

Preliminary & Field Evaluation Form

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Owner Information			
Date	<u>7/8/2019</u>	Sec / Twp / Rng	<u>S-18, T-49, R-26</u>
Parcel ID	<u>35-0-030203</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>James Sandberg</u>	Owners address (if different)	
Property Address:	<u>39406 498th Ln. Palisade MN 56469</u>		<u>530 Linden Ln.</u>
City / State / Zip:			<u>Lino Lakes MN 55014</u>

Flow Information and Waste Type / Strength			
Estimated Design flow _____	Anticipated Waste strength	<input type="checkbox"/> Hi Strength	<input type="checkbox"/> Domestic
Comments: Alternate site for property split	Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V)	<input type="checkbox"/> No
	Sewage ejector/grinder pump	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Water softener	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Garbage Disposal	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Daycare / In home business	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Site Information					
Existing & proposed lot improvements located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Well casing depth	Existing deep well	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Drainfield w/in 100' of residential well	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Property lines determined (see site map) By Others	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in 200' of transient noncommunity water supply (TNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Req'd setbacks determined (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities located & identified (gopher state one call)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Buried water supply pipe w/in 50' of system	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Access for system maintenance (shown on site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site located in Shoreland (w/in 1000' of lake, 300' of river)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Soil treatment area protected	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Site map prepared with previous items included	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Construction related issues	<u>Alternate site is in a wooded area West of Driveway.</u>				
	<u>Alt Site 50' x 100'</u>				

Soil Information

		Evidence of site:			
		Cut		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Filled		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Compacted		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		Disturbed		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Perk test completed and attached (if applicable)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft ²)	<u>0.60</u>		Percolation rate (if applicable)	_____	
Depth/elev to SHWT	<u>16"</u>		Flooding or run-on potential (comments)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Depth to system bottom maximum (or elev minimum)	<u>NA</u>				
Depth/elev to standing water (if applicable)	_____		Flood elevation (if applicable)	_____	
Depth/elev to bedrock (if applicable)	_____		Elevation of ordinary high water level (if applicable)	_____	
Soil Survey information determined (see attachment)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Floodplain designation and elev - 100 yr/10 yr (if applicable)	_____	
Differences between soil survey and field evaluation (if applicable)	_____ _____				

I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.



 Designer Signature

Brummer Septic LLC.

 Company

L-1347

 License #

Soil Observation Log

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Owner Information	
Property Owner / project: <u>James Sandberg</u>	Date <u>7/8/2019</u>
Property Address / PID: <u>39406 498th Ln, Palisade MN 56469</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input checked="" type="checkbox"/> Till <input type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input checked="" type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>204B & 928D</u> slope <u>(3-6)</u> % direction- <u>West</u>

Top of Deep Well Cap Elv. = 100'

Soil Log #1B Alternite site							
		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>99.1'</u>	Depth to SHWT <u>26"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 26	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular
26 - 29	Loam	<35	10YR5/4	7.5YR5/6 & 10YR6/2	Friable	Loose	Granular
		<35					
		<35					

Comments:

Soil Log #2B Alternate Site

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>98'</u>		Depth to SHWT <u>16"</u>	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Laom	<35	10YR3/2		Loose	Loose	Granular
6 - 16	Loam	<35	10YR6/3 E Horizon		Loose	Loose	Granular
16 - 21	Silt Loam	<35	10YR6/3E & 10YR4/4B E & B Horizon Blending	7.5YR5/4	Friable	Weak	Blocky
		<35					
		<35					

Soil Log #3

		<input type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation _____		Depth to SHWT _____	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive
		<35 35 - 50 >50			loose friable firm rigid	loose weak moderate strong	single grain granular blocky prismatic platy massive

I hereby certify this work was completed in accordance with MN 7080 and any local req's.

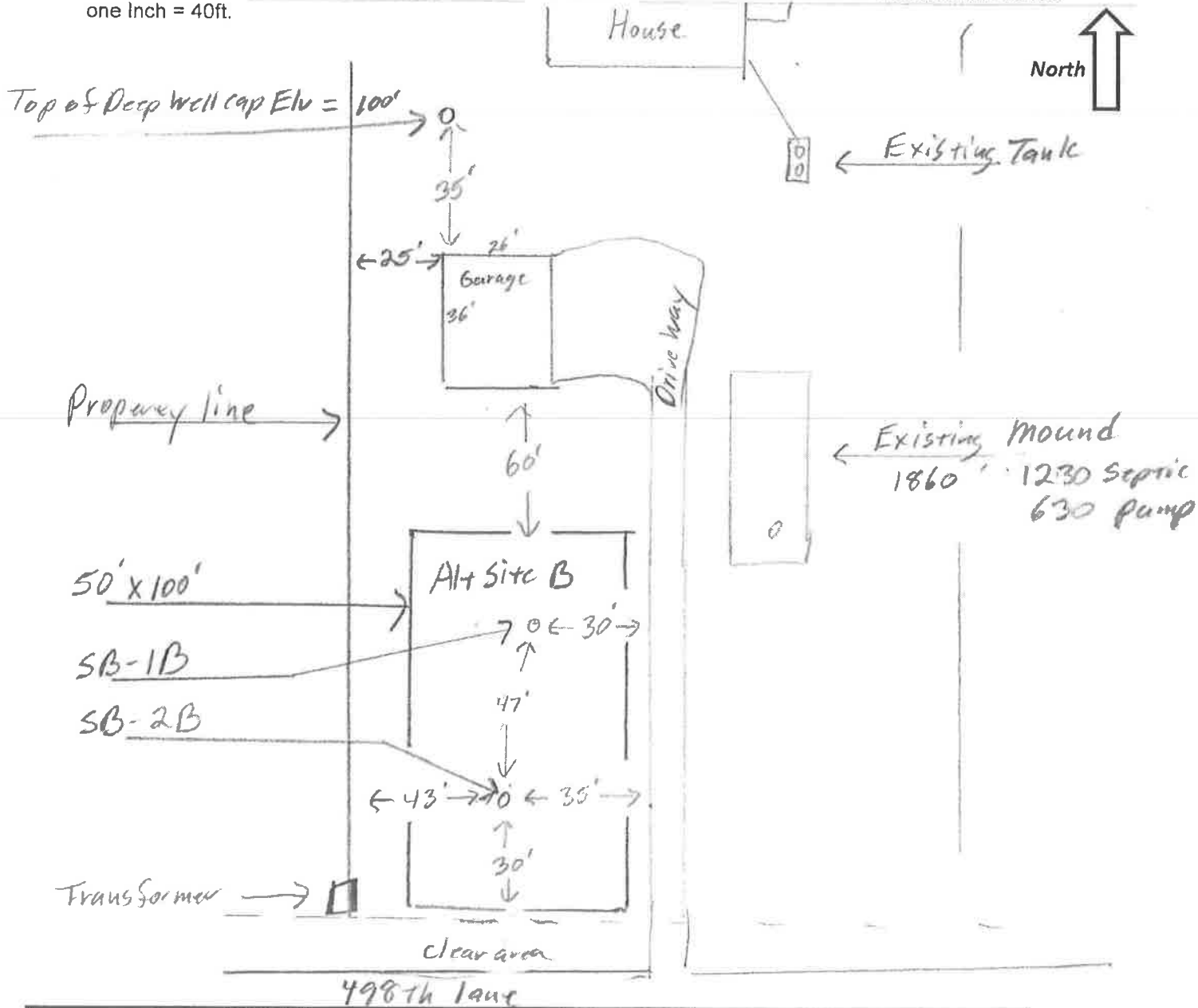
Designer Signature

Brummer Septic LLC.
Company

L-1347
License #

{ Design Drawing }

Property Owner: James Sandberg Date: 7/8/19 Designer's Initials: JB
 Parcel ID. Number: 35-0-030203 Address: 39406 498th Ln. Palisade MN 56469
 one Inch = 40ft.



	Surface/ SHWT	Top of well cap = Bench Mark 100'	Existing Grade
Soil Bore 1B	99.1'/26"	Bench Mark	100'
Soil Bore 2B	98'/16"	Ground Elv. BM	98.6'
Soil Bore 3		Ground Elv. Tank	93.2'
	Ground at	Existing house	97.8' Front

Please show all that apply (Existing)

- Wells within 100ft. Of Drain field.
- Water lines within 10 ft. of Drain field.
- Drain field Areas:

Please Draw to Scale with North to Top or Left Side of Page:

- | | |
|---------------------------|-----------------------------------|
| Disturbed/Compacted Areas | Access Route for Tank Maintenance |
| Component Location | Property Lines |
| OHW ordinary high water | Structures |
| Lot Easements | Setbacks |



Detailed Parcel Report

Parcel Number: 35-0-030203

General Information

Township/City: WAUKENABO TWP
Taxpayer Name: SANDBERG, JAMES J & CYNTHIA
Taxpayer Address: 530 LINDEN LANE
 LINO LAKES MN 55014
Property Address: 39406 498th Ln
Township: 49 **Lake Number:** 1014700
Range: 26 **Lake Name:** ESQUAGAMAH LAKE
Section: 18 **Acres:** 6.00
Green Acres: No **School District:** 1.00
Plat:
Brief Legal Description: BAL E 750 FT OF LOT 2 LESS 18.32 AC

Tax Information

Class Code 1: Non-Comm Seasonal Residential Recreational
Class Code 2: Unclassified
Class Code 3: Unclassified
Homestead: Non Homestead
Assessment Year: 2019

Estimated Land Value:	\$154,300.00
Estimated Building Value:	\$161,200.00
Estimated Total Value:	\$315,500.00
Prior Year Total Taxable Value:	\$248,200.00
Current Year Net Tax (Specials Not Included):	\$2,076.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$0.00
Delinquent Taxes:	No

* For more information on delinquent taxes, please call the Aitkin County Treasurer's Office at 218-927-7325.

** Balance Due on a parcel does not include late payment penalties.



Minnesota Well Index

General Information

Unique Well ID:	615273	Well Name:	SANDBERG, JIM	County:	Altkin	Aquifer:	Quat. buried artes. aquifer
Well Elevation (msl in feet):	1266	Drilled Depth (ft):	92	Well Completed (ft):	92	Date Drilled:	07/09/1998
Township:	49	Range:	26	Dir:	W	Section:	18
Subsection:	ABDADB	Use:	domestic	Well Status:	Active	Depth To Bedrock:	
Driller:	Northland Well Co.	Entry Date:	05/19/1999	Update Date:	11/21/2017		

Related Resources:

[Go to MN Well Index Map](#)
 [Well Log Report](#)
 [Scanned Record\(s\)](#)
 [Stratigraphy Report](#)

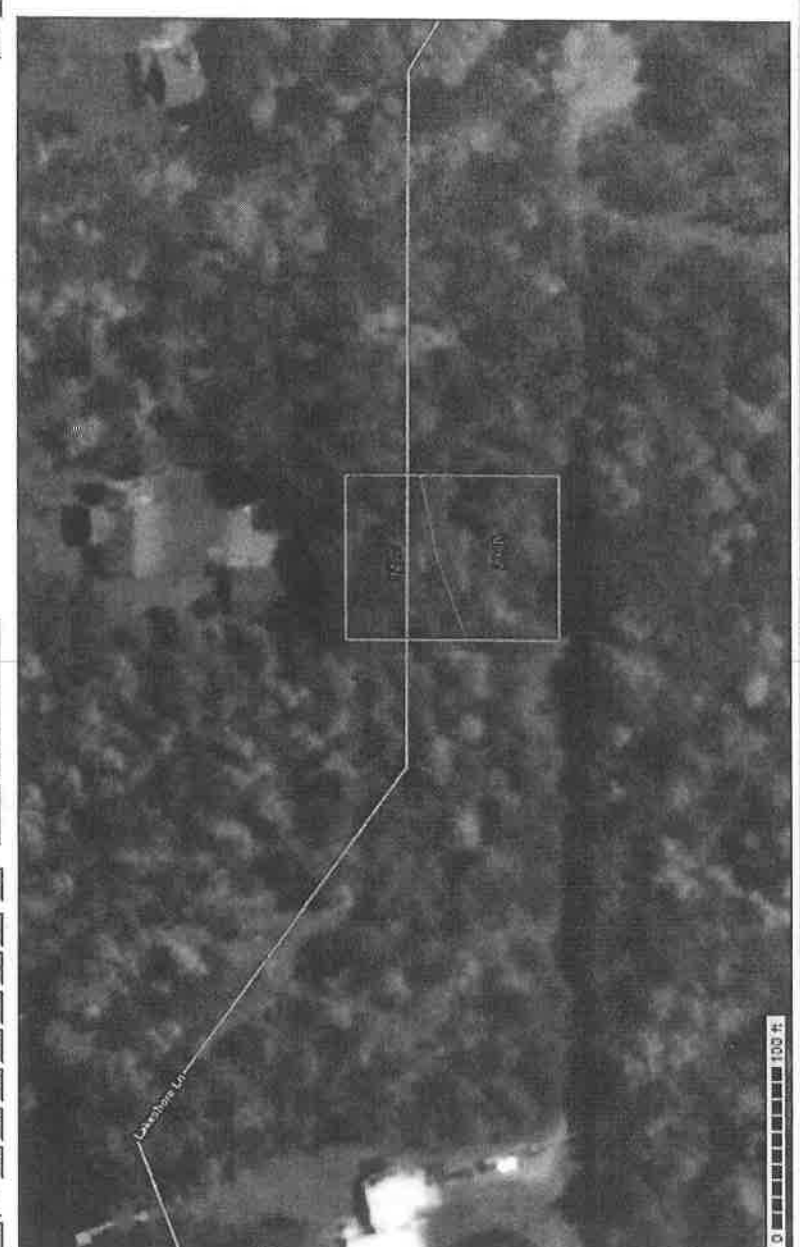
[More Details](#)
[Stratigraphy](#)
[Address](#)
[Chemical Data](#)
[Construction](#)
[Pump Test](#)
[Static Water](#)
[Comments](#)

[Location Changes](#)
[Overview Map](#)

Description	From(ft)	To(ft)	Color	Hardness	Lith Primary	Lith Secondary	Interpretation
SANDY CLAY (ROCKS)	0	20	BROWN	MEDIUM	CLAY	COBL	pebbly sand/silt/clay-brown
CLAY	20	55	GRAY	MEDIUM	CLAY		clay-brown
SAND (ROCKS)	55	92	GRAY	SOFT	SAND		sand +larger-gray

Search			
Map Unit Legend			
Aitkin County, Minnesota (MN001)			
Aitkin County, Minnesota (MN001)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
204B	Branstad loam, 2 to 6 percent slopes	0.2	55.7%
928D	Cushing-Mahtomedi complex, 10 to 25 percent slopes	0.1	44.3%
Totals for Area of Interest		0.3	100.0%

Soil Map



|

Aitkin County, Minnesota

204B—Branstad loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: gjfx
Elevation: 980 to 1,640 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 120 to 140 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Branstad and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Branstad

Setting

Landform: Moraines
Landform position (two-dimensional): Backslope, summit
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy till

Typical profile

A - 0 to 2 inches: loam
E,Bw,E',E/B - 2 to 17 inches: fine sandy loam
Bt1,Bt2 - 17 to 36 inches: loam
Bt3 - 36 to 43 inches: loam
C - 43 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat):
 Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Forage suitability group: Sloping Upland, Neutral (G090AN002MN)
Hydric soil rating: No

Minor Components

Alstad and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Cromwell and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Cutaway and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Hamre and similar soils

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Seelyeville and similar soils

Percent of map unit: 2 percent

Landform: Bogs

Hydric soil rating: Yes

Talmoon and similar soils

Percent of map unit: 2 percent

Landform: Swales

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 19, Sep 12, 2018

Aitkin County, Minnesota

928D—Cushing-Mahtomedi complex, 10 to 25 percent slopes

Map Unit Setting

National map unit symbol: gjk5
Elevation: 980 to 1,640 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 120 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Cushing and similar soils: 45 percent
Mahtomedi and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cushing

Setting

Landform: Moraines
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

E - 0 to 7 inches: loam
B/E - 7 to 17 inches: loam
Bt - 17 to 30 inches: loam
C - 30 to 60 inches: loam

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat):
Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Forage suitability group: Sloping; Fine Texture (G090AN023MN)
Hydric soil rating: No

Description of Mahtomedi

Setting

Landform: Moraines
Landform position (two-dimensional): Shoulder, backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and gravelly outwash

Typical profile

A - 0 to 3 inches: loamy coarse sand
E - 3 to 13 inches: coarse sand
Bw - 13 to 25 inches: gravelly coarse sand
C - 25 to 60 inches: gravelly sand

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy (G090AN022MN)
Hydric soil rating: No

Minor Components

Alstad and similar soils

Percent of map unit: 8 percent
Hydric soil rating: No

Cathro and similar soils

Percent of map unit: 7 percent
Landform: Bogs
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota
Survey Area Data: Version 19, Sep 12, 2018