC  
 Slope (%): 0 - 2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock outcrop complex, 18 to 35 per  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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>Wetter than normal.</u>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point : WA-60-1u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. <u>Quercus rubra</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>90</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>190</u></td> <td>x 4 = <u>760</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>760</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>190</u>	x 4 = <u>760</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>190</u> (A)	<u>760</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>190</u>	x 4 = <u>760</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>190</u> (A)	<u>760</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Ostrya virginiana</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>80</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Acer saccharum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Quercus rubra</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>20</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														



## SOIL

Sampling Point: WA-60-1u,

[illegible]

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/12/2014 12:07:02  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-60-01w  
 Investigator(s): NEM DAH Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CC  
 Slope (%): 0 - 2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock outcrop complex, 18 to 35 per 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
Primary Indicators (minimum of one is required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>2.00</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Water Table Present? Yes _____ No _____	Depth (inches): _____		
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0.00</u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-60-1w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus nigra</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.67</u> (A/B)
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Betula alleghaniensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>70</u>				<b>Prevalence Index worksheet:</b> <div style="display: flex; justify-content: space-between;"> <span>Total % Cover of:</span> <span>Multiply by:</span> </div> OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>120</u> x 2 = <u>240</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>60</u> x 4 = <u>240</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>235</u> (A) <u>595</u> (B)  Prevalence Index = B/A = <u>2.53</u>
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15</u> )				
1. <u>Fraxinus nigra</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Betula alleghaniensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4. <u>Ulmus americana</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
Total Cover: <u>80</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5</u> )				
1. <u>Carex disperma</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Circaea alpina</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Impatiens capensis</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Ulmus americana</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
Total Cover: <u>65</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
50% of total cover: _____ 20% of total cover: _____				
Woody Vine Stratum (Plot size: <u>15</u> )				
1. <u>Parthenocissus quinquefolia</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>20</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

## SOIL

Sampling Point: WA-60-1w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R, MLRA 149B</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B</b> )
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L</b> )
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B</b> )	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>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:



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/17/2014 11:29:51  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-69-02u  
 Investigator(s): NEM MJK Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): convex  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) <u>Wetter than normal.</u>	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-69-02u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.67</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>50</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>210</u></td> <td>x 4 = <u>840</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>220</u> (A)</td> <td><u>870</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.95</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>210</u>	x 4 = <u>840</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>220</u> (A)	<u>870</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>210</u>	x 4 = <u>840</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>220</u> (A)	<u>870</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Ostrya virginiana</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>120</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Lonicera tatarica</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Dryopteris intermedia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>50</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

## SOIL

Sampling Point: WA-69-02u

[illegible]

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/17/2014 11:13:44  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-69-02w  
 Investigator(s): NEM MJK Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave  
 Slope (%): 0 - 2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-69-02w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>10</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>70</u> (A/B)														
2. <u>Fraxinus nigra</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>40</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>130</u></td> <td>x 2 = <u>260</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>90</u></td> <td>x 4 = <u>360</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>270</u> (A)</td> <td><u>730</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.7</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>130</u>	x 2 = <u>260</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>270</u> (A)	<u>730</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>130</u>	x 2 = <u>260</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>90</u>	x 4 = <u>360</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>270</u> (A)	<u>730</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Fraxinus nigra</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>															
2. <u>Acer saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Betula alleghaniensis</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>120</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Carex disperma</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>															
3. <u>Fraxinus nigra</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
4. <u>Rubus hispidus</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
5. <u>Rubus idaeus</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>															
6. <u>Symphyotrichum novae-angliae</u>	<u>10</u>	<u>No</u>	<u>FACW</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>110</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

## SOIL

Sampling Point: WA-69-02<sup>w</sup>

[illegible]

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/18/2014 12:02:08 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-74-03u/WA-7  
 Investigator(s): NEM MJK Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): convex  
 Slope (%): 8 - 15% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal. Shared upland point.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-74-03U

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>70</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>70</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>220</u></td> <td>x 4 = <u>880</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>230</u> (A)</td> <td><u>900</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.91</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>220</u>	x 4 = <u>880</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>230</u> (A)	<u>900</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>220</u>	x 4 = <u>880</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>230</u> (A)	<u>900</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Acer saccharum</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Fraxinus americana</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Ostrya virginiana</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>100</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Tilia americana</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Quercus rubra</u>	<u>10</u>	<u>No</u>	<u>FACU</u>															
4. <u>Caulophyllum thalictum</u>	<u>10</u>	<u>No</u>	<u>UPL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>60</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														



## SOIL

Sampling Point: WA-74-03u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: Ashland Sampling Date: 6/18/2014 11:26:22  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-74-03w  
 Investigator(s): NEM MJK Section, Township, Range: S1, T44N, R2W  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) <u>Wetter than normal</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		<b>Secondary Indicators (minimum of two required)</b>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1.00</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-74-03W

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>55.56</u> (A/B)														
2. <u>Fraxinus americana</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Fraxinus nigra</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>90</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>625</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.29</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>190</u> (A)	<u>625</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>65</u>	x 2 = <u>130</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>120</u>	x 4 = <u>480</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>190</u> (A)	<u>625</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Fraxinus americana</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Acer saccharum</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Fraxinus nigra</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>80</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Fraxinus nigra</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Impatiens capensis</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Ranunculus hispidus</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>20</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														

## SOIL

Sampling Point: WA-74-03w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: rock

Depth (inches): 5.00

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/7/2014 3:18:51 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-144-01u  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): convex  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock outcrop complex, 18 to 35 perc 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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

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



**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-144-0

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>45</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>135</u></td> <td>x 4 = <u>540</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u></td> <td>(A) <u>540</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>135</u>	x 4 = <u>540</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>135</u>	(A) <u>540</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>135</u>	x 4 = <u>540</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>135</u>	(A) <u>540</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Acer saccharum</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>75</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Maianthemum canadense</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Sanguinaria canadensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>15</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

## SOIL

Sampling Point: WA-144-0

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>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 Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/7/2014 2:57:26 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-144-01w  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave  
 Slope (%): 0 - 2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Dishno-Gogebic-Peshekee-Rock outcrop complex, 18 to 35 perc+ 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 <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>16.00</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-144-0

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>15</u></td> <td>x 2 = <u>30</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>40</u> (A)</td> <td><u>65</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.62</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>15</u>	x 2 = <u>30</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>40</u> (A)	<u>65</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>15</u>	x 2 = <u>30</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>40</u> (A)	<u>65</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Impatiens capensis</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Caltha palustris</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>															
3. <u>Carex scabrata</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>															
4. <u>Dryopteris intermedia</u>	<u>5</u>	<u>No</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>40</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

## SOIL

Sampling Point: WA-144-0

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>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:



# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/9/2014 12:01:20 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-149-04u  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): convex  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-149-04<sub>u</sub>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>30</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>445</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.87</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>445</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>115</u> (A)	<u>445</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Uvularia sessilifolia</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Acer saccharum</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Dryopteris intermedia</u>	<u>15</u>	<u>No</u>	<u>FAC</u>															
4. <u>Caulophyllum thalictroides</u>	<u>5</u>	<u>No</u>	<u>UPL</u>															
5. <u>Adiantum pedatum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>85</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

## SOIL

Sampling Point: WA-149-04 u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: bedrock

Depth (inches): 15.00

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/9/2014 11:39:14 AM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-149-04w  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): concave  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-149-04 **w**

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer saccharum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>10</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>60</u></td> <td>x 2 = <u>120</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u></td> <td>(A) <u>365</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.61</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>60</u>	x 2 = <u>120</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u>	(A) <u>365</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>60</u>	x 2 = <u>120</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>140</u>	(A) <u>365</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>5</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Impatiens capensis</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Dryopteris intermedia</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>															
3. <u>Scirpus cyperinus</u>	<u>15</u>	<u>No</u>	<u>OBL</u>															
4. <u>Solidago gigantea</u>	<u>15</u>	<u>No</u>	<u>FACW</u>															
5. <u>Acer saccharum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>															
6. <u>Onoclea sensibilis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>															
7. <u>Rubus idaeus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>125</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



## SOIL

Sampling Point: WA-149-04 w**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 3	7.5YR 2.5/1	100					MMI	
3 - 10	7.5YR 2.5/1	90	7.5YR 2.5/3	10.00	C	M	SIL	
10 - 15	7.5YR 4/4	90	7.5YR 5/6	10.00	C	M	LS	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 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)

<sup>3</sup>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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/9/2014 4:47:06 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-155-01u  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Rise Local relief (concave, convex, none): convex  
 Slope (%): 0 - 2% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

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

**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-155-01<sub>U</sub>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. <u>Tilia americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>25</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>100</u>	x 4 = <u>400</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>400</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. <u>Ostrya virginiana</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Fraxinus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Quercus rubra</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
Total Cover: <u>35</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u>Carex gracillima</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Fraxinus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Maianthemum canadense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
4. <u>Mitchella repens</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
5. <u>Tilia americana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
Total Cover: <u>40</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: <u>0</u>																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														

## SOIL

Sampling Point: WA-155-01 u

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: rock

Depth (inches): 8.00

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: GTAC City/County: IRON Sampling Date: 7/9/2014 4:10:31 PM  
 Applicant/Owner: GTAC State: WI Sampling Point: WA-155-01w  
 Investigator(s): NEM NLR Section, Township, Range: S6, T44N, R1W  
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): concave  
 Slope (%): 3 - 7% Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Gogebic silt loam, 18 to 35 percent slopes, very stony, rocky 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 <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetter than normal.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		<b>Secondary Indicators (minimum of two required)</b>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1.00</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.00</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION – Use scientific names of plants.**

 Sampling Point: WA-155-01 <sub>W</sub>

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus nigra</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>10</u>				<b>Prevalence Index worksheet:</b> <div style="display: flex; justify-content: space-between;"> <span>Total % Cover of:</span> <span>Multiply by:</span> </div> OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>135</u> (A) <u>265</u> (B)  Prevalence Index = B/A = <u>1.96</u>
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15</u> )				
1. <u>Fraxinus nigra</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Ostrya virginiana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>20</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5</u> )				
1. <u>Impatiens capensis</u>	<u>55</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Carex scabrata</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Fraxinus nigra</u>	<u>20</u>	<u>No</u>	<u>FACW</u>	
4. <u>Poa palustris</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
Total Cover: <u>105</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
50% of total cover: _____ 20% of total cover: _____				
Woody Vine Stratum (Plot size: <u>15</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>0</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

## SOIL

Sampling Point: WA-155-01 w

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

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R,</b>
<input type="checkbox"/> Histic Epipedon (A2)	<b>MLRA 149B)</b>
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L)</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B)</b>	

### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ 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)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: rock

Depth (inches): 10.00

Hydric Soil Present? Yes ✓ No       

Remarks:



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>T. King</b>		Investigator #2: <b>H. Stoffs</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic silt loam</b>	NW/WWI Classification: <b>N/A</b>			Wetland ID: <b>WD-28</b>
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>			Sample Point: <b>WD-28-1u</b>
Slope (%): <b>2-6</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>Mixed Upland Forest</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>33</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Is This Sampling Point Within A Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</b>
Remarks: <b>Wetter than normal conditions per antecedant precipitation analysis. Mixed deciduous/conifer upland forest recently logged in strips. Sample point less disturbed than adjacent areas.</b>	

<b>HYDROLOGY</b>	
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <u>Primary:</u>  <input type="checkbox"/> A1 - Surface Water  <input type="checkbox"/> A2 - High Water Table  <input type="checkbox"/> A3 - Saturation  <input type="checkbox"/> B1 - Water Marks  <input type="checkbox"/> B2 - Sediment Deposits  <input type="checkbox"/> B3 - Drift Deposits  <input type="checkbox"/> B4 - Algal Mat or Crust  <input type="checkbox"/> B5 - Iron Deposits  <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery  <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface         </div> <div style="width: 30%;"> <input type="checkbox"/> B9 - Water-Stained Leaves  <input type="checkbox"/> B13 - Aquatic Fauna  <input type="checkbox"/> B15 - Marl Deposits  <input type="checkbox"/> C1 - Hydrogen Sulfide Odor  <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots  <input type="checkbox"/> C4 - Presence of Reduced Iron  <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils  <input type="checkbox"/> C7 - Thin Muck Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> <div style="width: 30%;"> <u>Secondary:</u>  <input type="checkbox"/> B6 - Surface Soil Cracks  <input type="checkbox"/> B10 - Drainage Patterns  <input type="checkbox"/> B16 - Moss Trim Lines  <input type="checkbox"/> C2 - Dry-Season Water Table  <input type="checkbox"/> C8 - Crayfish Burrows  <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery  <input type="checkbox"/> D1 - Stunted or Stressed Plants  <input type="checkbox"/> D2 - Geomorphic Position  <input type="checkbox"/> D3 - Shallow Aquitard  <input type="checkbox"/> D4 - Microtopographic Relief  <input type="checkbox"/> D5 - FAC-Neutral Test         </div> </div>	
<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>16</b> (in.)	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>	
Remarks:	

SOILS											
Map Unit Name: Gogebic silt loam						Series Drainage Class: Moderately well					
Taxonomy (Subgroup): Alfic Oxyaquic Fragiorthods											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	6	1	7.5YR	3/2	100	--	--	--	--	--	silt loam
6	18	2	7.5YR	3/3	99	5YR	3/4	1	C	M	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> A1- Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)         </div> <div style="width: 30%;"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input type="checkbox"/> F3 - Depleted Matrix  <input type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions         </div> <div style="width: 30%;"> <b>Indicators for Problematic Soils <sup>1</sup></b>  <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>			
Restrictive Layer (If Observed)      Type: <b>rock</b> Depth: <b>18"</b>			<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks:			

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **Gogebic Taconite Mine** Wetland ID: **WD-28** Sample Point **WD-28-1u**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Abies balsamea</i>	20	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 20

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Abies balsamea</i>	10	Y	FAC
2.	<i>Ostrya virginiana</i>	10	Y	FACU
3.	<i>Betula alleghaniensis</i>	5	N	FAC
4.	<i>Tsuga canadensis</i>	5	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 30

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	1	N	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 1

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

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

 Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>0</b>	x 2 =	<b>0</b>
FAC spp.	<b>35</b>	x 3 =	<b>105</b>
FACU spp.	<b>16</b>	x 4 =	<b>64</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

 Total **51** (A) **169** (B)

 Prevalence Index = B/A = **3.314**
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/24/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>T. King</b>		Investigator #2: <b>H. Stoffs</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Tula-Gogebic complex</b>	NWII/WWI Classification: <b>T3/8K</b>			Wetland ID: <b>WD-28</b>
Landform: <b>Toeslope</b>	Local Relief: <b>Concave</b>			Sample Point: <b>WD-28-1w</b>
Slope (%): <b>0-2</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>Mixed Hardwood/Conifer Swamp</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>33</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

**SUMMARY OF FINDINGS**

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Conditions wetter than normal per antecedant precipitation analysis. Area recently logged in strips. Sample point is less disturbed than adjacent areas.**

**HYDROLOGY**

**Wetland Hydrology Indicators** (Check here if indicators are not present ☐ ):

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

<b>Field Observations:</b> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>2</b> (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>4</b> (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>0</b> (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks: **Surface water in adjacent depressions. Saturation at ground surface at sample point.**

**SOILS**

Map Unit Name: <b>Tula-Gogebic complex</b>	Series Drainage Class: <b>Somewhat poorly to moderately well</b>
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	10	1	10YR	2/2	95	7.5YR	4/6	5	C	M	mucky silt loam
10	14	2	7.5YR	4/2	80	7.5YR	3/4	20	C	M	silt loam
14	16	3	7.5YR	3/4	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> A1- Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)           </div> <div> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input checked="" type="checkbox"/> F3 - Depleted Matrix  <input checked="" type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions           </div> </div>		<b>Indicators for Problematic Soils <sup>1</sup></b> <div> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div>
---	--	--

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: <b>Rock</b> Depth: <b>16"</b>	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: Gogebic Taconite Mine

Wetland ID: WD-28

Sample Point WD-28-1w

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Abies balsamea</i>	5	Y	FAC
2.	<i>Acer saccharum</i>	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 10

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Fraxinus nigra</i>	25	Y	FACW
2.	<i>Betula alleghaniensis</i>	10	Y	FAC
3.	<i>Acer rubrum</i>	5	N	FAC
4.	<i>Acer saccharum</i>	2	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 42

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Carex gracillima</i>	30	Y	FACU
2.	<i>Carex crinita</i>	20	Y	OBL
3.	<i>Rubus pubescens</i>	20	Y	FACW
4.	<i>Acer rubrum</i>	10	N	FAC
5.	<i>Acer saccharum</i>	5	N	FACU
6.	<i>Solidago gigantea</i>	5	N	FACW
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 90

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	20	x 1 =	20
FACW spp.	50	x 2 =	100
FAC spp.	30	x 3 =	90
FACU spp.	42	x 4 =	168
UPL spp.	0	x 5 =	0

Total 142 (A) 378 (B)

Prevalence Index = B/A = 2.662

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

Project/Site: <b>Gogebic Taconite Mine</b>	Stantec Project #: <b>193701133</b>	Date: <b>06/25/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>		County: <b>Iron</b>
Investigator #1: <b>T. King</b>	Investigator #2: <b>C. Rodgers</b>	State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	NWI/WWI Classification: <b>N/A</b>	Wetland ID: <b>WD-29</b>
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>	Sample Point: <b>WD-29-2u</b>
Slope (%): <b>2-4</b>	Latitude: <b>N/A</b>	Community ID: <b>Northern Mesic Forest</b>
	Longitude: <b>N/A</b>	Datum: <b>N/A</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Section: <b>33</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?	Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: <b>Wetter than normal conditions per antecedant precipitation analysis.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ):			
<u>Primary:</u>		<u>Secondary:</u>	
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks	
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns	
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines	
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table	
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows	
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery	
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants	
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position	
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief	
		<input type="checkbox"/> D5 - FAC-Neutral Test	
<b>Field Observations:</b>			
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)		
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <b>16</b> (in.)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks:			

<b>SOILS</b>											
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>						Series Drainage Class: <b>moderately well</b>					
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)	%	Type	Location		
<b>0</b>	<b>12</b>	<b>1</b>	<b>5YR</b>	<b>2.5/2</b>	<b>100</b>	--	--	--	--	--	<b>silt loam</b>
<b>12</b>	<b>20</b>	<b>2</b>	<b>5YR</b>	<b>3/3</b>	<b>100</b>	--	--	--	--	--	<b>sandy loam</b>
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ):						<b>Indicators for Problematic Soils <sup>1</sup></b>					
<input type="checkbox"/> A1- Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)				<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)					
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)				<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)					
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)				<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)					
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)				<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)					
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> F21 - Red Parent Material				<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)					
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> TF12 - Very Shallow Dark Surface				<input type="checkbox"/> Other (Explain in Remarks)					
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface										
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions										
<input type="checkbox"/> S4 - Sandy Gleyed Matrix											
<input type="checkbox"/> S5 - Sandy Redox											
<input type="checkbox"/> S6 - Stripped Matrix											
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)											
						<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
<b>Restrictive Layer (If Observed)</b>		Type:	Depth:	<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Remarks:											



Project/Site: **Gogebic Taconite Mine**Wetland ID: **WD-29**Sample Point **WD-29-2u****VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer saccharum</i>	5	Y	FACU
2.	<i>Betula alleghaniensis</i>	5	Y	FAC
3.	<i>Ostrya virginiana</i>	5	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **15**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	40	Y	FACU
2.	<i>Ostrya virginiana</i>	20	Y	FACU
3.	<i>Betula alleghaniensis</i>	10	N	FAC
4.	<i>Fraxinus nigra</i>	2	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **72**

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **20**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = **0**

Remarks:

**Dominance Test Worksheet**Number of Dominant Species that are OBL, FACW, or FAC: **1** (A)Total Number of Dominant Species Across All Strata: **6** (B)Percent of Dominant Species That Are OBL, FACW, or FAC: **16.7%** (A/B)**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>2</b>	x 2 =	<b>4</b>
FAC spp.	<b>15</b>	x 3 =	<b>45</b>
FACU spp.	<b>90</b>	x 4 =	<b>360</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>

Total **107** (A) **409** (B)Prevalence Index = B/A = **3.822****Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/25/14</b>	
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>	
Investigator #1: <b>T. King</b>		Investigator #2: <b>C. Rodgers</b>		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>		NW/WWI Classification: <b>N/A</b>		Wetland ID: <b>WD-29</b>	
Landform: <b>Side slope/depression</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WD-29-2w</b>	
Slope (%): <b>0-2</b>		Latitude: <b>N/A</b>		Community ID: <b>Hardwood Swamp</b>	
		Longitude: <b>N/A</b>		Datum: <b>N/A</b>	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>33</b>	
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>	

<b>SUMMARY OF FINDINGS</b>	
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</b>
Remarks: <b>Conditions wetter than normal per antecedant precipitation analysis. Area recently logged in strips. Area in proximity to sample point is significantly disturbed by logging (Veg clearing, debris covering ground, soil rutting/mixing). Difficult situation - problematic vegetation.</b>	

<b>HYDROLOGY</b>		
Wetland Hydrology Indicators (Check here if indicators are not present <input type="checkbox"/> ):		
<u>Primary:</u> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test

<b>Field Observations:</b> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>2</b> (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>0</b> (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>0</b> (in.)	<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks: **Hydrology at sample pt. is relatively undisturbed, except for adjacent debris covered ground that may impeded drainage.**

<b>SOILS</b>	
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>	Series Drainage Class: <b>moderately well</b>
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	8	1	10YR	2/1	100	--	--	--	--	--	mucky silt loam
8	16	2	5YR	3/3	95	5YR	3/4	5	C	M	silt loam
16	20	3	5YR	3/3	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ):			<b>Indicators for Problematic Soils <sup>1</sup></b>		
<input type="checkbox"/> A1- Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)			

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type:	Depth:	<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks: **Soil sample point is relatively undisturbed ground.**



Project/Site: **Gogebic Taconite Mine** Wetland ID: **WD-29** Sample Point **WD-29-2w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	2	N	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 2

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	10	Y	FACU
2.	<i>Betula alleghaniensis</i>	10	Y	FAC
3.	<i>Fraxinus nigra</i>	5	N	FACW
4.	<i>Tilia americana</i>	1	N	FACU
5.	<i>Ostrya virginiana</i>	1	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 27

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	10	Y	FACU
2.	<i>Fraxinus nigra</i>	5	Y	FACW
3.	<i>Abies balsamea</i>	1	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 16

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks: Vegetation is significantly disturbed due to logging and considered problematic. Indicators of hydric soil and wetland hydrology are present. Local relief (concave surface) is conducive to wetlands. Wetland determination is based on those factors and determinations at nearby sample pts.

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	11	x 3 =	33
FACU spp.	24	x 4 =	96
UPL spp.	0	x 5 =	0

Total 45 (A) 149 (B)

Prevalence Index = B/A = 3.311

**Hydrophytic Vegetation Indicators:**

- ☐ Yes ☒ No Rapid Test for Hydrophytic Vegetation  
☐ Yes ☒ No Dominance Test is > 50%  
☐ Yes ☒ No Prevalence Index is ≤ 3.0 \*  
☐ Yes ☒ No Morphological Adaptations (Explain) \*  
☒ Yes ☐ No Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**

It is assumed that the same wetland plant community would exist on the managed (logged) sample site in the absence of human alteration based on examination of the vegetation on nearby wetland sample points having similar soils, hydrology and topography. Therefore, hydrophytic vegetation is considered present.

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>	
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>	
Investigator #1: <b>Tim King</b>		Investigator #2:		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very st</b>		NWI/WWI Classification: <b>NA</b>		Wetland ID: <b>WE-01</b>	
Landform: <b>Side slope</b>		Local Relief: <b>Convex</b>		Sample Point: <b>WE-01-1u</b>	
Slope (%): <b>6-12</b>		Latitude: <b>N/A</b>		Community ID: <b>N. Mesic Forest</b>	
		Longitude: <b>N/A</b>		Datum:	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: <b>32</b>	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: <b>45N</b>	
				Range: <b>1</b> Dir: <b>W</b>	
<b>SUMMARY OF FINDINGS</b>					
Hydrophytic Vegetation Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present?	
Wetland Hydrology Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b>	
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Antecedent precipitation analysis shows that conditions are wetter than normal.</b>					
<b>HYDROLOGY</b>					
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> )					
<div><div><u>Primary:</u><div><input type="checkbox"/> A1 - Surface Water</div><div><input type="checkbox"/> A2 - High Water Table</div><div><input type="checkbox"/> A3 - Saturation</div><div><input type="checkbox"/> B1 - Water Marks</div><div><input type="checkbox"/> B2 - Sediment Deposits</div><div><input type="checkbox"/> B3 - Drift Deposits</div><div><input type="checkbox"/> B4 - Algal Mat or Crust</div><div><input type="checkbox"/> B5 - Iron Deposits</div><div><input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery</div><div><input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</div></div><div><input type="checkbox"/> B9 - Water-Stained Leaves</div><div><input type="checkbox"/> B13 - Aquatic Fauna</div><div><input type="checkbox"/> B15 - Marl Deposits</div><div><input type="checkbox"/> C1 - Hydrogen Sulfide Odor</div><div><input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots</div><div><input type="checkbox"/> C4 - Presence of Reduced Iron</div><div><input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils</div><div><input type="checkbox"/> C7 - Thin Muck Surface</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div> <div><u>Secondary:</u><div><input type="checkbox"/> B6 - Surface Soil Cracks</div><div><input type="checkbox"/> B10 - Drainage Patterns</div><div><input type="checkbox"/> B16 - Moss Trim Lines</div><div><input type="checkbox"/> C2 - Dry-Season Water Table</div><div><input type="checkbox"/> C8 - Crayfish Burrows</div><div><input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery</div><div><input type="checkbox"/> D1 - Stunted or Stressed Plants</div><div><input type="checkbox"/> D2 - Geomorphic Position</div><div><input type="checkbox"/> D3 - Shallow Aquitard</div><div><input type="checkbox"/> D4 - Microtopographic Relief</div><div><input type="checkbox"/> D5 - FAC-Neutral Test</div></div>					

Project/Site: Gogebic Taconite Mine

Wetland ID: WE-01

Sample Point WE-01-1u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	70	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 70

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	40	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 40

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	60	Y	FACU
2.	<i>Dryopteris intermedia</i>	20	Y	FAC
3.	<i>Allium tricoccum</i>	10	N	FACU
4.	<i>Maianthemum racemosum</i>	5	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 95

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**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: 25.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	20	x 3 =	60
FACU spp.	185	x 4 =	740
UPL spp.	0	x 5 =	0

Total 205 (A) 800 (B)

Prevalence Index = B/A = 3.902

**Hydrophytic Vegetation Indicators:**

- ☐ Yes ☒ No Rapid Test for Hydrophytic Vegetation  
☐ Yes ☒ No Dominance Test is > 50%  
☐ Yes ☒ No Prevalence Index is ≤ 3.0 \*  
☐ Yes ☐ No Morphological Adaptations (Explain) \*  
☐ Yes ☐ No Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>							
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>							
Investigator #1: <b>Tim King</b>		Investigator #2:		State: <b>Wisconsin</b>							
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very st</b>		NWI/WWI Classification: <b>NA</b>		Wetland ID: <b>WE-01</b>							
Landform: <b>Footslope/Depression</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WE-01-1w</b>							
Slope (%): <b>1-6</b>		Latitude: <b>N/A</b>		Community ID: <b>Wet Meadow</b>							
		Longitude: <b>N/A</b>		Datum:							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: <b>32</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: <b>45N</b>							
				Range: <b>1</b> Dir: <b>W</b>							
<b>SUMMARY OF FINDINGS</b>											
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?							
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
				<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Remarks: <b>Antecedent precipitation analysis shows that conditions are wetter than normal.</b>											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> )											
<div><div><b>Primary:</b></div><div><input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</div><div><input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)</div><div><b>Secondary:</b> <input type="checkbox"/> B6 - Surface Soil Cracks <input checked="" type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test</div></div>											
<b>Field Observations:</b>											
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Depth: <b>1</b> (in.)											
Depth: <b>1</b> (in.)											
Depth: <b>0</b> (in.)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>											
Remarks: <b>Sample point located adjacent to stream SE-19. Surface water in stream channel and depressions. Soil saturated at sample point</b>											
<b>SOILS</b>											
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony,</b> Series Drainage Class: <b>moderately well drained</b>											
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture	
			Color (Moist)		%	Color (Moist)		%	Type	Location	(e.g. clay, sand, loam)
<b>0</b>	<b>12</b>	<b>1</b>	<b>10YR</b>	<b>2/1</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Mucky Silt Loam</b>
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> )											
<div><div><input type="checkbox"/> A1- Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Mucky Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)</div><div><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions</div><div><b>Indicators for Problematic Soils</b><sup>1</sup> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)</div></div>											
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (If Observed)</b>			Type: <b>Rock</b>			Depth: <b>12in</b>			<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks:											

Project/Site: Gogebic Taconite Mine

Wetland ID: WE-01

Sample Point WE-01-1w

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 10

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	2	N	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 2

Herb Stratum (Plot size: 2 meter radius)

1.	<i>MYOSOTIS SCORPIOIDES</i>	50	Y	OBL
2.	<i>RUMEX OBTUSIFOLIUS</i>	40	Y	FAC
3.	<i>Carex crinita</i>	5	N	OBL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 95

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	55	x 1 =	55
FACW spp.	0	x 2 =	0
FAC spp.	40	x 3 =	120
FACU spp.	12	x 4 =	48
UPL spp.	0	x 5 =	0

Total 107 (A) 223 (B)

Prevalence Index = B/A = 2.084

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No**Additional Remarks**

Full extent of wetland was not delineated because it extends to the east along stream SE-19, beyond the Access Road 1/priority area 1 study limits.



Project/Site: Gogebic Taconite Mine		Stantec Project #: 193701133		Date: 06/03/14						
Applicant: Gogebic Taconite, LLC				County: Iron						
Investigator #1: T. King		Investigator #2:		State: Wisconsin						
Soil Unit: Gogebic silt loam, 6 to 18 percent slopes, very stc		NWI/WWI Classification: NA		Wetland ID: WE-02						
Landform: Side slope		Local Relief: Convex		Sample Point: WE-02-1u						
Slope (%): 6-12		Latitude: N/A		Community ID: N. Mesic Forest						
		Longitude: N/A		Datum:						
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: 32						
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 45N						
				Range: 1 Dir: W						
SUMMARY OF FINDINGS										
Hydrophytic Vegetation Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present?						
Wetland Hydrology Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Is This Sampling Point Within A Wetland?						
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Remarks: Antecedent precipitation analysis shows that conditions are wetter than normal.										
HYDROLOGY										
Wetland Hydrology Indicators (Check here if indicators are not present ): <input checked="" type="checkbox"/>										
Primary: <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface										
Secondary: <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test										
Field Observations:			Wetland Hydrology Present?							
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Depth: (in.)										
Depth: (in.)										
Depth: (in.)										
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A										
Remarks:										
SOILS										
Map Unit Name: Gogebic silt loam, 6 to 18 percent slopes, very stony, rSeries Drainage Class: moderately well drained										
Taxonomy (Subgroup): Alfic Oxyaquic Fragiorthods										
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)										
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture
			Color (Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	6	1	10YR	2/2	100	--	--	--	--	Silt loam
6	18	2	7.5YR	3/4	100	--	--	--	--	loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
NRCS Hydric Soil Field Indicators (check here if indicators are not present ): <input checked="" type="checkbox"/>						Indicators for Problematic Soils <sup>1</sup>				
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)						<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)				
Restrictive Layer (If Observed) Type: Rock Depth: 18in						Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Remarks:										

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: Gogebic Taconite Mine Wetland ID: WE-02 Sample Point WE-02-1u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Acer saccharum	80	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		80		

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	Acer saccharum	20	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		20		

Herb Stratum (Plot size: 2 meter radius)

1.	Acer saccharum	50	Y	FACU
2.	Allium tricoccum	20	Y	FACU
3.	Caulophyllum thalictroides	15	N	UPL
4.	Dryopteris intermedia	10	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		95		

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL spp. 0

FACW spp. 0

FAC spp. 10

FACU spp. 170

UPL spp. 15

Multiply by:

x 1 = 0

x 2 = 0

x 3 = 30

x 4 = 680

x 5 = 75

Total 195 (A)

785 (B)

Prevalence Index = B/A = 4.026

Hydrophytic Vegetation Indicators:

☐ Yes

☒ No

Rapid Test for Hydrophytic Vegetation

☐ Yes

☒ No

Dominance Test is > 50%

☐ Yes

☒ No

Prevalence Index is ≤ 3.0 \*

☐ Yes

☐ No

Morphological Adaptations (Explain) \*

☐ Yes

☐ No

Problem 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. (7.6cm) 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. 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 ☐ Yes ☒ No

Additional Remarks:

Project/Site: Gogebic Taconite Mine		Stantec Project #: 193701133		Date: 06/03/14							
Applicant: Gogebic Taconite, LLC				County: Iron							
Investigator #1: T. King		Investigator #2:		State: Wisconsin							
Soil Unit: Gogebic silt loam, 6 to 18 percent slopes, very stc		NWI/WWI Classification: NA		Wetland ID: WE-02							
Landform: Depression		Local Relief: Concave		Sample Point: WE-02-1w							
Slope (%): 0-2		Latitude: N/A		Community ID: Small Excavated Pit							
		Longitude: N/A		Datum:							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: 32							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 45N							
				Range: 1 Dir: W							
SUMMARY OF FINDINGS											
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?							
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland?							
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Remarks: Antecedent precipitation analysis shows that conditions are wetter than normal. This potentially isolated & artificial wetland is a historic, excavated pit adjacent to access rd. The hole is approx. 6' deep x 15' wide.											
HYDROLOGY											
Wetland Hydrology Indicators (Check here if indicators are not present ): <input type="checkbox"/>											
Primary: <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input checked="" type="checkbox"/> B8 - Sparsely Vegetated Concave Surface											
Secondary: <input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)											
<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test											
Field Observations:											
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Depth: N/A (in.)								
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Depth: 3 (in.)								
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Depth: 0 (in.)								
			Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A											
Remarks:											
SOILS											
Map Unit Name: Gogebic silt loam, 6 to 18 percent slopes, very stony, rSeries Drainage Class: moderately well drained											
Taxonomy (Subgroup): Alfic Oxyaquic Fragiorthods											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture	
			Color (Moist)		%	Color (Moist)		%	Type	Location	(e.g. clay, sand, loam)
0	8	1	10YR	2/1	100	--	--	--	--	--	Mucky silt loam
8	20	2	10YR	2/2	100	--	--	--	--	--	Silt Loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
NRCS Hydric Soil Field Indicators (check here if indicators are not present ): <input type="checkbox"/>											
Indicators for Problematic Soils <sup>1</sup>											
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)											
<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions											
<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)											
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
Restrictive Layer (If Observed)			Type: Rock			Depth: 20 in			Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Remarks:											



Project/Site: **Gogebic Taconite Mine** Wetland ID: **WE-02** Sample Point **WE-02-1w**

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharum</i>	3	N	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		3		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Dryopteris carthusiana</i>	5	Y	FACW
2.	<i>Dryopteris intermedia</i>	2	Y	FAC
3.	<i>Acer saccharum</i>	2	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		9		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks: <b>Sparsely vegetated concave surface.</b>				

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: **66.7%** (A/B)

**Prevalence Index Worksheet**

Total % Cover of: Multiply by:

OBL spp.	<b>0</b>	x 1 =	<b>0</b>
FACW spp.	<b>5</b>	x 2 =	<b>10</b>
FAC spp.	<b>2</b>	x 3 =	<b>6</b>
FACU spp.	<b>5</b>	x 4 =	<b>20</b>
UPL spp.	<b>0</b>	x 5 =	<b>0</b>
Total	<b>12</b>	(A)	<b>36</b> (B)
Prevalence Index = B/A =		<b>3.000</b>	

**Hydrophytic Vegetation Indicators:**

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**  
This wetland is a small, isolated depression that appears to be artificial. Physical alteration is a historic disturbance, of minor extent, relatively permanent & considered new normal circumstance. Indicators of all 3 parameters are present to support decision that normal circumstances present.

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>							
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>							
Investigator #1: <b>Tim King</b>		Investigator #2:		State: <b>Wisconsin</b>							
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very st</b>		NWI/WWI Classification: <b>NA</b>		Wetland ID: <b>WE-03</b>							
Landform: <b>Side slope</b>		Local Relief: <b>Convex</b>		Sample Point: <b>WE-03-1u</b>							
Slope (%): <b>2-6</b>		Latitude: <b>N/A</b> Longitude: <b>N/A</b>		Community ID: <b>N. Mesic Forest</b>							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: <b>32</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: <b>45N</b>							
				Range: <b>1</b> Dir: <b>W</b>							
<b>SUMMARY OF FINDINGS</b>											
Hydrophytic Vegetation Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Wetland Hydrology Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Remarks: <b>Antecedent precipitation analysis shows that conditions are wetter than normal.</b>											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present) <input checked="" type="checkbox"/>											
<div><div><u>Primary:</u><div><input type="checkbox"/> A1 - Surface Water<input type="checkbox"/> A2 - High Water Table<input type="checkbox"/> A3 - Saturation<input type="checkbox"/> B1 - Water Marks<input type="checkbox"/> B2 - Sediment Deposits<input type="checkbox"/> B3 - Drift Deposits<input type="checkbox"/> B4 - Algal Mat or Crust<input type="checkbox"/> B5 - Iron Deposits<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</div></div><div><input type="checkbox"/> B9 - Water-Stained Leaves<input type="checkbox"/> B13 - Aquatic Fauna<input type="checkbox"/> B15 - Marl Deposits<input type="checkbox"/> C1 - Hydrogen Sulfide Odor<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots<input type="checkbox"/> C4 - Presence of Reduced Iron<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils<input type="checkbox"/> C7 - Thin Muck Surface<input type="checkbox"/> Other (Explain in Remarks)</div><div><u>Secondary:</u><div><input type="checkbox"/> B6 - Surface Soil Cracks<input type="checkbox"/> B10 - Drainage Patterns<input type="checkbox"/> B16 - Moss Trim Lines<input type="checkbox"/> C2 - Dry-Season Water Table<input type="checkbox"/> C8 - Crayfish Burrows<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery<input type="checkbox"/> D1 - Stunted or Stressed Plants<input type="checkbox"/> D2 - Geomorphic Position<input type="checkbox"/> D3 - Shallow Aquitard<input type="checkbox"/> D4 - Microtopographic Relief<input type="checkbox"/> D5 - FAC-Neutral Test</div></div></div>											
<b>Field Observations:</b>											
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Depth: (in.)											
Depth: (in.)											
Depth: (in.)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>											
Remarks:											
<b>SOILS</b>											
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony,</b> Series Drainage Class: <b>moderately well drained</b>											
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type	Location	
<b>0</b>	<b>6</b>	<b>1</b>	<b>10YR</b>	<b>2/2</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Silt loam</b>
<b>6</b>	<b>14</b>	<b>2</b>	<b>7.5YR</b>	<b>2.5/3</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Silt loam</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present) <input checked="" type="checkbox"/>											
<div><div><input type="checkbox"/> A1- Histosol<input type="checkbox"/> A2 - Histic Epipedon<input type="checkbox"/> A3 - Black Histic<input type="checkbox"/> A4 - Hydrogen Sulfide<input type="checkbox"/> A5 - Stratified Layers<input type="checkbox"/> A11 - Depleted Below Dark Surface<input type="checkbox"/> A12 - Thick Dark Surface<input type="checkbox"/> S1 - Sandy Muck Mineral<input type="checkbox"/> S4 - Sandy Gleyed Matrix<input type="checkbox"/> S5 - Sandy Redox<input type="checkbox"/> S6 - Stripped Matrix<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)</div><div><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)<input type="checkbox"/> F2 - Loamy Gleyed Matrix<input type="checkbox"/> F3 - Depleted Matrix<input type="checkbox"/> F6 - Redox Dark Surface<input type="checkbox"/> F7 - Depleted Dark Surface<input type="checkbox"/> F8 - Redox Depressions</div></div>											
<b>Indicators for Problematic Soils</b> <sup>1</sup>											
<div><input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)<input type="checkbox"/> F21 - Red Parent Material<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)<input type="checkbox"/> TF12 - Very Shallow Dark Surface<input type="checkbox"/> Other (Explain in Remarks)</div>											
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (If Observed)</b>			Type: <b>Rock</b>			Depth: <b>14 in</b>			<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Remarks:											



Project/Site: Gogebic Taconite Mine

Wetland ID: WE-03

Sample Point WE-03-1u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	25	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 25

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	20	Y	FACU
2.	<i>Ribes cynosbati</i>	10	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 30

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Acer saccharum</i>	50	Y	FACU
2.	<i>Dryopteris intermedia</i>	20	Y	FAC
3.	<i>Osmunda claytoniana</i>	10	N	FAC
4.	<i>Allium tricoccum</i>	5	N	FACU
5.	<i>Erythronium americanum</i>	5	N	UPL
6.	<i>Cardamine concatenata</i>	5	N	FACU
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 95

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**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: 20.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	30	x 3 =	90
FACU spp.	115	x 4 =	460
UPL spp.	5	x 5 =	25

Total 150 (A) 575 (B)

Prevalence Index = B/A = 3.833

**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>	
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>	
Investigator #1: <b>T. King</b>		Investigator #2:		State: <b>Wisconsin</b>	
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very st</b>		NWI/WWI Classification: <b>NA</b>		Wetland ID: <b>WE-03</b>	
Landform: <b>Footslope/Depression</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WE-03-1w</b>	
Slope (%): <b>1-2</b>		Latitude: <b>N/A</b>		Community ID: <b>Wet Meadow</b>	
		Longitude: <b>N/A</b>		Datum:	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Section: <b>32</b>	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: <b>45N</b>	
				Range: <b>1</b> Dir: <b>W</b>	
<b>SUMMARY OF FINDINGS</b>					
Hydrophytic Vegetation Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present?	
Wetland Hydrology Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Remarks: <b>Antecedent precipitation analysis shows that conditions are wetter than normal.</b>					
<b>HYDROLOGY</b>					
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> )					
<div><div><u>Primary:</u><div><input checked="" type="checkbox"/> A1 - Surface Water<div><input type="checkbox"/> A2 - High Water Table</div><input checked="" type="checkbox"/> A3 - Saturation<div><input type="checkbox"/> B1 - Water Marks</div><input type="checkbox"/> B2 - Sediment Deposits<div><input type="checkbox"/> B3 - Drift Deposits</div><input type="checkbox"/> B4 - Algal Mat or Crust<div><input type="checkbox"/> B5 - Iron Deposits</div><input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery<div><input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</div></div></div><div><input type="checkbox"/> B9 - Water-Stained Leaves<div><input type="checkbox"/> B13 - Aquatic Fauna</div><input type="checkbox"/> B15 - Marl Deposits<div><input type="checkbox"/> C1 - Hydrogen Sulfide Odor</div><input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots<div><input type="checkbox"/> C4 - Presence of Reduced Iron</div><input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils<div><input type="checkbox"/> C7 - Thin Muck Surface</div><input type="checkbox"/> Other (Explain in Remarks)</div></div> <div><u>Secondary:</u><div><input type="checkbox"/> B6 - Surface Soil Cracks</div><input checked="" type="checkbox"/> B10 - Drainage Patterns<div><input type="checkbox"/> B16 - Moss Trim Lines</div><input type="checkbox"/> C2 - Dry-Season Water Table<div><input type="checkbox"/> C8 - Crayfish Burrows</div><input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery<div><input type="checkbox"/> D1 - Stunted or Stressed Plants</div><input checked="" type="checkbox"/> D2 - Geomorphic Position<div><input type="checkbox"/> D3 - Shallow Aquitard</div><input type="checkbox"/> D4 - Microtopographic Relief<div><input type="checkbox"/> D5 - FAC-Neutral Test</div></div>					

Project/Site: **Gogebic Taconite Mine** Wetland ID: **WE-03** Sample Point **WE-03-1w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Betula alleghaniensis</i>	20	Y	FAC
2.	<i>Ulmus americana</i>	2	N	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		22		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharum</i>	2	N	FACU
2.	<i>Betula alleghaniensis</i>	2	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		4		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Matteuccia struthiopteris</i>	25	Y	FAC
2.	<i>Osmunda claytoniana</i>	25	Y	FAC
3.	<i>RUMEX OBTUSIFOLIUS</i>	15	Y	FAC
4.	<i>Dryopteris intermedia</i>	10	N	FAC
5.	<i>Carex crinita</i>	10	N	OBL
6.	<i>Equisetum arvense</i>	5	N	FAC
7.	<i>Acer saccharum</i>	5	N	FACU
8.	<i>Cardamine concatenata</i>	5	N	FACU
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
<b>Dominance Test Worksheet</b>				
Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)				
Total Number of Dominant Species Across All Strata: <u>4</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)				
<b>Prevalence Index Worksheet</b>				
Total % Cover of:		Multiply by:		
OBL spp.	10	x 1 =	10	
FACW spp.	2	x 2 =	4	
FAC spp.	102	x 3 =	306	
FACU spp.	12	x 4 =	48	
UPL spp.	0	x 5 =	0	
Total		126	(A)	368 (B)
Prevalence Index = B/A = <u>2.921</u>				
<b>Hydrophytic Vegetation Indicators:</b>				
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Morphological Adaptations (Explain) *		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *		
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Definitions of Vegetation Strata:</b>				
<b>Tree</b> - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
<b>Sapling/Shrub</b> - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.				
<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.				
<b>Woody Vines</b> - All woody vines greater than 3.28 ft. in height.				
<b>Hydrophytic Vegetation Present</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Remarks:				

**Additional Remarks:**

Full extent of wetland was not delineated because it extends to the southwest and southeast along stream SE-19, beyond the Access Road 1/priority area 1 study limits.



Project/Site: Gogebic Taconite Mine		Stantec Project #: 193701133		Date: 06/03/14
Applicant: Gogebic Taconite, LLC				County: Iron
Investigator #1: T. King		Investigator #2:		State: Wisconsin
Soil Unit: Gogebic silt loam, 6 to 18 percent slopes, very stc	NWII/WWI Classification: NA			Wetland ID: WE-04
Landform: Side slope	Local Relief: Convex			Sample Point: WE-04-1u
Slope (%): 1-6	Latitude: N/A	Longitude: N/A	Datum:	Community ID: N. Mesic Forest
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)				Section: 32
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Township: 45N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: Antecedent precipitation analysis shows that conditions are wetter than normal.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present): ☒

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

Field Observations:	
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Depth: (in.)	
Depth: (in.)	
Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: Gogebic silt loam, 6 to 18 percent slopes, very stony, rSeries Drainage Class: moderately well drained

Taxonomy (Subgroup): Alfic Oxyaquic Fragiorthods

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture	
			Color (Moist)		%	Color (Moist)		%	Type	Location	(e.g. clay, sand, loam)
0	6	1	10YR	2/1	100	--	--	--	--	--	Silt loam
6	14	2	5YR	3/3	100	--	--	--	--	--	Silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input checked="" type="checkbox"/>	Indicators for Problematic Soils <sup>1</sup>
<input type="checkbox"/> A1 - Histosol	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)
<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> F21 - Red Parent Material
<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> TF12 - Very Shallow Dark Surface
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> Other (Explain in Remarks)
	<small><sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</small>

Restrictive Layer (If Observed)	Type: Rock	Depth: 14 in	Hydric Soil Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---------------------------------	------------	--------------	----------------------	---

Remarks:

Project/Site: **Gogebic Taconite Mine** Wetland ID: **WE-04** Sample Point **WE-04-1u**

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Acer saccharum</i>	75	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		75		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharum</i>	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		10		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Acer saccharum</i>	70	Y	FACU
2.	<i>Allium tricoccum</i>	10	N	FACU
3.	<i>Dryopteris intermedia</i>	5	N	FAC
4.	<i>Maianthemum racemosum</i>	5	N	FACU
5.	<i>Cardamine concatenata</i>	5	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		95		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **0** (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: **0.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL spp. **0**

FACW spp. **0**

FAC spp. **5**

FACU spp. **175**

UPL spp. **0**

Multiply by:

x 1 = **0**

x 2 = **0**

x 3 = **15**

x 4 = **700**

x 5 = **0**

Total **180** (A)

**715** (B)

Prevalence Index = B/A = **3.972**

Hydrophytic Vegetation Indicators:

☐ Yes

☒ No

Rapid Test for Hydrophytic Vegetation

☐ Yes

☒ No

Dominance Test is > 50%

☐ Yes

☒ No

Prevalence Index is ≤ 3.0 \*

☐ Yes

☐ No

Morphological Adaptations (Explain) \*

☐ Yes

☐ No

Problem 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. (7.6cm) 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. 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

☐ Yes

☒ No

**Additional Remarks:**



Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/03/14</b>							
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>							
Investigator #1: <b>T. King</b>		Investigator #2:		State: <b>Wisconsin</b>							
Soil Unit: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b>		NWI/WWI Classification: <b>NA</b>		Wetland ID: <b>WE-04</b>							
Landform: <b>Footslope/Depression</b>		Local Relief: <b>Concave</b>		Sample Point: <b>WE-04-1w</b>							
Slope (%): <b>0-2</b>		Latitude: <b>N/A</b>		Community ID: <b>Wet Meadow</b>							
		Longitude: <b>N/A</b>		Datum:							
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>32</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>							
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>							
<b>SUMMARY OF FINDINGS</b>											
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Remarks: <b>Antecedent precipitation analysis shows that conditions are wetter than normal.</b>											
<b>HYDROLOGY</b>											
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> )											
<div><div><b>Primary:</b><ul style="list-style-type: none"><li><input checked="" type="checkbox"/> A1 - Surface Water</li><li><input checked="" type="checkbox"/> A2 - High Water Table</li><li><input checked="" type="checkbox"/> A3 - Saturation</li><li><input type="checkbox"/> B1 - Water Marks</li><li><input type="checkbox"/> B2 - Sediment Deposits</li><li><input type="checkbox"/> B3 - Drift Deposits</li><li><input type="checkbox"/> B4 - Algal Mat or Crust</li><li><input type="checkbox"/> B5 - Iron Deposits</li><li><input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery</li><li><input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface</li></ul></div><div><ul style="list-style-type: none"><li><input checked="" type="checkbox"/> B9 - Water-Stained Leaves</li><li><input type="checkbox"/> B13 - Aquatic Fauna</li><li><input type="checkbox"/> B15 - Marl Deposits</li><li><input type="checkbox"/> C1 - Hydrogen Sulfide Odor</li><li><input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots</li><li><input type="checkbox"/> C4 - Presence of Reduced Iron</li><li><input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils</li><li><input type="checkbox"/> C7 - Thin Muck Surface</li><li><input type="checkbox"/> Other (Explain in Remarks)</li></ul></div><div><b>Secondary:</b><ul style="list-style-type: none"><li><input type="checkbox"/> B6 - Surface Soil Cracks</li><li><input checked="" type="checkbox"/> B10 - Drainage Patterns</li><li><input type="checkbox"/> B16 - Moss Trim Lines</li><li><input type="checkbox"/> C2 - Dry-Season Water Table</li><li><input type="checkbox"/> C8 - Crayfish Burrows</li><li><input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery</li><li><input type="checkbox"/> D1 - Stunted or Stressed Plants</li><li><input checked="" type="checkbox"/> D2 - Geomorphic Position</li><li><input type="checkbox"/> D3 - Shallow Aquitard</li><li><input type="checkbox"/> D4 - Microtopographic Relief</li><li><input type="checkbox"/> D5 - FAC-Neutral Test</li></ul></div></div>											
<b>Field Observations:</b>											
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>3</b> (in.)			<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>1</b> (in.)											
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: <b>0</b> (in.)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>											
Remarks: <b>Saturated at sample point. Central depression is inundated.</b>											
<b>SOILS</b>											
Map Unit Name: <b>Gogebic silt loam, 6 to 18 percent slopes, very stony</b> , Series Drainage Class: <b>moderately well drained</b>											
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type	Location	
<b>0</b>	<b>8</b>	<b>1</b>	<b>10YR</b>	<b>2/1</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>Mucky silt Loam</b>
<b>8</b>	<b>20</b>	<b>2</b>	<b>7.5YR</b>	<b>3/2</b>	<b>95</b>	<b>7.5YR</b>	<b>3/3</b>	<b>5</b>	<b>C</b>	<b>M</b>	<b>Sandy Clay Loam</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> )											
<div><div><ul style="list-style-type: none"><li><input type="checkbox"/> A1- Histosol</li><li><input type="checkbox"/> A2 - Histic Epipedon</li><li><input type="checkbox"/> A3 - Black Histic</li><li><input type="checkbox"/> A4 - Hydrogen Sulfide</li><li><input type="checkbox"/> A5 - Stratified Layers</li><li><input type="checkbox"/> A11 - Depleted Below Dark Surface</li><li><input type="checkbox"/> A12 - Thick Dark Surface</li><li><input type="checkbox"/> S1 - Sandy Muck Mineral</li><li><input type="checkbox"/> S4 - Sandy Gleyed Matrix</li><li><input type="checkbox"/> S5 - Sandy Redox</li><li><input type="checkbox"/> S6 - Stripped Matrix</li><li><input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)</li></ul></div><div><ul style="list-style-type: none"><li><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)</li><li><input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)</li><li><input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)</li><li><input type="checkbox"/> F2 - Loamy Gleyed Matrix</li><li><input type="checkbox"/> F3 - Depleted Matrix</li><li><input type="checkbox"/> F6 - Redox Dark Surface</li><li><input type="checkbox"/> F7 - Depleted Dark Surface</li><li><input type="checkbox"/> F8 - Redox Depressions</li></ul></div><div><b>Indicators for Problematic Soils</b><sup>1</sup><ul style="list-style-type: none"><li><input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)</li><li><input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)</li><li><input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)</li><li><input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)</li><li><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)</li><li><input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)</li><li><input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)</li><li><input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)</li><li><input type="checkbox"/> F21 - Red Parent Material</li><li><input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)</li><li><input type="checkbox"/> TF12 - Very Shallow Dark Surface</li><li><input type="checkbox"/> Other (Explain in Remarks)</li></ul></div></div>											
<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.											
<b>Restrictive Layer (If Observed)</b>			Type: <b>N/A</b> Depth: <b>N/A</b>			<b>Hydric Soil Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Remarks:											

Project/Site: Gogebic Taconite Mine

Wetland ID: WE-04

Sample Point WE-04-1w

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	<i>Acer saccharum</i>	5	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 5

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Acer saccharum</i>	5	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 5

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Carex scabrata</i>	40	Y	OBL
2.	<i>MYOSOTIS SCORPIOIDES</i>	25	Y	OBL
3.	<i>RUMEX OBTUSIFOLIUS</i>	10	N	FAC
4.	<i>Dryopteris intermedia</i>	10	N	FAC
5.	<i>Acer saccharum</i>	5	N	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 90

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	65	x 1 =	65
FACW spp.	0	x 2 =	0
FAC spp.	20	x 3 =	60
FACU spp.	15	x 4 =	60
UPL spp.	0	x 5 =	0

Total 100 (A) 185 (B)

Prevalence Index = B/A = 1.850

**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No**Additional Remarks:**

Full extent of wetland was not delineated because it extends to the northwest and southeast, beyond the Access road 1/ priority area 1 study limits.

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/05/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>T. King</b>		Investigator #2: <b>H. Stoffs</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Gogebic silt loam</b>	NW/WWI Classification: <b>N/A</b>			Wetland ID: <b>WE-10</b>
Landform: <b>Side slope</b>	Local Relief: <b>Convex</b>			Sample Point: <b>WE-10-1u</b>
Slope (%): <b>2-6</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>Northern Mesic Forest</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>32</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Is This Sampling Point Within A Wetland?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Wetter than normal conditions per antecedant precipitation analysis.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <u>Primary:</u>  <input type="checkbox"/> A1 - Surface Water  <input type="checkbox"/> A2 - High Water Table  <input type="checkbox"/> A3 - Saturation  <input type="checkbox"/> B1 - Water Marks  <input type="checkbox"/> B2 - Sediment Deposits  <input type="checkbox"/> B3 - Drift Deposits  <input type="checkbox"/> B4 - Algal Mat or Crust  <input type="checkbox"/> B5 - Iron Deposits  <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery  <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface         </div> <div style="width: 30%;"> <input type="checkbox"/> B9 - Water-Stained Leaves  <input type="checkbox"/> B13 - Aquatic Fauna  <input type="checkbox"/> B15 - Marl Deposits  <input type="checkbox"/> C1 - Hydrogen Sulfide Odor  <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots  <input type="checkbox"/> C4 - Presence of Reduced Iron  <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils  <input type="checkbox"/> C7 - Thin Muck Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> <div style="width: 30%;"> <u>Secondary:</u>  <input type="checkbox"/> B6 - Surface Soil Cracks  <input type="checkbox"/> B10 - Drainage Patterns  <input type="checkbox"/> B16 - Moss Trim Lines  <input type="checkbox"/> C2 - Dry-Season Water Table  <input type="checkbox"/> C8 - Crayfish Burrows  <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery  <input type="checkbox"/> D1 - Stunted or Stressed Plants  <input type="checkbox"/> D2 - Geomorphic Position  <input type="checkbox"/> D3 - Shallow Aquitard  <input type="checkbox"/> D4 - Microtopographic Relief  <input type="checkbox"/> D5 - FAC-Neutral Test         </div> </div>			
<b>Field Observations:</b> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Depth: (in.)		<b>Wetland Hydrology Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks:			

SOILS											
Map Unit Name: Gogebic silt loam						Series Drainage Class: Moderately well					
Taxonomy (Subgroup):											
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	2	1	7.5YR	2.5/2	100	--	--	--	--	--	sandy loam
2	24	2	5YR	3/4	100	--	--	--	--	--	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input checked="" type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> A1- Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)         </div> <div style="width: 30%;"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input type="checkbox"/> F3 - Depleted Matrix  <input type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions         </div> <div style="width: 30%;"> <b>Indicators for Problematic Soils <sup>1</sup></b>  <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>			
Restrictive Layer (If Observed)      Type:      Depth:			<b>Hydric Soil Present?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks:			

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



Project/Site: Gogebic Taconite Mine

Wetland ID: WE-10

Sample Point WE-10-1u

**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Betula alleghaniensis</i>	60	Y	FAC
2.	<i>Acer saccharum</i>	10	N	FACU
3.	<i>Tilia americana</i>	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 75

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	25	Y	FAC
2.	<i>Acer saccharum</i>	15	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 40

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Maianthemum canadense</i>	20	Y	FACU
2.	<i>Acer saccharum</i>	10	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 30

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	85	x 3 =	255
FACU spp.	60	x 4 =	240
UPL spp.	0	x 5 =	0

Total 145 (A) 495 (B)

Prevalence Index = B/A = 3.414

**Hydrophytic Vegetation Indicators:**

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Dominance Test is > 50%                    |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☐ Yes ☒ No

Project/Site: <b>Gogebic Taconite Mine</b>		Stantec Project #: <b>193701133</b>		Date: <b>06/05/14</b>
Applicant: <b>Gogebic Taconite, LLC</b>				County: <b>Iron</b>
Investigator #1: <b>T. King</b>		Investigator #2: <b>H. Stoffs</b>		State: <b>Wisconsin</b>
Soil Unit: <b>Tula-Gogebic complex</b>	NWI/WWI Classification: <b>N/A</b>			Wetland ID: <b>WE-10</b>
Landform: <b>Footslope/Depression</b>	Local Relief: <b>Concave</b>			Sample Point: <b>WE-10-1w</b>
Slope (%): <b>0-2</b>	Latitude: <b>N/A</b>	Longitude: <b>N/A</b>	Datum: <b>N/A</b>	Community ID: <b>Excavated pit</b>
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Section: <b>32</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?		Township: <b>45N</b>
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: <b>1</b> Dir: <b>W</b>

<b>SUMMARY OF FINDINGS</b>			
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <b>Conditions wetter than normal per antecedant precipitation analysis. Historical excavated pit.</b>			

<b>HYDROLOGY</b>			
<b>Wetland Hydrology Indicators</b> (Check here if indicators are not present <input type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <u>Primary:</u>  <input checked="" type="checkbox"/> A1 - Surface Water  <input checked="" type="checkbox"/> A2 - High Water Table  <input checked="" type="checkbox"/> A3 - Saturation  <input type="checkbox"/> B1 - Water Marks  <input type="checkbox"/> B2 - Sediment Deposits  <input type="checkbox"/> B3 - Drift Deposits  <input type="checkbox"/> B4 - Algal Mat or Crust  <input type="checkbox"/> B5 - Iron Deposits  <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery  <input checked="" type="checkbox"/> B8 - Sparsely Vegetated Concave Surface         </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> B9 - Water-Stained Leaves  <input type="checkbox"/> B13 - Aquatic Fauna  <input type="checkbox"/> B15 - Marl Deposits  <input type="checkbox"/> C1 - Hydrogen Sulfide Odor  <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots  <input type="checkbox"/> C4 - Presence of Reduced Iron  <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils  <input type="checkbox"/> C7 - Thin Muck Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> <div style="width: 30%;"> <u>Secondary:</u>  <input type="checkbox"/> B6 - Surface Soil Cracks  <input type="checkbox"/> B10 - Drainage Patterns  <input type="checkbox"/> B16 - Moss Trim Lines  <input type="checkbox"/> C2 - Dry-Season Water Table  <input type="checkbox"/> C8 - Crayfish Burrows  <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery  <input type="checkbox"/> D1 - Stunted or Stressed Plants  <input checked="" type="checkbox"/> D2 - Geomorphic Position  <input type="checkbox"/> D3 - Shallow Aquitard  <input type="checkbox"/> D4 - Microtopographic Relief  <input checked="" type="checkbox"/> D5 - FAC-Neutral Test         </div> </div>			
<b>Field Observations:</b> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>24</b> (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>0</b> (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Depth: <b>0</b> (in.)		<b>Wetland Hydrology Present?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <b>N/A</b>			
Remarks: <b>Saturated at fringe of pond at sample point. Pond is inundated.</b>			

<b>SOILS</b>											
Map Unit Name: <b>Tula-Gogebic complex</b>						Series Drainage Class: <b>somewhat poorly to moderately well</b>					
Taxonomy (Subgroup): <b>Alfic Oxyaquic Fragiorthods</b>											
<b>Profile Description</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)		%	Color (Moist)		%	Type		Location
<b>0</b>	<b>4</b>	<b>1</b>	<b>10YR</b>	<b>2/2</b>	<b>100</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>mucky sandy loam</b>
<b>4</b>	<b>20</b>	<b>2</b>	<b>7.5YR</b>	<b>3/3</b>	<b>90</b>	<b>5YR</b>	<b>3/4</b>	<b>10</b>	<b>C</b>	<b>M</b>	<b>loamy sand</b>
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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<b>NRCS Hydric Soil Field Indicators</b> (check here if indicators are not present <input type="checkbox"/> ): <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> A1- Histosol  <input type="checkbox"/> A2 - Histic Epipedon  <input type="checkbox"/> A3 - Black Histic  <input type="checkbox"/> A4 - Hydrogen Sulfide  <input type="checkbox"/> A5 - Stratified Layers  <input type="checkbox"/> A11 - Depleted Below Dark Surface  <input type="checkbox"/> A12 - Thick Dark Surface  <input type="checkbox"/> S1 - Sandy Muck Mineral  <input type="checkbox"/> S4 - Sandy Gleyed Matrix  <input type="checkbox"/> S5 - Sandy Redox  <input type="checkbox"/> S6 - Stripped Matrix  <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)         </div> <div style="width: 30%;"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)  <input checked="" type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)  <input type="checkbox"/> F2 - Loamy Gleyed Matrix  <input type="checkbox"/> F3 - Depleted Matrix  <input type="checkbox"/> F6 - Redox Dark Surface  <input type="checkbox"/> F7 - Depleted Dark Surface  <input type="checkbox"/> F8 - Redox Depressions         </div> <div style="width: 30%;"> <b>Indicators for Problematic Soils <sup>1</sup></b>  <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)  <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)  <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)  <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)  <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)  <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)  <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)  <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)  <input type="checkbox"/> F21 - Red Parent Material  <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)  <input type="checkbox"/> TF12 - Very Shallow Dark Surface  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>					
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <b>Restrictive Layer</b> (If Observed)      Type:      Depth:         </div> <div style="width: 60%; background-color: #cccccc; text-align: center;"> <b>Hydric Soil Present?</b>      <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No         </div> </div>					
Remarks: <b>Frequently ponded</b>					

<sup>1</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



Project/Site: **Gogebic Taconite Mine** Wetland ID: **WE-10** Sample Point **WE-10-1w**
**VEGETATION** (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Betula alleghaniensis</i>	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 10

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	<i>Betula alleghaniensis</i>	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = 10

Herb Stratum (Plot size: 2 meter radius)

1.	<i>Osmunda claytoniana</i>	10	Y	FAC
2.	<i>Dryopteris carthusiana</i>	5	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = 15

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--

Total Cover = 0

Remarks:

**Dominance Test Worksheet**

 Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

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

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

**Prevalence Index Worksheet**

Total % Cover of:

Multiply by:

OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>5</u>	x 2 =	<u>10</u>
FAC spp.	<u>30</u>	x 3 =	<u>90</u>
FACU spp.	<u>0</u>	x 4 =	<u>0</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>

 Total 35 (A) 100 (B)

 Prevalence Index = B/A = 2.857
**Hydrophytic Vegetation Indicators:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | Rapid Test for Hydrophytic Vegetation      |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Dominance Test is > 50%                    |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | Prevalence Index is ≤ 3.0 *                |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Morphological Adaptations (Explain) *      |
| <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | Problem 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. (7.6cm) 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. 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** ☒ Yes ☐ No

**Additional Remarks:**