

Handout -
Soltau

REVISED



**OFFICE OF
AITKIN COUNTY ASSESSOR**
209 2nd ST N.W. Room 111
AITKIN, MINNESOTA 56431
Phone: 218/927-7327 – Fax: 218/927-7379
assessor@co.aitkin.mn.us

County Board of Equalization Appeal Information Sheet

Appointment Time: 4:45pm

Owner Name: Steven & Jane Soltau

Property ID#: 29-1-161200

Physical Address: 19262 486th Street, McGregor, MN 55760

Estimated Market Value 2014 Assessment: \$153,800

Classification 2014 Assessment: Seasonal Recreational Residential

Estimated Market Value 2015 Assessment: \$146,800

Classification 2015 Assessment: Seasonal Recreational Residential

Reason for Appeal: Mr. Soltau feels the cabin is a tear down and the whole property is valued too high.

Assessor's Recommendation: Change Dgrade from D5 to D4; value basement area as basement and area on piers as on piers; EA from 60 to 55

Comments: The Shamrock Township Local Board of Appeal and Equalization voted no change to the valuation of this property.

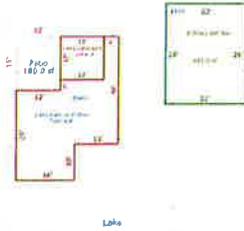
Page 2 is an email letter from the owner regarding the property value. Pages 3 and 4 show the approximate location of this property. Pages 5 through 9 are the assessor's field card for this parcel including photos and a sketch. Page 10 shows an example of one recent comparable sale of a similar property in the Sheshebe Point 3rd Addition Plat.

Further information on the subject property will be available once staff views the interior of this cabin on June 15.

Jim Hicks and Stacy Westerlund viewed the property with Mr. Soltau on Monday, June 15, 2015. Part of the cabin has a basement area (approximately 12' x 12') and the remainder is on piers – changed CAMA to show this. The cabin has an original area and then a couple of additions. There is no heat and the plumbing is drained after the

summer season. Changed the DGrade from D5 to D4 to show this is not a year round residence. Shingles are not new and will need to be replaced; siding has areas that should be replaced; soffit and fascia has some areas that should be fixed also. The skylights leak and have left water stains on the ceilings; there is a leak in one of the closets where there is a gable above it. The floors have some sags and bows to it from settling of piers and aging construction. The windows are not new and have not seen repair or replacement.

We recommend changing to a cabin grade (D4) but we do not feel the cabin is necessarily a "tear down," therefore we would not recommend an EA lower than 55 since the cabin is still usable.



Fee Owner: 20999
 SOLTAU, STEVEN D & JANE G
 Taxpayer: 20999 FALCO:F.O.
 SOLTAU, STEVEN D & JANE G
 7116 FLEETWOOD DR
 EDINA MN 55439
 Primary Address/911 #:
 19262 486th St
 MCGREGOR

DISTRICTS:
 Twp/City : 29 SHAMROCK TWP
 Plat : 5 SHESHEBE POINT
 School : 4 MCGREGOR
 Lake : 10033 MINNEWAWA LAKE

LEGAL DESCRIPTION:
 Sec/Twp/Rge : 21 49.0 23 Acres: .00
 PT LOT 181 AS IN DOC 360908 & LOT 182

Parcel notes:
 ASRIN 6/15/2015 SMW/JH: MET WITH THE
 SOLTAU'S REVIEWED CABIN

4/27/2015 SMW/JH: LBOAE - NO CHANGE.

RA 9/13/2010 JH & SMW: NO ANSWER

1-28-2010, JH, N/C CHECKS, NO ONE HERE, GOT A
 CALL, LOWERED DECREPIT CABIN, PUT SHED VALUE

ISSUE DETAILS:

Nbr: 14044 Type: ASRIN Sts: OPEN Desc: REVIEW CABIN CONDITION. PER OWNER - A TEAR DOWN Permit:
 LID: 1st AY: 2015 Next action:
 Action: INSCM 06/15/2015 Inspection completed - appraisal date from CAMA
 Action: CRID 04/27/2015 Created
 Asmt yr: 2016 Entered by: SMWL
 Asmt yr: 2015 Entered by: SMWL

ASSESSMENT DETAILS:

Year	Rcd	Class	Acres	CAMA	Estimated	Deferred	Taxable
2015	Rcd: 1	Class: 151 Non-Comm Seasonal Residential Recreational	Land 1.77	116,200	116,200		116,200
		Hstd: 0 cabin	Building	39,906	39,900		39,900
		MP/Seq: 29-1-161200 : 000	Total MKT	156,106	156,100		156,100
		Own% Rel AG% Rel NA% Dsb%					
2014	Rcd: 1	Class: 151 Non-Comm Seasonal Residential Recreational	Land	113,900	113,900		113,900
		Hstd: 0 cabin	Building	39,906	39,900		39,900
		MP/Seq: 29-1-161200 : 000	Total MKT	153,806	153,800		153,800
		Own% Rel AG% Rel NA% Dsb%					
2013	Rcd: 1	Class: 151 Non-Comm Seasonal Residential Recreational	Land	113,900	113,900		113,900
		Hstd: 0 cabin	Building	39,906	39,900		39,900
		MP/Seq: 29-1-161200 : 000	Total MKT	153,806	153,800		153,800
		Own% Rel AG% Rel NA% Dsb%					

ASSESSMENT SUMMARY:

Year	Class	Hstd	Land Mkt	Land Dfr	Building	Total Mkt	Total Dfr	Limited Mkt	Limited Dfr	Exemptions	Taxable	New Imp
2015	151	0	116,200	0	39,900	156,100		156,100			156,100	0
2014	151	0	113,900	0	39,900	153,800		153,800			153,800	0
2013	151	0	113,900	0	39,900	153,800		153,800			153,800	0

TAX SECTION:

Tax Year	Rec Class	NYC	RMV	St Gen	Disaster	Powerline	Ag	Res	Tac	Net Tax
2016		.00	.00	.00	.00	.00	.00	.00	.00	.00
2015		1,176.10	.00	234.90	.00	.00	.00	.00	.00	1,411.00
2014		1,165.77	.00	247.23	.00	.00	.00	.00	.00	1,413.00
2013		1,228.15	.00	287.85	.00	.00	.00	.00	.00	1,516.00

CAMA LAND DETAILS:

Land market: 29 SHAMROCK / ZONE 3 Last calc date/env: 04/27/15 I
 Neighborhood: 29 SHAMROCK 1.00 Asmt year: 2016
 COG: 20999 1 Ac/FF/SF: 1.77 Lake: 10033 MINNEWAWA LAKE
 Wid: .00 Dth: 450.00 Avg CER:

NOTES:

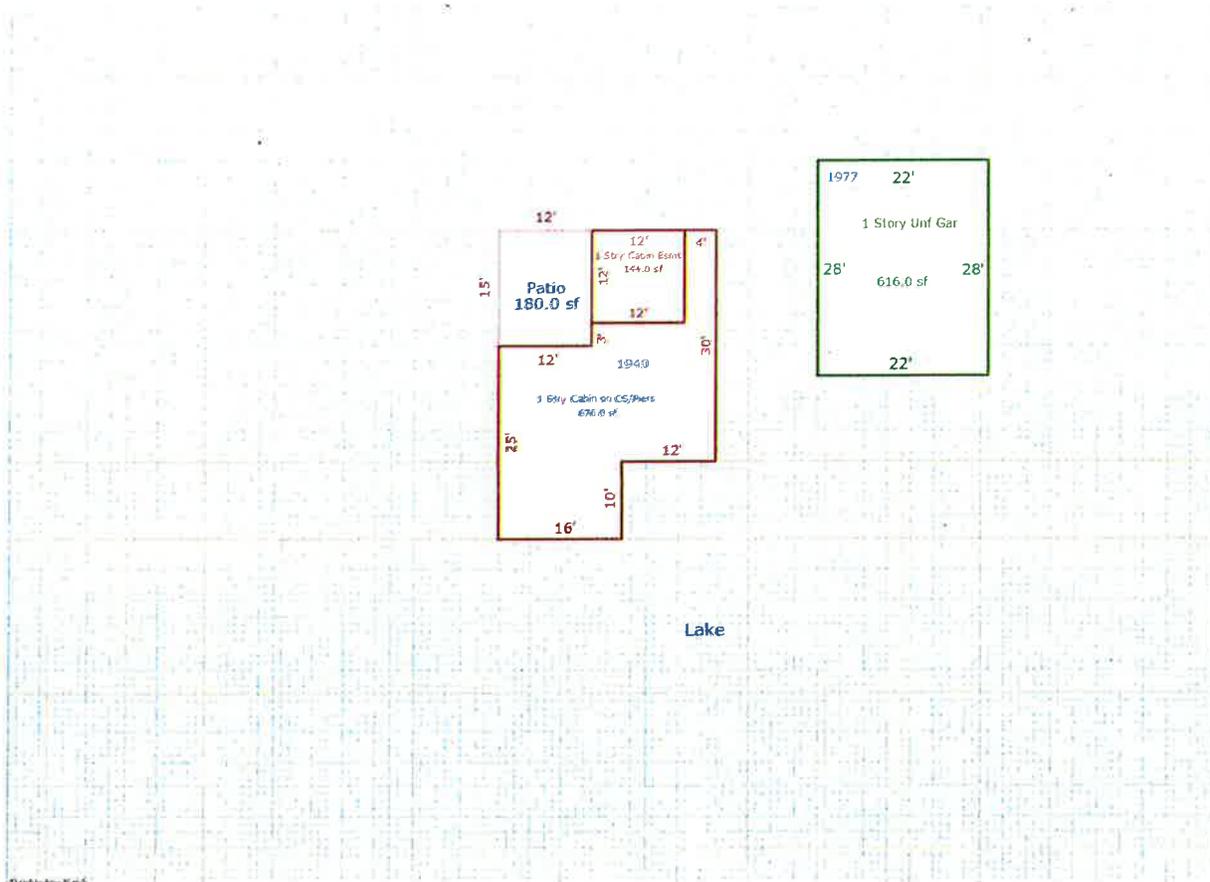
RES ON SLOPE
 GENTLE AT FIRST THEN STEEPER SLOPE AT LAKE
 ROCK RETAINING WALL BY SAND BEACH
 3' TO 4' DROP TO WATER
 SANDY/PREBLY HARD BOTTOM
 WEEDY IF NOT USED

75' TOTAL LAKE FRONTAGE = +15% COG ADJ









Handout - Marcotte

AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

**209 Second Street, NW
Aitkin, Minnesota 56431**

PH: (218) 927-7342
FX: (218) 927-4372



June 12, 2015

RE: Wetland Delineation on Parcel 12-0-021800

Anne Marcotte
P. O. Box 192
Hill City, MN 55748

Dear Ms. Marcotte:

Enclosed is the Notice of Decision approving the wetland delineation that was done on the above-referenced parcel. The onsite was conducted on June 10, 2015 with the Corps of Engineers Project Manager.

We reviewed the information in the data sheets on site and found them to be accurate. The flagged areas were found and the vegetation change at the boundary was very clear.

The Wetland Conservation Act (WCA) regulates impacts to wetland areas. The most common impacts would be fill, excavation or drainage.

Because this area is in shoreland, the maximum wetland impact is 1,000 square feet. However, you have a significant amount of cedar wetland on the property, which is limited to 100 square feet. The WCA does not allow a project to be split into components or phases for the purpose of gaining additional exemptions. Therefore, subdividing the property will not gain any additional wetland exemptions. In the past, the Technical Evaluation Panel that reviews requests for additional wetland impact has not recommended additional fill for subdivided properties.

Posts for an elevated walkway would not be considered fill, so a boardwalk can be used to cross the wetland area.

Please call with any questions you might have on this project. I can be reached at 218-927-7342.

Sincerely,

A handwritten signature in cursive script that reads "Becky Sovde".

Becky Sovde
Wetland Specialist/Compliance Officer
Aitkin County

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) Aitkin County Planning & Zoning	209 Second Street NW, Room 100 Aitkin, MN 56431
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1. PROJECT INFORMATION

Applicant Name Ben Meister for Anne Marcotte	Project Name	Date of Application 06/02/15	Application Number
<input type="checkbox"/> Attach site locator map.			

Type of Decision:

<input checked="" type="checkbox"/> Wetland Boundary or Type	<input type="checkbox"/> No-Loss	<input type="checkbox"/> Exemption	<input type="checkbox"/> Sequencing
<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Banking Plan		

Technical Evaluation Panel Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
----------------------------------	--	-------------------------------

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: 06/12/15		
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with conditions (include below)	<input type="checkbox"/> Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

The wetland boundary was reviewed with Corps of Engineers staff. The flagged areas were located. Data sheets were reviewed for soils and vegetation and were found to be accurate. No changes to the delineation were recommended. The onsite was conducted on June 10, 2015.

Minnesota Wetland Conservation Act

Notice of Decision

Local Government Unit (LGU) Aitkin County Planning & Zoning	209 Second Street NW, Room 100 Aitkin, MN 56431
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Summary (or attach):		

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Sincerely,

A handwritten signature in cursive script that reads "Becky Sovde". The signature is written in black ink and is positioned above the printed name.

Becky Sovde
Wetland Specialist/Compliance Officer
Aitkin County

4. LIST OF ADDRESSEES

- SWCD TEP member: **Steve Hughes, SWCD, 130 Southgate Drive, Aitkin, MN 56431**
- BWSR TEP member: **Dale Krystosek, BWSR, 4 West Office Bldg, 403 Fourth Street, Room 200, Bemidji, MN 56601**
- LGU TEP member: **John Welle, Road & Bridge, 1211 Air Park Lane, Aitkin, MN 56431**
- DNR TEP member: **Kevin Woizeschke, DNR, 1601 Minnesota Drive, Brainerd, MN 56401**
- DNR Regional Office: **Rian Reed, DNR, 1201 East Highway 2, Grand Rapids 55744**
- WD or WMO (if applicable):
- Applicant: **Ben Meister, 8718 Center Drive, Breezy Point, MN 56472**
- Landowner: **Anne Marcotte, 69175 350th Place, Hill City, MN 55748**
- Members of the public who requested notice:
- Corps of Engineers Project Manager: **Rob Maroney, ACOE, 10867 East Gull Lake Drive NW, Brainerd, MN 56401**
- BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

For Wetland Bank Plan applications, also send a copy of the application to:
Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

-
-
-
-
-

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)
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Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

- Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).
- Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.
- Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name Becky Sovde	Title Wetland Specialist	
Signature 	Date 6/2/15	Phone Number and E-mail 218-927-7342 rsovde@co.aitkin.mn.us

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT.

Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Charges for an appeal are \$50.00/hour plus any additional costs to Aitkin County. Send petition to: Aitkin County Planning & Zoning 209 Second Street NW, Room 100 Aitkin, MN 56431	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Wetland Pit A1
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455969.631 Long.: 5205096.422 Datum: UTM 15 North
 Soil Map Unit Name: Cromwell fine sandy loam, 1-6% slopes 268B NWI Classification: None
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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 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 _____ 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</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:		

VEGETATION - Use scientific names of plants

Sampling Point: Wetland Pit A1

Tree Stratum					50/20 Thresholds		
Plot Size (30')		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Thuja occidentalis</i>	40	Y	FACW	12	30	
2	<i>Abies balsamea</i>	10	N	FAC	14	35	
3	<i>Tilia americana</i>	10	N	FACU	14	35	
4					0	0	
5							
6							
7							
8							
9							
10							
		60	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15')		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
1	<i>Acer rubrum</i>	50	Y	FAC	Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	<i>Sambucus racemosa</i>	20	Y	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)		
3					Prevalence Index Worksheet Total % Cover of: OBL species $\frac{0}{100} \times 1 = \frac{0}{100}$ FACW species $\frac{40}{100} \times 2 = \frac{80}{100}$ FAC species $\frac{130}{100} \times 3 = \frac{390}{100}$ FACU species $\frac{30}{100} \times 4 = \frac{120}{100}$ UPL species $\frac{0}{100} \times 5 = \frac{0}{100}$ Column totals $\frac{200}{100}$ (A) $\frac{590}{100}$ (B) Prevalence Index = B/A = <u>2.95</u>		
4							
5							
6							
7							
8							
9							
10							
		70	= Total Cover				
Herb Stratum							
Plot Size (5')		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 $\leq 3.0^*$ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain)		
1	<i>Athyrium filix-femina</i>	40	Y	FAC	*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.		
2	<i>Osmunda claytoniana</i>	20	Y	FAC			
3	<i>Arisaema triphyllum</i>	10	N	FAC			
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
		70	= Total Cover				
Woody Vine Stratum					Hydrophytic vegetation present?		
Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status	<input checked="" type="checkbox"/> <u>Y</u>		
1							
2							
3							
4							
5							
		0	= Total Cover				

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Upland Pit A1
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455980.984 Long.: 5205106.66 Datum: UTM 15 North
 Soil Map Unit Name: Cromwell fine sandy loam 1-6% slopes 268B NWI Classification: None
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.)	

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 Living <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> 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 <input type="checkbox"/> (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> </u> No <u> X </u> Depth (inches): _____ Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): _____ (includes capillary fringe)
		Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: Upland Pit A1

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer saccharum</i>	50	Y	FACU
2	<i>Pinus strobus</i>	10	N	FACU
3	<i>Fraxinus pennsylvanica</i>	10	N	FACW
4				
5				
6				
7				
8				
9				
10				
		70 = Total Cover		

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>	30	Y	FAC
2	<i>Ribes cynosbati</i>	20	Y	FACU
3	<i>Fraxinus pennsylvanica</i>	20	Y	FACW
4				
5				
6				
7				
8				
9				
10				
		70 = Total Cover		

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Athyrium filix-femina</i>	20	Y	FAC
2	<i>Carex pensylvanica</i>	15	Y	UPL
3	<i>Aster macrophyllus</i>	15	Y	UPL
4	<i>Streptopus lanceolatus</i>	15	Y	FACU
5	<i>Viola sororia</i>	15	Y	FAC
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		80 = 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	14	35
Sapling/Shrub Stratum	14	35
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>4</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>44.44%</u> (A/B)	

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	<u>0</u> x 1 = <u>0</u>
FACW species	<u>30</u> x 2 = <u>60</u>
FAC species	<u>65</u> x 3 = <u>195</u>
FACU species	<u>95</u> x 4 = <u>380</u>
UPL species	<u>30</u> x 5 = <u>150</u>
Column totals	<u>220</u> (A) <u>785</u> (B)
Prevalence Index = B/A = <u>3.57</u>	

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Wetland Pit A2
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455899.587 Long.: 5205232.86 Datum: UTM 15 North
 Soil Map Unit Name: Branstad loam 2-6% slopes 204B NWI Classification: PFO4B
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) _____ Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) _____ Water Marks (B1) _____ Sediment Deposits (B2) _____ Drift Deposits (B3) _____ Algal Mat or Crust (B4) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Sparsely Vegetated Concave Surface (B8)	_____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13) _____ Marl Deposits (B15) _____ Hydrogen Sulfide Odor (C1) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Presence of Reduced Iron (C4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Thin Muck Surface (C7) _____ Other (Explain in Remarks)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ 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>12</u> Saturation present? Yes <u>X</u> No <u>_____</u> Depth (inches): <u>0</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:		

VEGETATION - Use scientific names of plants

Sampling Point: Wetland Pit A2

Tree Stratum					Plot Size (30')		Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds				
1	<i>Fraxinus nigra</i>					30	Y	FACW	Tree Stratum	20%	50%	14	35	
2	<i>Thuja occidentalis</i>					20	Y	FACW	Sapling/Shrub Stratum	14	35			
3	<i>Populus balsamifera</i>					20	Y	FACW	Herb Stratum	16	40			
4									Woody Vine Stratum	0	0			
5									Dominance Test Worksheet					
6									Number of Dominant Species that are OBL, FACW, or FAC:	6	(A)			
7									Total Number of Dominant Species Across all Strata:	9	(B)			
8									Percent of Dominant Species that are OBL, FACW, or FAC:	66.67%	(A/B)			
9									Prevalence Index Worksheet					
10						70	= Total Cover		Total % Cover of:					
Sapling/Shrub Stratum					Plot Size (15')		Absolute % Cover	Dominant Species	Indicator Status	OBL species	0	x 1 =	0	
1	<i>Acer rubrum</i>					30	Y	FAC	FACW species	110	x 2 =	220		
2	<i>Prunus pensylvanica</i>					20	Y	FACU	FAC species	50	x 3 =	150		
3	<i>Cornus alternifolia</i>					20	Y	FACU	FACU species	40	x 4 =	160		
4									UPL species	20	x 5 =	100		
5									Column totals	220	(A)	630	(B)	
6									Prevalence Index = B/A =	2.86				
7									Hydrophytic Vegetation Indicators:					
8									<input type="checkbox"/> Rapid test for hydrophytic vegetation					
9									<input checked="" type="checkbox"/> Dominance test is >50%					
10									<input checked="" type="checkbox"/> Prevalence index is ≤3.0*					
11									Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)					
12									<input type="checkbox"/> Problematic hydrophytic vegetation* (explain)					
13									*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
14									Definitions of Vegetation Strata:					
15						80	= Total Cover		Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.					
Herb Stratum					Plot Size (5')		Absolute % Cover	Dominant Species	Indicator Status	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.				
1	<i>Poa palustris</i>					40	Y	FACW	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.					
2	<i>Athyrium filix-femina</i>					20	Y	FAC	Woody vines - All woody vines greater than 3.28 ft in height.					
3	<i>Asarum canadense</i>					20	Y	UPL						
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
Woody Vine Stratum					Plot Size ()		Absolute % Cover	Dominant Species	Indicator Status					
1														
2														
3														
4														
5														
						0	= Total Cover		Hydrophytic vegetation present?	Y				

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Upland Pit A2
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455913.474 Long.: 5205241.071 Datum: UTM 15 North
 Soil Map Unit Name: Branstad loam 2-6% slopes 204B NWI Classification: PFO4B
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.) 	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	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): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: Upland Pit A2

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Tilia americana</i>	40	Y	FACU
2	<i>Ulmus americana</i>	10	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				

50 = Total Cover

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rubus idaeus</i>	40	Y	FAC
2	<i>Populus balsamifera</i>	20	Y	FACW
3				
4				
5				
6				
7				
8				
9				
10				

60 = Total Cover

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Carex pensylvanica</i>	30	Y	UPL
2	<i>Aster macrophyllus</i>	20	Y	UPL
3	<i>Viola pubescens</i>	10	N	FACU
4	<i>Uvularia sessilifolia</i>	10	N	FACU
5	<i>Actaea rubra</i>	10	N	FACU
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

80 = 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	10	25
Sapling/Shrub Stratum	12	30
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	3 (A)
Total Number of Dominant Species Across all Strata:	6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC:	50.00% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL species	0 x 1 = 0
FACW species	30 x 2 = 60
FAC species	40 x 3 = 120
FACU species	70 x 4 = 280
UPL species	50 x 5 = 250
Column totals	190 (A) 710 (B)
Prevalence Index = B/A =	3.74

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Wetland Pit A3
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455928.882 Long.: 5205402.242 Datum: UTM 15 North
 Soil Map Unit Name: Alstad loam 292 NWI Classification: PFO/SSB
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.) 	

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>4</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0</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:		

VEGETATION - Use scientific names of plants

Sampling Point: Wetland Pit A3

Tree Stratum					Plot Size (30')		Absolute %	Dominant	Indicator
					Cover	Species	Status		
1	<i>Abies balsamea</i>				20	Y	FAC		
2									
3									
4									
5									
6									
7									
8									
9									
10									
					20	=	Total Cover		
Sapling/Shrub Stratum					Plot Size (15')		Absolute %	Dominant	Indicator
					Cover	Species	Status		
1	<i>Populus balsamifera</i>				30	Y	FACW		
2	<i>Abies balsamea</i>				20	Y	FAC		
3	<i>Acer rubrum</i>				10	N	FAC		
4	<i>Corylus americana</i>				10	N	FACU		
5									
6									
7									
8									
9									
10									
					70	=	Total Cover		
Herb Stratum					Plot Size (5')		Absolute %	Dominant	Indicator
					Cover	Species	Status		
1	<i>Carex intumescens</i>				30	Y	FACW		
2	<i>Caltha palustris</i>				20	Y	OBL		
3	<i>Calamagrostis canadensis</i>				20	Y	OBL		
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
					70	=	Total Cover		
Woody Vine Stratum					Plot Size ()		Absolute %	Dominant	Indicator
					Cover	Species	Status		
1									
2									
3									
4									
5									
					0	=	Total Cover		

50/20 Thresholds	20%	50%
Tree Stratum	4	10
Sapling/Shrub Stratum	14	35
Herb Stratum	14	35
Woody Vine Stratum	0	0

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC: <u>6</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>100.00%</u> (A/B)		

Prevalence Index Worksheet		
Total % Cover of:		
OBL species	40 x 1 =	<u>40</u>
FACW species	60 x 2 =	<u>120</u>
FAC species	50 x 3 =	<u>150</u>
FACU species	10 x 4 =	<u>40</u>
UPL species	0 x 5 =	<u>0</u>
Column totals	160 (A)	<u>350</u> (B)
Prevalence Index = B/A = <u>2.19</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*
<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>Y</u>
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Remarks: (Include photo numbers here or on a separate sheet)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Upland Pit A3
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 455943.377 Long.: 5205403.864 Datum: UTM 15 North
 Soil Map Unit Name A1stad loam 292 NWI Classification: PFO/SSB
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.) 	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water table present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u> N </u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: Upland Pit A3

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Tilia americana</i>	20	Y	FACU
2	<i>Quercus macrocarpa</i>	20	Y	FACU
3	<i>Acer saccharum</i>	20	Y	FACU
4	<i>Populus tremuloides</i>	20	Y	FAC
5				
6				
7				
8				
9				
10				
		80 = Total Cover		

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Populus balsamifera</i>	30	Y	FACW
2	<i>Rubus idaeus</i>	20	Y	FAC
3	<i>Acer rubrum</i>	20	Y	FAC
4				
5				
6				
7				
8				
9				
10				
		70 = Total Cover		

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Aster macrophyllus</i>	40	Y	UPL
2	<i>Carex pensylvanica</i>	20	Y	UPL
3	<i>Viola canadensis</i>	20	Y	FACU
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		80 = 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%
Tree Stratum	16	40
Sapling/Shrub Stratum	14	35
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC: <u>4</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>40.00%</u> (A/B)		

Prevalence Index Worksheet		
Total % Cover of:		
OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>30</u> x 2 =	<u>60</u>
FAC species	<u>60</u> x 3 =	<u>180</u>
FACU species	<u>80</u> x 4 =	<u>320</u>
UPL species	<u>60</u> x 5 =	<u>300</u>
Column totals	<u>230</u> (A)	<u>860</u> (B)
Prevalence Index = B/A = <u>3.74</u>		

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤ 3.0 *

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? N

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

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Wetland Pit B
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 456138.506 Long.: 5205164.438 Datum: UTM 15 North
 Soil Map Unit Name: Alstad loam 292 NWI Classification: None
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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 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 _____ 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>10</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:		

VEGETATION - Use scientific names of plants

Sampling Point: Wetland Pit B

Tree Stratum					50/20 Thresholds		
Plot Size (30')		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1					Tree Stratum	0	0
2					Sapling/Shrub Stratum	10	25
3					Herb Stratum	18	45
4					Woody Vine Stratum	0	0
5							
6							
7							
8							
9							
10							
		0	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (15')		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)		
1	<i>Tilia americana</i>	30	Y	FACU	Total Number of Dominant Species Across all Strata: <u>5</u> (B)		
2	<i>Fraxinus pennsylvanica</i>	20	Y	FACW	Percent of Dominant Species that are OBL, FACW, or FAC: <u>80.00%</u> (A/B)		
3							
4							
5							
6							
7							
8							
9							
10							
		50	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5')		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Phalaris arundinacea</i>	50	Y	FACW	OBL species	<u>0</u>	x 1 = <u>0</u>
2	<i>Matteuccia struthiopteris</i>	20	Y	FAC	FACW species	<u>90</u>	x 2 = <u>180</u>
3	<i>Carex intumescens</i>	20	Y	FACW	FAC species	<u>20</u>	x 3 = <u>60</u>
4					FACU species	<u>30</u>	x 4 = <u>120</u>
5					UPL species	<u>0</u>	x 5 = <u>0</u>
6					Column totals	<u>140</u> (A)	<u>360</u> (B)
7					Prevalence Index = B/A =	<u>2.57</u>	
8							
9							
10							
11							
12							
13							
14							
15							
		90	= 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)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Marcotte Hill Lake City/County: Aitkin County Sampling Date: 5/23/2015
 Applicant/Owner: Anne Marcotte State: MN Sampling Point: Upland Pit B
 Investigator(s): Ben Meister and Kyle Cherne Section, Township, Range: 13-52N-26W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): 1-3% Lat.: 456126.038 Long.: 5205174.271 Datum: UTM 15 North
 Soil Map Unit Name: Alstad loam 292 NWI Classification: None
 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? No Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? No 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.)	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <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)	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): _____ (includes capillary fringe)	Indicators of wetland hydrology present? <u> N </u>	
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

Sampling Point: Upland Pit B

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer saccharum</i>	30	Y	FACU
2	<i>Tilia americana</i>	20	Y	FACU
3	<i>Abies balsamea</i>	20	Y	FAC
4				
5				
6				
7				
8				
9				
10				
		70 = Total Cover		

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rubus idaeus</i>	30	Y	FAC
2	<i>Ribes cynosbati</i>	20	Y	FACU
3	<i>Tilia americana</i>	20	Y	FACU
4				
5				
6				
7				
8				
9				
10				
		70 = Total Cover		

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Viola pubescens</i>	40	Y	FACU
2	<i>Sanguinaria canadensis</i>	20	Y	FACU
3	<i>Matteuccia struthiopteris</i>	20	Y	FAC
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		80 = 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	14	35
Sapling/Shrub Stratum	14	35
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	9	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	33.33%	(A/B)

Prevalence Index Worksheet		
Total % Cover of:		
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	70 x 3 =	210
FACU species	150 x 4 =	600
UPL species	0 x 5 =	0
Column totals	220 (A)	810 (B)
Prevalence Index = B/A =	3.68	

Hydrophytic Vegetation Indicators:

- Rapid test for hydrophytic vegetation
- Dominance test is >50%
- Prevalence index is ≤3.0*
- Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? N

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

