



WETLAND DELINEATION REPORT

Mr. John Hovland
10 Ac Wooded Site, Woodland Ave & Vassar St
Duluth, MN

ICECOR PROJECT #101016014

June 2nd, 2016

CIVIL ENGINEERING
ENVIRONMENTAL ENGINEERING
INDUSTRIAL HYGIENE
SAFETY
HYDROGEOLOGY
GEOLOGY

June 2, 2016

Mr. John Hovland
North Point Developing, LLC
Duluth, MN

**RE: Wetland Delineation Report, 10 Acre Undeveloped Site, Bounded by
Woodland Avenue and Vassar Street, Duluth, MN 54803
ICECOR Project #102016014**

Dear Mr. Hovland:

Thank you for allowing ICECOR to perform a wetland delineation for the above mentioned site (see Sheets 1 thru 3). Wetlands at the site were delineated in accordance with the US Army Corps. Of Engineers (COE) 1987 Wetland Delineation Manual methodologies and procedures and the Regional Supplement for our area.

Findings

The area where ICECOR performed a wetland delineation at the site is presented on Sheets 2 and 3 which have aerial photograph overlays. The goal of the delineation was to determine where the wetlands are present within the project property boundaries and within the easement areas for accessing Woodland Avenue and Vassar Street. A wetland delineation had been performed by a different company in 2008 (report on attached CD), and ICECOR was performing the new delineation as the former delineation was over 5 years old. The property corners of the site had been pinned by a registered land surveyor, and the corner pins/posts were visible in the field. Locations of the easements were estimated from an aerial photograph with approximate property boundaries from the City of Duluth.

Test pits were constructed on May 30th and June 1st, 2016 at areas suspected to be wetlands/uplands based on vegetation patterns and topography. A COE Data Form was completed for each test pit location that assessed the presence of hydric vegetation, wetland hydrology, and hydric soils. Test pit locations were marked with pink marker ribbons or wire flags that have neon-yellow ribbon tied to them, and are labeled as TP-xx. The borders of wetlands were marked with pink marker ribbons or wire flags, and are labeled as W-xx.

Wetlands encountered at the site are classified as being Hardwood Swamps (Type 7 - Circular 39 System) and Shrub Swamps (Type 6 - Circular 39 System). The wetland areas encountered are depicted by test pits TP-1, TP-3, TP-5, TP-8, TP-9, and TP-11. Surface vegetation in wetland areas consisted of herbs, shrubs, and trees.

To be classified as a wetland: greater than 50% of the vegetation must be hydric (wetland), indicators of saturation must be present within 12 inches of the surface, and hydric soils must be present. The key methodology for differentiating between wetlands and uplands at this site was the presence of wetland soils and hydric vegetation. Topography, plant patterns, and additional unmarked test pits helped to delineate the borders of all wetlands. Additional marked test pits with data forms were not needed to

complete the wetland delineation. The same methodology was applied to the rest of the flagged wetland borders. Additional unmarked test pits were constructed at intervals along the borders to confirm that the wetland delineation methodology was correct for different areas. Many site areas had vegetation that didn't cover 100% of the ground surface, with the rest of that ground surface being bare soil covered with leaf litter.

The goal of the proposed project is to construct a residential development with building lots for sale, along with the associated streets and support utilities. The property slopes south to north, with more local slopes to the northwest and northeast within the property boundaries. This leaves the center of the site trending north-south as an upland ridge, with wetlands present along the west and east sides that trend to the north. Amity Creek receives runoff from the site and is located approximately 305 - 840 feet northeast of the site. Sheet 2 presents the delineation within the property boundaries, and Sheet 3 was included to show the easements into the site, as well as testpits TP-5 and TP-6 where the delineation moved beyond the property borders.

The contours (5 foot interval) on the map came as part of the City of Duluth map with the aerial photograph and approximate property boundaries. Wetlands proximal to TP-1 and TP-3 are present as lower elevation swales that collect runoff from higher elevation areas and route it northeast towards the creek. The southern boundary of the TP-3 wetland has small bumps ("fingers") that point upslope, which appear to be "spring" type areas where groundwater percolates out of the ground and runs down slope to discharge to the lower wetland areas. The far side of the TP-3 wetland along the western property boundary has a channel with gently flowing runoff after rain events. It is unknown if this channel is natural or if it was excavated sometime in the past. The TP-1 and TP-3 wetlands are mostly Type 7 (hardwood swamp), with a few smaller areas of Type 6 (shrub swamp) wetlands also. The TP-1 wetland extends into the easement which connects the site to Woodland Avenue.

The wetland in the area of TP-5 (see Sheet 3) starts at the southeast corner of the property, trends north, and then trends off-site to discharge to the creek northeast of the site. This wetland was delineated on the first day at the site when the northeast property boundary stake was not able to be located, so the delineation proceed over the eastern property boundary unknowingly. This wetland is also a lower elevation swale that collects runoff from higher elevations, routing it northeast to the creek. These wetlands are mostly Type 7, with a few small Type 6 areas.

The TP-9 and TP-11 wetlands are present in lower depression areas surrounded by higher upland areas. Both have standing water in the center and could potentially overflow downgradient to the next wetland area if there was a very large precipitation event. They have Type 6 and 7 wetlands except for any center areas with standing water. The wetland west of the TP-11 wetland is also a depression wetland area, which has metal cans and tires present that were deposited in the past by neighboring property owners. A walking trail passes between these wetlands along an upland ridge that extends along the easement south to Vassar Street.

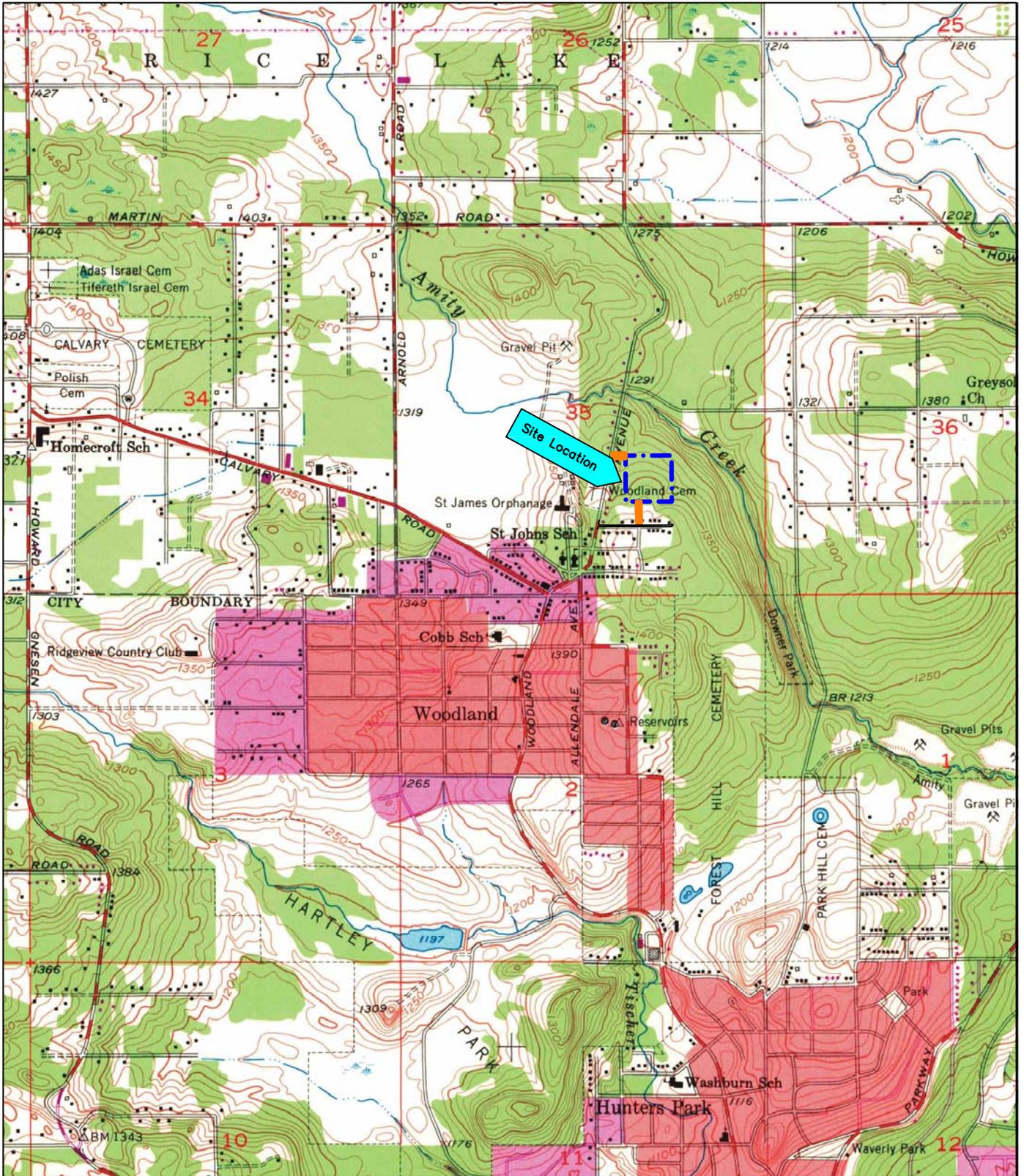
The TP-8 wetland is located in the center of the site and is mostly a Type 7 wetland. It gets some runoff from higher upslope areas, and some recharge comes from seepage out of the hillslope at it's southern end. It is a sloped area with a slightly concave surface ("pock marked"), and the sides are slightly higher in elevation. At the northern end, the hydric vegetation and wetland hydrology ends (no more concave surfaces) and this is were the wetland boundary is also present. During very large rain storms, this area could runoff to the north and/or northeast to discharge to downgradient wetland areas.

The boundaries of the uplands/wetlands plotted on the maps were measured using a sub meter GPS unit recording in St. Louis County Coordinates. A CD has been enclosed that has a PDF of the report, along with photographs from the wetland delineation. If you have questions regarding the delineation process or the permitting process for filling wetlands for construction, please call me at your convenience.

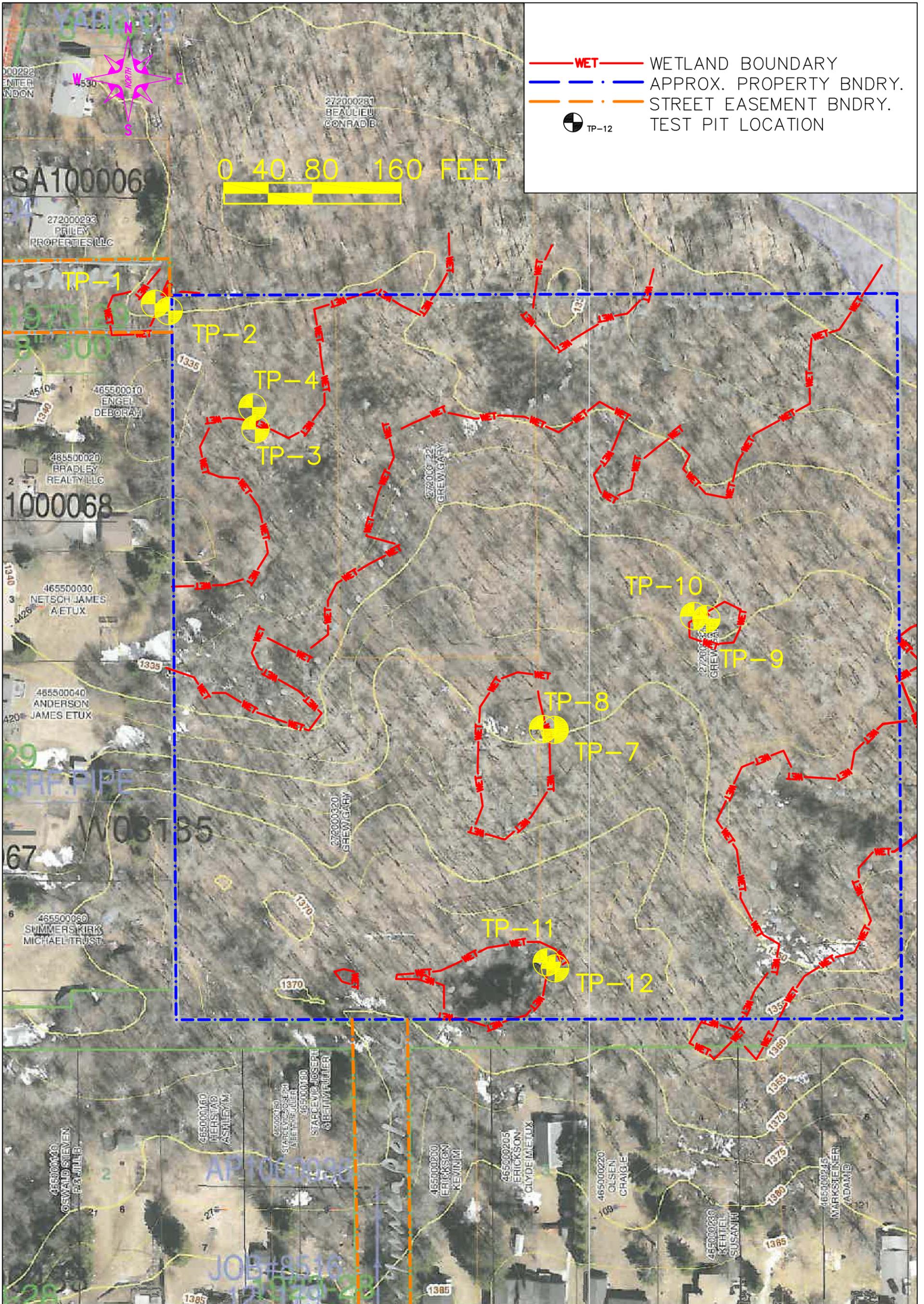
Sincerely,
IC ENVIRONMENTAL CORPORATION

Michael L Kohn

MICHAEL L. KOHN
Engineer/Hydrogeologist



 ICECOR IC ENVIRONMENTAL CORPORATION	Scale = 1:24,000	SHEET 1		
	USGS Topographic Map	NORTH POINT DEVELOPING SITE DULUTH, MINNESOTA		
	DULUTH, MN QUADRANGLE	SITE LOCATION MAP		
		CREATED BY: MLK	DRAWN BY: MLK	
		DATE: 6/2/2016	PROJECT # 101016014	



- WET WETLAND BOUNDARY
- - - APPROX. PROPERTY BNDRY.
- - - STREET EASEMENT BNDRY.
- TP-12 TEST PIT LOCATION

0 40 80 160 FEET

NORTH POINT DEVELOPING LLC
 10 AC SITE, DULUTH, MN
 ICECOR PROJECT #101016014
 WETLAND DELINEATION MAP

DATE	REVISIONS	DESCRIPTION
6/1/15		ORIGINAL SUBMISSION
		PROPERTY BOUNDED BY WOODLAND AVE AND VASSAR STREET
		BASE MAP FROM CITY OF DULUTH GIS

I hereby certify that this plan, specification or report was prepared by me or under my supervision and that I am a duly licensed PROFESSIONAL ENGINEER under the laws of the State of WISCONSIN.

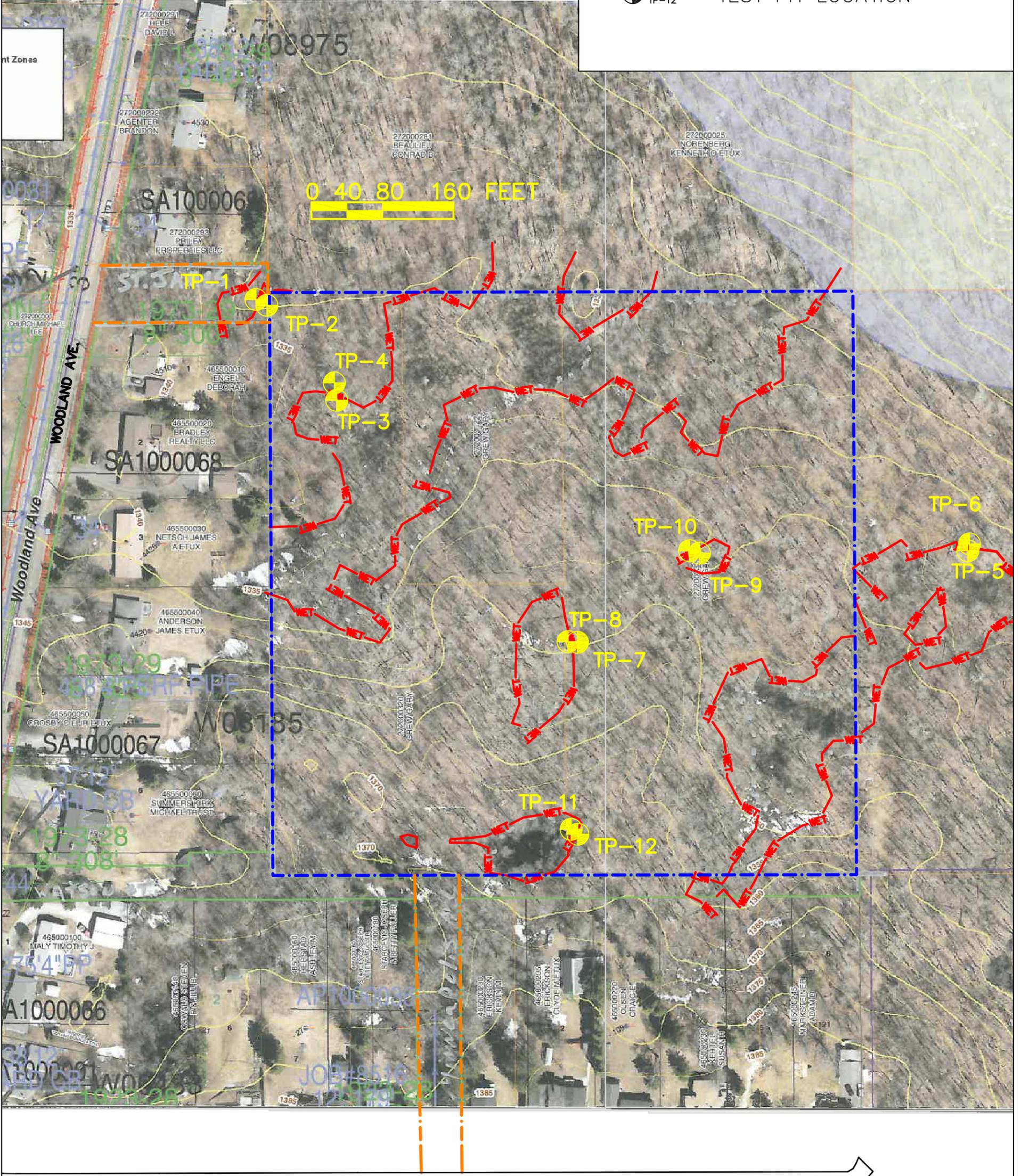
Printed name: _____
 Date: _____ Lic. No. _____

ICECOR

P.O. BOX 1105
 SUPERIOR, WISCONSIN 54880
 (715) 395-0965



- WET WETLAND BOUNDARY
- - - APPROX. PROPERTY BNDRY.
- - - STREET EASEMENT BNDRY.
- TP-12 TEST PIT LOCATION



VASSAR STREET

3
of
SHEET NO.

NORTH POINT DEVELOPING LLC
10 AC SITE, DULUTH, MN
ICECOR PROJECT #101016014

LARGE AREA DELINEATION MAP

DATE	REVISIONS	DESCRIPTION
6/1/15		ORIGINAL SUBMISSION
		PROPERTY BOUNDED BY WOODLAND AVE AND VASSAR STREET
		BASE MAP FROM CITY OF DULUTH GIS

I hereby certify that this plan, specification or report was prepared by me or under my supervision and that I am a duly licensed PROFESSIONAL ENGINEER under the laws of the State of WISCONSIN.

Printed name: _____
Date: _____ Lic. No. _____

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(715) 395-0965

ENGLISH NAMES FOR VEGETATION

<u>LATIN</u>	<u>ENGLISH</u>	<u>INDICATOR</u>
Fraxinus Nigra	Black Ash	FacW
Betula Papyrifera	Paper Birch	FacU
Acer Rubrum	Red Maple	Fac
Corylus Cornuta	Beaked Hazelnut	Upl
Acer Saccharum	Sugar Maple	FacU
Alnus Incana	Speckled Alder	FacW
Matteuccia struthiopteris	Ostrich Fern	Fac
Equisetum Pratense	Meadow Horsetail	FacW
Phegopteris connectilis	Narrow Beech Fern	FacU
Caltha palustris	Yellow Marsh-Marigold	Obl
Sphagnum magellanicum	Sphagnum Moss	NI
Betula Papyrifera	Paper Birch	FacU
Pteridium Aquilinum	Bracken Fern	FacU
Populus Tremuloides	Quaking Aspen	Fac
Calamagrostis Canadensis	Blue Joint Grass	Obl
Eurybia Macrophylla	Large-Leaf Wood-Aster	Upl
Carex Stricta	Hummock Sedge	Obl
Doellingeria umbellata	Parasol White-top	FacW
Solidago altissima	Tall Goldenrod	FacU
Athyrium Filix-femina	Lady Fern	Fac
Solidago gigantea	Late Goldenrod	FacW
Equisetum sylvaticum	Woodland Horsetail	FacW
Elymus Repens	Quack Grass	FacU
Taraxacum Officinale	Common Dandelion	FacU
Fragaria Virginiana	Common Strawberry	FacU
Rubus Idaeus	Red Raspberry	Fac
Glyceria canadensis	Rattlesnake Manna grass	Obl
Dieverilla Lonicera	Northern Bush Honeysuckle	NI

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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 5/30/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point TP-1
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained last 2 days.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0.5</u> (includes capillary fringe)
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		Indicators of wetland hydrology present? <u>Y</u>
Remarks:		

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VEGETATION - Use scientific names of plants

Sampling Point: TP-1

Tree Stratum					Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Fraxinus nigra</i>		15	Y	FACW				
2	<i>Betula papyrifera</i>		6	Y	FACU				
3									
4									
5									
6									
7									
8									
9									
10									
			21	= Total Cover					
Sapling/Shrub Stratum					Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Fraxinus nigra</i>		8	Y	FACW				
2	<i>Corylus cornuta</i>		6	Y	FACU				
3	<i>Acer rubrum</i>		6	Y	FAC				
4	<i>Alnus incana</i>		6	Y	FACW				
5	<i>Acer saccharum</i>		4	N	FACU				
6									
7									
8									
9									
10									
			30	= Total Cover					
Herb Stratum					Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Matteuccia struthiopteris</i>		40	Y	FAC				
2	<i>Equisetum pratense</i>		10	N	FACW				
3	<i>Phegopteris connectilis</i>		6	N	FACU				
4	<i>Caltha palustris</i>		5	N	OBL				
5									
6	<i>Sphagnum magallemicum (8%)</i>								
7									
8	<i>Rest bare/Leaf Litter</i>								
9									
10									
11									
12									
13									
14									
15									
			61	= Total Cover					
Woody Vine Stratum					Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5									
			0	= Total Cover					

50/20 Thresholds	20%	50%
Tree Stratum	4	11
Sapling/Shrub Stratum	6	15
Herb Stratum	12	31
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)	
Total Number of Dominant Species Across all Strata: <u>7</u> (B)	
Percent of Dominant Species that are OBL, FACW, or FAC: <u>71.43%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species <u>5</u> x 1 = <u>5</u>	
FACW species <u>39</u> x 2 = <u>78</u>	
FAC species <u>46</u> x 3 = <u>138</u>	
FACU species <u>22</u> x 4 = <u>88</u>	
UPL species <u>0</u> x 5 = <u>0</u>	
Column totals <u>112</u> (A)	<u>309</u> (B)
Prevalence Index = B/A = <u>2.76</u>	

Hydrophytic Vegetation Indicators:	
<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*	
Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)	
<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines - All woody vines greater than 3.28 ft in height.	

Hydrophytic vegetation present?	<u>Y</u>
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Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160530_094854

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VEGETATION - Use scientific names of plants

Sampling Point: TP-2

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Acer saccharum</i>	8	Y	FACU	3	8
2	<i>Betula papyrifera</i>	8	Y	FACU	7	18
3					13	33
4					0	0
5						
6						
7						
8						
9						
10						
		16	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
1	<i>Acer saccharum</i>	20	Y	FACU	Total Number of Dominant Species Across all Strata: <u>6</u> (B)	
2	<i>Corylus cornuta</i>	15	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>16.67%</u> (A/B)	
3						
4						
5						
6						
7						
8						
9						
10						
		35	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Pteridium aquilinum</i>	35	Y	FACU	OBL species	<u>0</u> x 1 = <u>0</u>
2	<i>Matteuccia struthiopteris</i>	30	Y	FAC	FACW species	<u>0</u> x 2 = <u>0</u>
3					FAC species	<u>30</u> x 3 = <u>90</u>
4	<i>rest bare</i>				FACU species	<u>86</u> x 4 = <u>344</u>
5					UPL species	<u>0</u> x 5 = <u>0</u>
6					Column totals	<u>116</u> (A) <u>434</u> (B)
7					Prevalence Index = B/A =	<u>3.74</u>
8						
9						
10						
11						
12						
13						
14						
15						
		65	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)	
1					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2						
3						
4						
5						
		0	= Total Cover			
Definitions of Vegetation Strata:					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
					Hydrophytic vegetation present? <u>N</u>	
Remarks: (Include photo numbers here or on a separate sheet) Photo #20160530_094501						

ICECOR
Superior, Wisconsin

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 5/30/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point: TP-3
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained last 2 days.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.2</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-3

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Populus tremuloides</i>	20	Y	FAC	7	18
2	<i>Fraxinus nigra</i>	15	Y	FACW	7	18
3					17	42
4					0	0
5						
6						
7						
8						
9						
10						
		35	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A)	
1	<i>Alnus incana</i>	25	Y	FACW	Total Number of Dominant Species Across all Strata: <u>6</u> (B)	
2	<i>fraxinus nigra</i>	10	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
3						
4						
5						
6						
7						
8						
9						
10						
		35	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Calamagrostis canadensis</i>	30	Y	OBL	OBL species <u>45</u> x 1 = <u>45</u>	
2	<i>Equisetum pratense</i>	20	Y	FACW	FACW species <u>78</u> x 2 = <u>156</u>	
3	<i>Carex stricta</i>	15	N	OBL	FAC species <u>30</u> x 3 = <u>90</u>	
4	<i>Matteuccia struthiopteris</i>	10	N	FAC	FACU species <u>0</u> x 4 = <u>0</u>	
5	<i>Doellingeria umbellata</i>	8	N	FACW	UPL species <u>0</u> x 5 = <u>0</u>	
6					Column totals <u>153</u> (A) <u>291</u> (B)	
7					Prevalence Index = B/A = <u>1.90</u>	
8	<i>Rest Bare</i>					
9						
10						
11						
12						
13						
14						
15						
		83	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<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* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
2						
3						
4						
5						
		0	= Total Cover		Hydrophytic vegetation present? <u>Y</u>	

Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160530_102333

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VEGETATION - Use scientific names of plants

Sampling Point: TP-4

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Populus tremuloides</i>	15	Y	FAC	3	8
2					6	14
3					14	34
4					0	0
5						
6						
7						
8						
9						
10						
		15	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
1	<i>corylus cornuta</i>	20	Y	FACU	Total Number of Dominant Species Across all Strata: <u>4</u> (B)	
2	<i>Acer saccharum</i>	8	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>25.00%</u> (A/B)	
3						
4						
5						
6						
7						
8						
9						
10						
		28	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Eurybia macrophylla</i>	40	Y	UPL	OBL species <u>0</u> x 1 = <u>0</u>	
2	<i>Fragaria virginiana</i>	10	N	FACU	FACW species <u>10</u> x 2 = <u>20</u>	
3	<i>Equisetum pratense</i>	10	N	FACW	FAC species <u>15</u> x 3 = <u>45</u>	
4	<i>Solidago altissima</i>	8	N	FACU	FACU species <u>46</u> x 4 = <u>184</u>	
5					UPL species <u>40</u> x 5 = <u>200</u>	
6					Column totals <u>111</u> (A) <u>449</u> (B)	
7	<i>Rest Bare</i>				Prevalence Index = B/A = <u>4.05</u>	
8						
9						
10						
11						
12						
13						
14						
15						
		68	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)	
1					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2						
3						
4						
5						
		0	= Total Cover			
Definitions of Vegetation Strata:					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
					Hydrophytic vegetation present? <u>N</u>	
Remarks: (Include photo numbers here or on a separate sheet) Photo #20160530_102450						

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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 5/30/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point: TP-5
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained last 2 days.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>10</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> (includes capillary fringe)	Indicators of wetland hydrology present? <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

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VEGETATION - Use scientific names of plants

Sampling Point: TP-5

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Populus tremuloides</i>	15	Y	FAC	4	10
2	<i>Acer saccharum</i>	5	Y	FACU	6	14
3					20	50
4					0	0
5						
6						
7						
8						
9						
10						
		20	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)	
1	<i>Populus tremuloides</i>	15	Y	FAC	Total Number of Dominant Species Across all Strata: <u>6</u> (B)	
2	<i>Acer saccharum</i>	8	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>66.67%</u> (A/B)	
3	<i>Alnus incana</i>	5	N	FACW		
4						
5						
6						
7						
8						
9						
10						
		28	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Calamagrostis canadensis</i>	50	Y	OBL	OBL species <u>50</u> x 1 = <u>50</u>	
2	<i>Athyrium filix-femina</i>	20	Y	FAC	FACW species <u>35</u> x 2 = <u>70</u>	
3	<i>Solidago gigantea</i>	15	N	FACW	FAC species <u>50</u> x 3 = <u>150</u>	
4	<i>Equisetum sylvaticum</i>	15	N	FACW	FACU species <u>13</u> x 4 = <u>52</u>	
5					UPL species <u>0</u> x 5 = <u>0</u>	
6					Column totals <u>148</u> (A) <u>322</u> (B)	
7					Prevalence Index = B/A = <u>2.18</u>	
8						
9						
10						
11						
12						
13						
14						
15						
		100	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<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* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
2						
3						
4						
5						
		0	= Total Cover		Hydrophytic vegetation present? <u>Y</u>	

Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160530_115829

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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 5/30/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point: TP-6
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Slight Slope Local relief (concave, convex, none): None
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained last 2 days.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): <u> >16 </u> (includes capillary fringe)
Indicators of wetland hydrology present? <u> N </u>		
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <hr/> Remarks:		

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VEGETATION - Use scientific names of plants

Sampling Point: TP-6

Tree Stratum					Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u><i>Acer saccharum</i></u>		15	Y	FACU				
2	<u><i>Populus tremuloides</i></u>		10	Y	FAC				
3	<u><i>Betula papyrifera</i></u>		8	Y	FACU				
4									
5									
6									
7									
8									
9									
10									
			33	= Total Cover					
Sapling/Shrub Stratum					Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u><i>Acer saccharum</i></u>		10	Y	FACU				
2	<u><i>Populus tremuloides</i></u>		10	Y	FAC				
3	<u><i>Corylus cornuta</i></u>		8	Y	FACU				
4									
5									
6									
7									
8									
9									
10									
			28	= Total Cover					
Herb Stratum					Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u><i>Eurybia macrophylla</i></u>		40	Y	UPL				
2	<u><i>Pteridium aquilinum</i></u>		25	Y	FACU				
3	<u><i>Elymus repens</i></u>		15	N	FACU				
4	<u><i>Taraxacum officinale</i></u>		15	N	FACU				
5	<u><i>Equisetum pratense</i></u>		5	N	FACW				
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
			100	= Total Cover					
Woody Vine Stratum					Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5									
			0	= Total Cover					

50/20 Thresholds	20%	50%
Tree Stratum	7	17
Sapling/Shrub Stratum	6	14
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)	
Total Number of Dominant Species Across all Strata: <u>8</u> (B)	
Percent of Dominant Species that are OBL, FACW, or FAC: <u>25.00%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>5</u> x 2 = <u>10</u>
FAC species	<u>20</u> x 3 = <u>60</u>
FACU species	<u>96</u> x 4 = <u>384</u>
UPL species	<u>40</u> x 5 = <u>200</u>
Column totals	<u>161</u> (A) <u>654</u> (B)
Prevalence Index = B/A = <u>4.06</u>	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/>	Rapid test for hydrophytic vegetation
<input type="checkbox"/>	Dominance test is >50%
<input type="checkbox"/>	Prevalence index is ≤3.0*
<input type="checkbox"/>	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
<input type="checkbox"/>	Problematic hydrophytic vegetation* (explain)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines - All woody vines greater than 3.28 ft in height.	

Hydrophytic vegetation present?	<u>N</u>
--	----------

Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160530_132526

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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 6/1/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point: TP-7
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> Y </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained yesterday and last night.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): _____ Water table present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 15 </u> Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> 2 </u> (includes capillary fringe)
Indicators of wetland hydrology present? <u> Y </u>		Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks: <p style="text-align: center;">saturation from rains, not normal</p>		

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VEGETATION - Use scientific names of plants

Sampling Point: TP-7

Tree Stratum					Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer saccharum</i>		30	Y	FACU				
2									
3									
4									
5									
6									
7									
8									
9									
10			30	= Total Cover					
Sapling/Shrub Stratum					Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer saccharum</i>		15	Y	FACU				
2	<i>Corylus cornuta</i>		15	Y	FACU				
3	<i>Fraxinus nigra</i>		6	N	FACW				
4									
5									
6									
7									
8									
9									
10			36	= Total Cover					
Herb Stratum					Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<i>Eurybia macrophylla</i>		25	Y	UPL				
2	<i>Fragaria virginiana</i>		15	Y	FACU				
3	<i>Elymus repens</i>		10	N	FACU				
4	<i>Carex Stricta</i>		9	N	OBL				
5	<i>Equisetum pratense</i>		8	N	FACW				
6	<i>Phegopteris connectilis</i>		4	N	FACU				
7									
8									
9	Rest Bare								
10									
11									
12									
13									
14									
15			71	= Total Cover					
Woody Vine Stratum					Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5			0	= Total Cover					

50/20 Thresholds		
Tree Stratum	20%	50%
Sapling/Shrub Stratum	6	15
Herb Stratum	7	18
Woody Vine Stratum	14	36
	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</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>0.00%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species <u>9</u> x 1 = <u>9</u>	
FACW species <u>14</u> x 2 = <u>28</u>	
FAC species <u>0</u> x 3 = <u>0</u>	
FACU species <u>89</u> x 4 = <u>356</u>	
UPL species <u>25</u> x 5 = <u>125</u>	
Column totals <u>137</u> (A) <u>518</u> (B)	
Prevalence Index = B/A = <u>3.78</u>	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/>	Rapid test for hydrophytic vegetation
<input type="checkbox"/>	Dominance test is >50%
<input type="checkbox"/>	Prevalence index is ≤3.0*
<input type="checkbox"/>	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
<input type="checkbox"/>	Problematic hydrophytic vegetation* (explain)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines - All woody vines greater than 3.28 ft in height.	

Hydrophytic vegetation present?	
	<u>N</u>

Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160601_105901

ICECOR
Superior, Wisconsin

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 6/1/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point TP-8
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained yesterday and last night.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>9</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>1</u> (includes capillary fringe)	Indicators of wetland hydrology present? <u>Y</u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-8

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<u>Fraxinus nigra</u>	15	Y	FACW	5	13
2	<u>Populus tremuloides</u>	6	Y	FAC	7	17
3	<u>Acer saccharum</u>	4	N	FACU	17	42
4					0	0
5						
6						
7						
8						
9						
10						
		25	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>8</u> (A)	
1	<u>Fraxinus nigra</u>	25	Y	FACW	Total Number of Dominant Species Across all Strata: <u>8</u> (B)	
2	<u>Alnus incana</u>	8	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
3						
4						
5						
6						
7						
8						
9						
10						
		33	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<u>Matteuccia struthiopteris</u>	20	Y	FAC	OBL species <u>15</u> x 1 = <u>15</u>	
2	<u>Solidago gigantea</u>	20	Y	FACW	FACW species <u>83</u> x 2 = <u>166</u>	
3	<u>Carex stricta</u>	15	Y	OBL	FAC species <u>34</u> x 3 = <u>102</u>	
4	<u>Equisetum sylvaticum</u>	15	Y	FACW	FACU species <u>4</u> x 4 = <u>16</u>	
5	<u>Rubus idaeus</u>	8	N	FAC	UPL species <u>5</u> x 5 = <u>25</u>	
6	<u>Eurybia macrophylla</u>	5	N	UPL	Column totals <u>141</u> (A) <u>324</u> (B)	
7					Prevalence Index = B/A = <u>2.30</u>	
8	<u>rest bare</u>					
9						
10						
11						
12						
13						
14						
15						
		83	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<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* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)	
1					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
2						
3						
4						
5						
		0	= Total Cover			
					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
					Hydrophytic vegetation present? <u>Y</u>	
Remarks: (Include photo numbers here or on a separate sheet) Photo #20160601_105908						

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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 6/1/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point TP-9
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained yesterday and last night.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0.2</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-9

Tree Stratum					50/20 Thresholds	
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%
1	<i>Fraxinus nigra</i>	30	Y	FACW	9	23
2	<i>Populus tremuloides</i>	15	Y	FAC	3	7
3					15	37
4					0	0
5						
6						
7						
8						
9						
10						
		45	= Total Cover			
Sapling/Shrub Stratum					Dominance Test Worksheet	
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>7</u> (A)	
1	<i>Fraxinus nigra</i>	10	Y	FACW	Total Number of Dominant Species Across all Strata: <u>7</u> (B)	
2	<i>Acer Rubrum</i>	4	Y	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)	
3						
4						
5						
6						
7						
8						
9						
10						
		14	= Total Cover			
Herb Stratum					Prevalence Index Worksheet	
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:	
1	<i>Athyrium filix-femina</i>	20	Y	FAC	OBL species <u>40</u> x 1 = <u>40</u>	
2	<i>Calamagrostis canadensis</i>	15	Y	OBL	FACW species <u>40</u> x 2 = <u>80</u>	
3	<i>Carex stricta</i>	15	Y	OBL	FAC species <u>44</u> x 3 = <u>132</u>	
4	<i>Glyceria canadensis</i>	10	N	OBL	FACU species <u>8</u> x 4 = <u>32</u>	
5	<i>Fragaria virginiana</i>	8	N	FACU	UPL species <u>0</u> x 5 = <u>0</u>	
6	<i>Ranunculus acris</i>	5	N	FAC	Column totals <u>132</u> (A) <u>284</u> (B)	
7					Prevalence Index = B/A = <u>2.15</u>	
8	<i>Sphagnum magellanicum (10%)</i>					
9						
10	Rest bare					
11						
12						
13						
14						
15						
		73	= Total Cover			
Woody Vine Stratum					Hydrophytic Vegetation Indicators:	
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<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* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
1					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.	
2						
3						
4						
5						
		0	= Total Cover		Hydrophytic vegetation present? <u>Y</u>	

Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160601_113314

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-10

Tree Stratum					Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u>Acer saccharum</u>		30	Y	FACU				
2	<u>Betula papyrifera</u>		8	Y	FACU				
3									
4									
5									
6									
7									
8									
9									
10									
			<u>38</u>	= Total Cover					
Sapling/Shrub Stratum					Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u>Acer saccharum</u>		10	Y	FACU				
2	<u>Corylus cornuta</u>		10	Y	FACU				
3	<u>Diervilla Lonicera</u>		10	Y					
4									
5									
6									
7									
8									
9									
10									
			<u>30</u>	= Total Cover					
Herb Stratum					Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status
1	<u>Taraxacum officinale</u>		30	Y	FACU				
2	<u>Pteridium aquilinum</u>		15	Y	FACU				
3	<u>Athyrium filix-femina</u>		10	N	FAC				
4	<u>Carex stricta</u>		10	N	OBL				
5	<u>Elymus repens</u>		10	N	FACU				
6	<u>Eurybia macrophylla</u>		10	N	UPL				
7									
8	<u>rest bare</u>								
9									
10									
11									
12									
13									
14									
15									
			<u>85</u>	= Total Cover					
Woody Vine Stratum					Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status
1									
2									
3									
4									
5									
			<u>0</u>	= Total Cover					

50/20 Thresholds	20%	50%
Tree Stratum	8	19
Sapling/Shrub Stratum	6	15
Herb Stratum	17	43
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)	
Total Number of Dominant Species Across all Strata: <u>7</u> (B)	
Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species <u>10</u> x 1 =	<u>10</u>
FACW species <u>0</u> x 2 =	<u>0</u>
FAC species <u>10</u> x 3 =	<u>30</u>
FACU species <u>113</u> x 4 =	<u>452</u>
UPL species <u>10</u> x 5 =	<u>50</u>
Column totals <u>143</u> (A)	<u>542</u> (B)
Prevalence Index = B/A = <u>3.79</u>	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/>	Rapid test for hydrophytic vegetation
<input type="checkbox"/>	Dominance test is >50%
<input type="checkbox"/>	Prevalence index is ≤3.0*
<input type="checkbox"/>	Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
<input type="checkbox"/>	Problematic hydrophytic vegetation* (explain)
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	

Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines - All woody vines greater than 3.28 ft in height.	

Hydrophytic vegetation present?	<u>N</u>
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Remarks: (Include photo numbers here or on a separate sheet)
Photo #20160601_113334

ICECOR
Superior, Wisconsin

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 10 Ac. Wooded Site, Woodland and Vassa City/County: Duluth/St. Louis Sampling Date: 6/1/16
 Applicant/Owner: Mr. John Hovland State: WI Sampling Point: TP-11
 Investigator(s): Michael Kohn - ICECOR Section, Township, Range: Sect 35, T51N, R14W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: _____ NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? Yes
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Rained yesterday and last night.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	Secondary Indicators (minimum of two required) <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"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): _____ Water table present? Yes <u>X</u> No _____ Depth (inches): <u>7</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-11

Tree Stratum					50/20 Thresholds		
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Fraxinus nigra</i>	10	Y	FACW	3	9	
2	<i>Populus tremuloides</i>	7	Y	FAC	4	11	
3					9	23	
4					0	0	
5							
6							
7							
8							
9							
10							
		17	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A)		
1	<i>Fraxinus nigra</i>	15	Y	FACW	Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	<i>Acer saccharum</i>	4	N	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
3	<i>Corylus cornuta</i>	2	N	FACU			
4							
5							
6							
7							
8							
9							
10							
		21	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Glyceria canadensis</i>	15	Y	OBL	OBL species	23	x 1 = 23
2	<i>Equisetum pratense</i>	10	Y	FACW	FACW species	35	x 2 = 70
3	<i>Carex Stricta</i>	8	N	OBL	FAC species	19	x 3 = 57
4	<i>Athyrium filix-femina</i>	6	N	FAC	FACU species	6	x 4 = 24
5	<i>Matteuccia struthiopteris</i>	6	N	FAC	UPL species	0	x 5 = 0
6					Column totals	83	(A) 174 (B)
7	<i>Sphagnum Magellanicum (8%)</i>				Prevalence Index = B/A = <u>2.10</u>		
8							
9	<i>Rest bare</i>						
10							
11							
12							
13							
14							
15							
		45	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<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* Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
1					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2							
3							
4							
5							
		0	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet)					Definitions of Vegetation Strata:		
Photo #20160601_120436					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
					Hydrophytic vegetation present? <u>Y</u>		

ICECOR
Superior, Wisconsin

VEGETATION - Use scientific names of plants

Sampling Point: TP-12

Tree Stratum					50/20 Thresholds		
Plot Size (30' Radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Acer saccharum</i>	20	Y	FACU	6	15	
2	<i>Betula papyrifera</i>	10	Y	FACU	5	12	
3					9	23	
4					0	0	
5							
6							
7							
8							
9							
10							
		30	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)		
1	<i>Acer saccharum</i>	10	Y	FACU	Total Number of Dominant Species Across all Strata: <u>7</u> (B)		
2	<i>Corylus cornuta</i>	8	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>14.29%</u> (A/B)		
3	<i>Acer rubrum</i>	5	Y	FAC			
4							
5							
6							
7							
8							
9							
10							
		23	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5' Radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Eurybia macrophylla</i>	30	Y	UPL	OBL species	0	x 1 = 0
2	<i>Pteridium aquilinum</i>	15	Y	FACU	FACW species	0	x 2 = 0
3					FAC species	5	x 3 = 15
4	<i>Rest bare</i>				FACU species	63	x 4 = 252
5					UPL species	30	x 5 = 150
6					Column totals	98	(A) 417 (B)
7					Prevalence Index = B/A = <u>4.26</u>		
8							
9							
10							
11							
12							
13							
14							
15							
		45	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain)		
1					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2							
3							
4							
5							
		0	= Total Cover				
Definitions of Vegetation Strata:					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines - All woody vines greater than 3.28 ft in height.		
Remarks: (Include photo numbers here or on a separate sheet)					Hydrophytic vegetation present? <u>N</u>		
Photo #20160601_120447							

