

# Preliminary & Field Evaluation Form

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Owner Information			
Date	<u>6/22/2018</u>	Sec / Twp / Rng	<u>S-19, T-49, R-23</u>
Parcel ID	<u>29-0-040604</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<del>XXXXXXXXXX</del> <u>Leonard Carlson</u>	Owners address (if different)	
Property Address:	<u>South of 48495 216th Pl. McGregor</u>		
City / State / Zip:	_____		

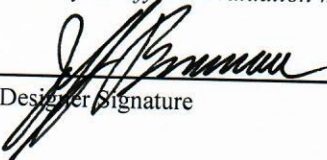
Flow Information and Waste Type / Strength			
Estimated Design flow	_____	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Site Elavuation for a new lot		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" 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	No Well On Lot at this time	
Easements on lot located (see site map)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Drainfield w/in 100' of residential well	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Property lines determined (see site map) By Other	<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 type="checkbox"/> Yes	<input checked="" 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 type="checkbox"/> Yes	<input checked="" 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 type="checkbox"/> Yes	<input type="checkbox"/> No
Construction related issues	<u>Steep slopes</u> <u>Septic Design 10/ 22/ 2018</u> <u>5. Septic design is in Site B ( See Septic design for location</u>				

## Soil Information

		Evidence of site:
		Cut <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
		Filled <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
		Compacted <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
		Disturbed <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
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) <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
Soil loading rate (gpd/ft <sup>2</sup> )	<u>0.78</u>	Percolation rate (if applicable) _____
Depth/elev to SHWT	<u>38" to +84"</u>	Flooding or run-on potential (comments) <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>
Depth to system bottom maximum (or elev minimum)	_____	Flood elevation (if applicable) _____
Depth/elev to standing water (if applicable)	_____	Elevation of ordinary high water level (if applicable) _____
Depth/elev to bedrock (if applicable)	_____	Floodplain designation and elev - 100 yr/10 yr (if applicable) _____
Soil Survey information determined (see attachment)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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: ~~Thomas Bakker~~ Leonard Carlson Date 6/22/2018  
 Property Address / PID: South of 48495 216th Pl. McGregor

## Soil Survey Information

refer to attached soil survey

Parent mat'l's:       Till       Outwash       Lacustrine       Alluvium       Organic       Bedrock  
 landscape position:       Summit       Shoulder       Side slope       Toe slope  
 soil survey map units:      268C & D458I      slope 15 %      direction- West

## Soil Log #1 Site A

Boring       Pit

Elevation 95.8'      Depth to SHWT 56"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 42	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular
42 - 56	Fine sand	<35	10YR5/4		Loose	Loose	Granular
56	Fine sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular
		<35			Loose	Loose	Granular

Comments:

South of 48495 216th Pl. McGregor

**Soil Log #2 Site A**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>90.3'</u>		Depth to SHWT <u>84"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape	
0 - 6	Topsoil Sandy Laom	<35	10YR3/2		Loose	Loose	Granular	
6 - 14	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular	
14 - 49	Med Sand	<35	10YR5/4		Loose	Loose	Granular	
49 - 84	Fine sand	<35	10YR6/4		Loose	Loose	Granular	
		<35			Loose	Loose	Granular	

South of 48495 216th Pl. McGregor

**Soil Log #3 Site B**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>94'</u>		Depth to SHWT <u>38"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape	
0 - 5	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular	
5 - 18	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular	
18 - 38	Fine sand	<35	10YR5/4		Loose	Loose	Granular	
38	Fine sand	<35	10YR5/4	7.5YR5/6	Loose	Loose	Granular	
		<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

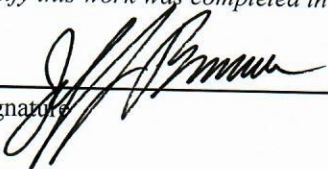
Brummer Septic LLC.  
 Company

L-1347  
 License #

South of 48495 216th Pl. McGregor			Soil Log #4 Site B				
<input checked="" type="checkbox"/> Boring		<input type="checkbox"/> Pit		Elevation <u>89.9'</u>		Depth to SHWT <u>76"</u>	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 7	Topsoil Sandy Laom	<35	10YR3/2		Loose	Loose	Granular
7 - 18	Sandy Loam	<35	10YR4/4		Loose	Loose	Granular
18 - 50	Med Sand	<35	10YR4/4		Loose	Loose	Granular
50 - 68	Med Sand	<35	10YR5/4		Loose	Loose	Granular
68 - 76	Med Sand	<35	10YR6/4	76" Mottles 7.5YR5/4	Loose	Loose	Granular

South of 48495 216th Pl. McGregor			Soil Log #5				
<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.

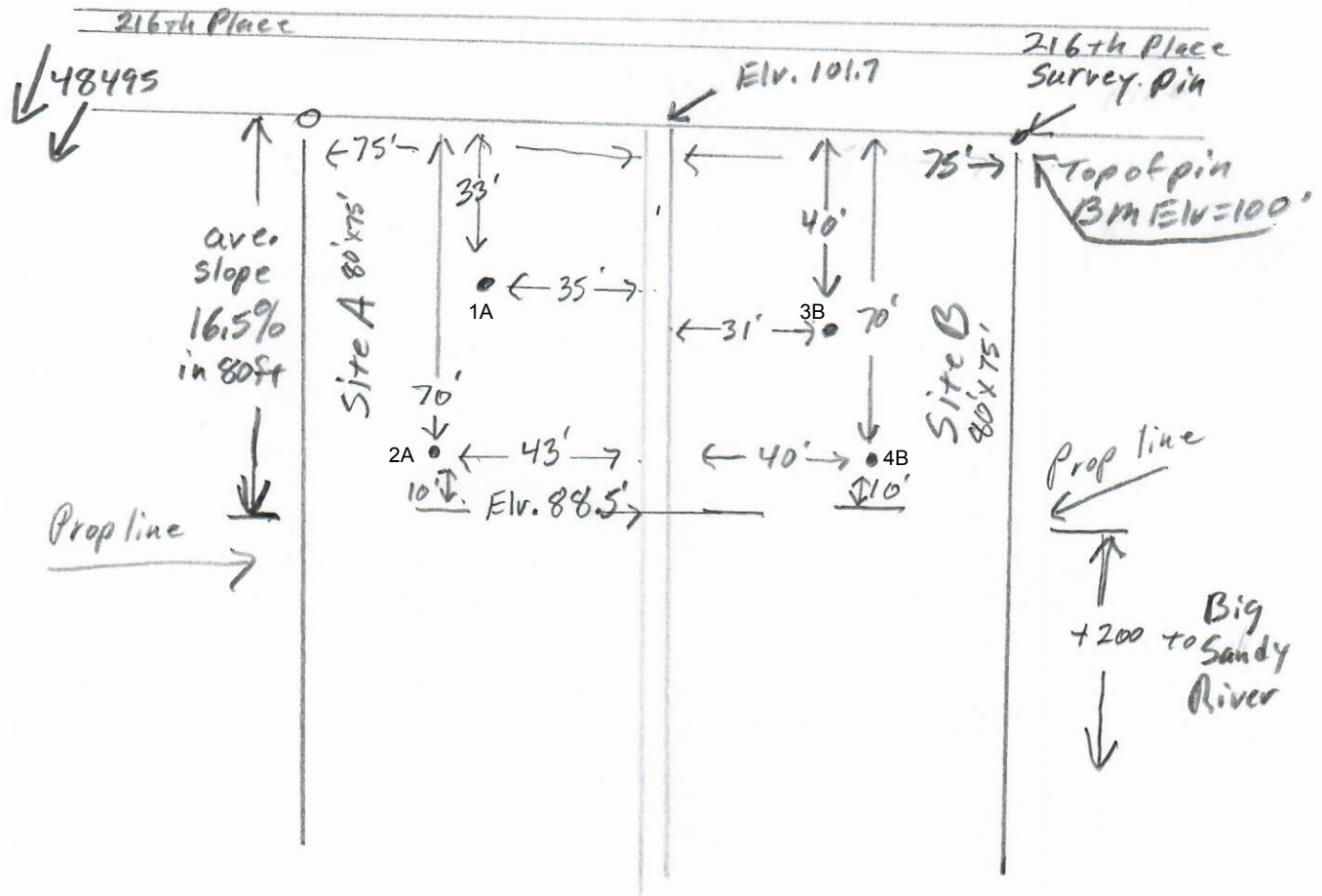
Designer Signature 

Brummer Septic LLC.  
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L-1347  
License #

# { Design Drawing }

Property Owner: ~~XXXXXX~~ Leonard Carlson Date: 6/22/18 Designer's Initials: JB  
 Parcel ID. Number: 29-0-040604 Address: South of 48495 216th Pl. McGregor  
 one Inch = 40ft.



	Surface/ SHWT	SE Lot Survey pin = Bench Mark 100'		Existing Grade	
Soil Bore 1	95.8'/56"	Bench Mark	100'	Grade at Bed	
Soil Bore 2	90.3'/+84"	Ground Elv. BM	99.8'	Bottom of Rock	
Soil Bore 3	94.0'/38"	Grade at Top of trail East Prop Line = 101.7'			
Soil Bore 4	89.9'/76"	Trail Grade Elv. At 80' from prop line 88.5'			

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                          |

## Site evaluation, Design Notes - Aitkin county

Property Owner: ~~Thomas Bakken~~ Leonard Carlson

Date: 6/21/2018

Site Address: South of 48495 216th Pl. McGregor MN 55760

PID: 29-0-040604

Comments: 2 sites are located on map.

- 1 This evaluation is to see if there are any areas that would support a septic drain field.
- 2 The soil borings are indicated on the map, approximate locations.
- 3 There are multiple locations that would be available. With the steep slopes it would be advised to find a suitable location at time of house planning than coordinate the design into the house location.
- 4 The preliminary site evaluation would suggest construction of some areas with possible of in ground. The results in this site evaluation are not enough for a complete design more info will be needed for that.
5. Septic design is in Site B ( See Septic design for location )

Designed to Aitkin Co. and MPCA recommendations and requirements.

  
\_\_\_\_\_  
Designer Signature

Brummer Septic LLC.  
Design Company

L-1347  
License#



# Detailed Parcel Report

Parcel Number: 29-0-040604

## General Information

Township/City: SHAMROCK TWP  
 Taxpayer Name: ~~BAKKE, THOMAS R & KENDRA K~~ Leonard Carlson  
 Taxpayer Address: ~~875 80TH ST N~~ 17208 Tungsten St. NW  
 Property Address: ~~STILLWATER MN 55082~~ Ramsey MN 55303  
 Township: 49 Lake Number: 1006000  
 Range: 23 Lake Name: BIG SANDY RIVER  
 Section: 19 Acres: 1.10  
 Green Acres: No School District: 4.00  
 Plat:  
 Brief Legal Description: PT LOT 4 AS IN DOC 322045

## Tax Information

Class Code 1: Rural Vacant Land  
 Class Code 2: Unclassified  
 Class Code 3: Unclassified  
 Homestead: Non Homestead  
 Assessment Year: 2018

Estimated Land Value:	\$55,900.00
Estimated Building Value:	\$0.00
Estimated Total Value:	<u>\$55,900.00</u>
Prior Year Total Taxable Value:	\$55,900.00
Current Year Net Tax (Specials Not Included):	\$420.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$210.00
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.





Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
268C	Cromwell sandy loam, 6 to 12 percent slopes	1.0	61.9%
302B	Rosholt fine sandy loam, 2 to 6 percent slopes	0.2	13.9%
D458E	Menahga loamy sand, 15 to 30 percent slopes	0.4	24.2%
<b>Totals for Area of Interest</b>			<b>1.6 100.0%</b>



**Warning: Soil Map may not be valid at this scale.**

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:20,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

## Aitkin County, Minnesota

### 268C—Cromwell sandy loam, 6 to 12 percent slopes

#### Map Unit Setting

*National map unit symbol:* gjgd  
*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

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

#### Description of Cromwell

##### Setting

*Landform:* Outwash plains  
*Landform position (two-dimensional):* Backslope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy outwash

##### Typical profile

*A - 0 to 2 inches:* sandy loam  
*Bw, 2Bw, 2C - 2 to 60 inches:* gravelly sand

##### Properties and qualities

*Slope:* 6 to 12 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat excessively drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Low (about 3.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* B  
*Forage suitability group:* Sloping Upland, Low AWC, Acid  
(G090AN008MN)  
*Hydric soil rating:* No

### Minor Components

#### **Oesterle and similar soils**

*Percent of map unit:* 8 percent

*Hydric soil rating:* No

#### **Leafriver and similar soils**

*Percent of map unit:* 7 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

### Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 18, Oct 4, 2017

## Aitkin County, Minnesota

### 302B—Rosholt fine sandy loam, 2 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* gigl  
*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

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

#### Description of Rosholt

##### Setting

*Landform:* Outwash plains  
*Landform position (two-dimensional):* Backslope, summit  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy outwash

##### Typical profile

*E - 0 to 9 inches:* fine sandy loam  
*E/B - 9 to 15 inches:* fine sandy loam  
*Bt1 - 15 to 22 inches:* sandy loam  
*2Bt2 - 22 to 30 inches:* gravelly loamy sand  
*2C - 30 to 60 inches:* stratified very gravelly coarse sand to extremely gravelly sand

##### Properties and qualities

*Slope:* 2 to 6 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 to high (0.60 to 6.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Low (about 4.9 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* A  
*Forage suitability group:* Sloping Upland, Low AWC, Acid  
(G090AN008MN)

*Hydric soil rating:* No

**Minor Components**

**Leafriver and similar soils**

*Percent of map unit:* 8 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

**Oesterle and similar soils**

*Percent of map unit:* 7 percent

*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Aitkin County, Minnesota  
Survey Area Data: Version 18, Oct 4, 2017

## Aitkin County, Minnesota

### D458E—Menahga loamy sand, 15 to 30 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2t4t3  
*Elevation:* 590 to 2,030 feet  
*Mean annual precipitation:* 23 to 33 inches  
*Mean annual air temperature:* 36 to 48 degrees F  
*Frost-free period:* 90 to 170 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Menahga and similar soils:* 87 percent  
*Minor components:* 13 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Menahga

##### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy outwash

##### Typical profile

*A - 0 to 3 inches:* loamy sand  
*Bw - 3 to 17 inches:* loamy sand  
*C - 17 to 79 inches:* sand

##### Properties and qualities

*Slope:* 15 to 30 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:* 10 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* Low (about 3.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A

*Forage suitability group:* Steep; Coarse Texture; Low AWC  
(G057XN018MN)  
*Hydric soil rating:* No

### Minor Components

#### Eagleview

*Percent of map unit:* 8 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Roscommon

*Percent of map unit:* 2 percent  
*Landform:* Swales  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

#### Andrusia

*Percent of map unit:* 1 percent  
*Landform:* Hillslopes  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Leafriver, frequently ponded

*Percent of map unit:* 1 percent  
*Landform:* Depressions  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

#### Meehan

*Percent of map unit:* 1 percent  
*Landform:* Swales  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Aitkin County, Minnesota  
Survey Area Data: Version 18, Oct 4, 2017