

Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>3/25/2021</u>	Sec / Twp / Rng	<u>S-13, T-49, R-27</u>
Parcel ID	<u>52-0-013207</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>James Simpson</u>	Owners address (if different)	
Property Address:	<u>49116 405th Pl. Palisade Mn 56469</u>		<u>49440 405th Pl.</u>
City / State / Zip:			<u>Palisade MN 56469</u>

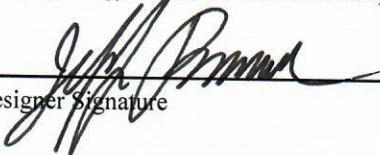
Flow Information and Waste Type / Strength			
Estimated Design flow	<u>450</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Included an Alternate Septic site on map		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		Sewage ejector/grinder pump	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Water softener	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Garbage Disposal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Daycare / In home business	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Site Information					
Existing & proposed lot improvements located (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Well casing depth	Proposed 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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Property lines determined (see site map) By Owner	<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	<hr/> <hr/>				

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>20"</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>(+ 18")</u>	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

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>James Simpson</u>	Date <u>3/25/2021</u>
Property Address / PID: <u>49116 405th Pl. 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 checked="" 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>625 & 1353B</u> slope <u>4</u> % direction- <u>South</u>

Soil Log #1							
		<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit		Elevation <u>98.4'</u>		Depth to SHWT <u>20"</u>	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 20	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular
20 - 22	Sandy Loam	<35	10YR5/4	7.5YR5/4	Loose	Loose	Granular
Comments:							

49116 405th Pl. Palisade Mn 56469

Soil Log #2

Boring

Pit

Elevation 98.4'

Depth to SHWT 20"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 20	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular
20 - 22	Sandy Loam	<35	10YR5/4	7.5YR5/4	Loose	Loose	Granular

49116 405th Pl. Palisade Mn 56469

Boring

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 #

49116 405th Pl. Palisade Mn 56469 **Soil Log #3A Alternate Site**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>98.1'</u>		Depth to SHWT <u>15"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape		
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular		
6 - 15	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular		
15	Sandy Loam	<35	10YR5/4	7.5YR5/4	Loose	Loose	Granular		
		<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		

49116 405th Pl. Palisade Mn 56469 **Soil Log #4A Alternate Site**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>98</u>		Depth to SHWT <u>15"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape		
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular		
6 - 15	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular		
15	Sandy Loam	<35	10YR5/4	7.5YR5/4	Loose	Loose	Granular		
		<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.

Jeff Brummer
Designer Signature

Brummer Septic LLC.
Company

L-1347
License #

Mound Design - Aitkin county

Property Owner: James Simpson

Date: 3/25/2021

Site Address: 49116 405th Pl. Palisade Mn 56469

PID: 52-0-013207

Comments: _____

instructions: = enter data = adjust if desired = computer calculated - DO NOT CHANGE!

- 1) bedroom Type Residential System
- 2) GPD design flow
- 3) Garbage disposal or pumped to septic Install Jacobson 1650 2/Compartment
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: none
- 5) GPD/ft² mound sand loading rate contour loading rate of req's a min ft. long rockbed
- 6) ft rockbed width ft rockbed length
- 7) ft lateral spacing ft perforation spacing (maximum of 3 for both)
 manifold connection
- 8) laterals feet long perfs / lateral perfs total
(1/2 a perf means the first perf starts at the middle feed manifold)
- 9) inch perfs at feet residual head gives gpm flow rate per perforation
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = , line #8 must be less --> OK
- 10) doses per day (4 minimum)
- 11) gallons per dose (treatment volume)
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 1.50 5x
- 13) feet of inch supply line leads to gallons of drainback volume 2.00 3x
(Tip: "top feed" manifold to control the drainback)
- 14) gallons TOTAL pump out volume (treatment + drainback)
- 15) feet vertical lift from pump to mound laterals, leads to a:
- 16) GPM @ feet of head, Pump requirement (note: >50gpm may require an extra 3-6' of head)
- 17) gal Dose tank (code minimum) gal Dose tank (design size / LUG req'd) at gpi
leads to a
- 18) inch swing on Demand float, or timed dosing of min ON (confirm pump rate with drawdown
(this delivers Average flow, =70% of Peak design flow) hrs OFF test and adjust as necessary)
- 19) inches from bottom of tank to "Pump OFF" float
- 20) inches from bottom of tank to "Pump ON" float, or inches to "Timer ON" float if time dosed
- 21) inches from bottom of tank to "Hi Level" float, or inches to "Hi Level" float if time dosed
- 22) gallons reserve capacity (after High Level Alarm is activated)

23) 0.60 gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of 2 (minimum)
 (this must match the soil boring log) desired mound ratio 2.0

24) 4 percent site slope (0-20% range) 4 (% downslope site slope, if different than upslope)

25) 18 inches, or 1.5 ft. to Redox or other limiting condition (need at least 12" to be a Type I)

26) 18 inch, or 1.5 ft. Sand Lift Mound
 Treatment zone contains 0 inches of 0% soil credit, and 0 inches of 50% soil credit. Giving a:
CRITICAL FOR FUTURE CERTIFICATIONS!!!

27) 20.0 ft. base absorption width (with sand beyond rockbed as follows):
 32.4 greater of: absorption width OR sand slope

28) 0.0 ft. upslope and sideslope sand upslope 8.6
 10.0 ft. Downslope sand down slope 13.8

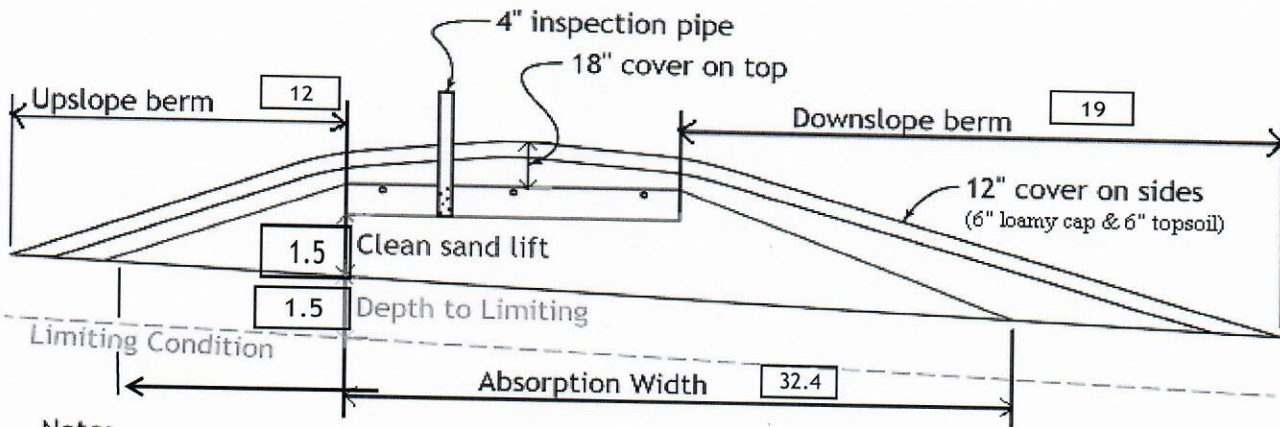
Individual slope ratios give BERM widths (topsoil beyond rockbed) of:

29) 4:1 upslope ratio 12 ft. upslope berm

30) 4:1 sideslope 16 ft. sideslope berms

31) 4:1 downslope 19 ft. downslope berm

32) Overall Dimensions: 10.0 ft. wide by 38.0 ft. long Rock bed
 41 ft. wide by 70 ft. long Mound footprint



Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
 For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

33) Rock Bed:
 10.0 ft. by 38.0 ft. by 9 inches under pipe, plus 20% gives 17 yd³ or *1.4= 24 ton

34) Mound Sand: (note: volume is based on 3:1/4:1 slope from top of rockbed, Exchange sand for loamy cap if desired)
 24.8 up + 46.0 downslope + 12.5 ends + 23.9 under rock = 129 yd³ or *1.4= 180 ton
 plus 20%

35) Loamy Cap:
 37 ft. by 66 ft. 6" deep, plus 20% gives 55 yd³ or *1.4= 77 ton

36) Topsoil:
 41 ft. by 70 ft. 6" deep, plus 20% gives 64 yd³ or *1.4= 90 ton

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

[Signature]
 Designer Signature

Brummer Septic LLC.
 Company

L-1347
 License#

3/25/2021
 Date

Installer Summary

1120 gallon Septic tank (minimum)

Tank options: none

533 gallon Dose tank (minimum)

Install Jacobson 1650 2/Compartment

at 12.69 gpi

29 GPM @ 23 ft. of head, Pump required

6.1 inch swing on Demand float which translates to roughly 4.1 inches of float tether length

if time dosing is required --> 2.7 minutes ON time & 5.1 hours OFF time

18 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float

21 inches from bottom of tank to "Hi Level Alarm" or 31 inches to "Hi level alarm" if time dosed

75 ft. of 2.0 inch supply line with end feed manifold connection

(Tip: "top feed" manifold to control drainback)

18 inch, or 1.5 ft. Sand Lift Mound

10.0 ft. wide by 38.0 ft. long Rock bed

3 laterals 1.50 inch diameter 36.0 ft. long 3.0 ft. lateral spacing

1/4" inch perfs 3.0 ft. perforation spacing

No Effluent filter & alarm

3 clean out & valve box assemblies

32.4 ft. Total sand ABSORPTION width (minimum)

8.6 ft. upslope and sideslope (sand beyond rockbed, minimum)

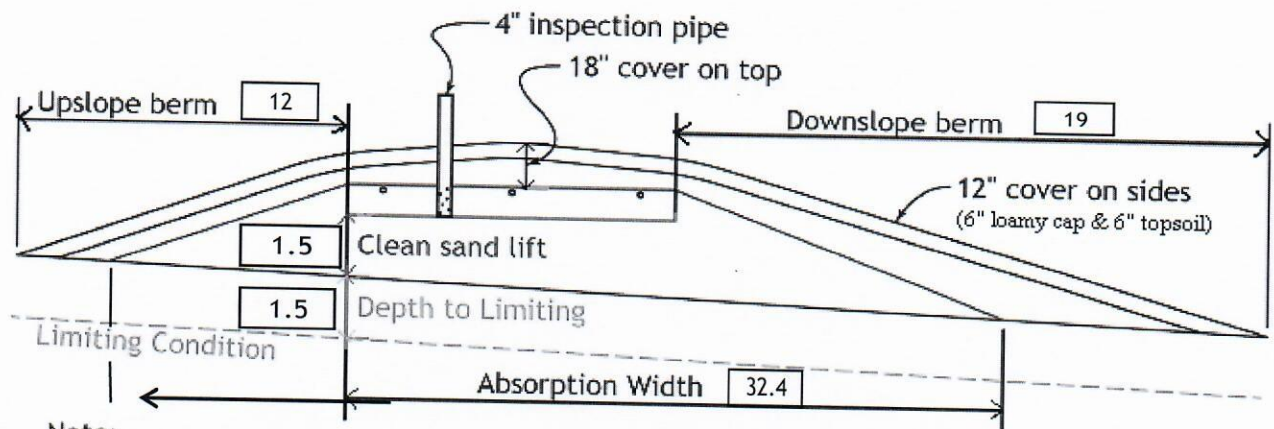
13.8 ft. Downslope (sand beyond rockbed, minimum)

Specific slope ratios give BERM widths (topsoil beyond rockbed) of:

4:1 upslope ratio 12 ft. upslope berm

4:1 sideslope 16 ft. sideslope berms

4:1 downslope 19 ft. downslope berm



Note:

For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.

For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

Rock Bed:	17.0 yd ³ or *1.4=	24 ton
Mound Sand:	129 yd ³ or *1.4=	180 ton
Loamy Cap:	55 yd ³ or *1.4=	77 ton
Topsoil:	64 yd ³ or *1.4=	90 ton

9 inches under pipe
 calculation based on 3:1/4:1 slope from top of rockbed
 6" deep
 6" deep

INSPECTOR CHECKLIST - mound

49116 405th Pl. Palisade Mn 56469

- WELL setbacks: 20' to pressure tested sewer line (5 psi for 15 min)
50' to everything 100' to dispersal area with shallow well
- PROPERTY LINES setback: 10' to everything
- Road setback: platted: 10' prop line. Metes & bounds: out of road easement, or outer ditch.
- LAKE / BLUFF setback: 20' for bluff. Lakes: GD __, RD __, NE __. Protected wetland __.
- Building setbacks: 10' for everything, 20' for dispersal area.
- WATER LINE under pressure se 10' to bed, tank & sewer line. (else sewer line > 12" below, else ok w/pvc)

- Sewer line & baffle connection (no 90's, 3' between 45's, slope min 1" in 8', max 2" in 8')
(no depth req's, clean out every 100', Sch 40 pipe)

- Septic tank and risers (water tight, insulated, proper depth, existing verified by pumping)
mfg _____ 1120 gallons none _____

- Riser over outlet, riser over inlet or center, and 6"+ inspection pipe over any remaining baffles.
- No effluent filter & alarm
- Dose tank risers and piping (water tight, insulated, proper depth, drainback)
mfg _____ 533 gallons

- dose pump _____ 29 gpm 23 head VERIFY PUMP CURVE 2.7 min ON 5.1 hr OFF

- float setting drop 6.1 inches at 12.7 gpi "DESIGNED" 4.1 inches approx float tether length
77.0 gal dose divided by _____ gpi "INSTALLED" = _____ inches float drop (field corrected)
LABEL pump requirements and drawdown on riser or panel

- Cam lock reachable from grade - 30" max. J-hook weep hole. Supply line access (no hard 90's)
2.0 inch supply pipe: Sch40, sloped 1/8"+, supported by 4" sch40 sleeve or compacted, and buried 6"+.
splice box / control panel / electrical connections
flow measurement: CT, ETM, time dosed, home water meter
mound absorption area rough up
mound rock dimensions 10.0 X 38.0
Sand lift depth 18 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)

- Absorption Sand beyond rock 8.6 upslope 13.8 downslope

- Bermed topsoil beyond rockbed 12 upslope 16 sideslope 19 downslope

- cover depth of 12-18"+ VERIFY
- 3 laterals (1-2' from edge of rock)
- 1.50 inch pipe size (Sch40 pipe & fittings)
- 3.0 ft lateral spacing

- 1/4" inch perforations
- 3.0 ft perforation spacing

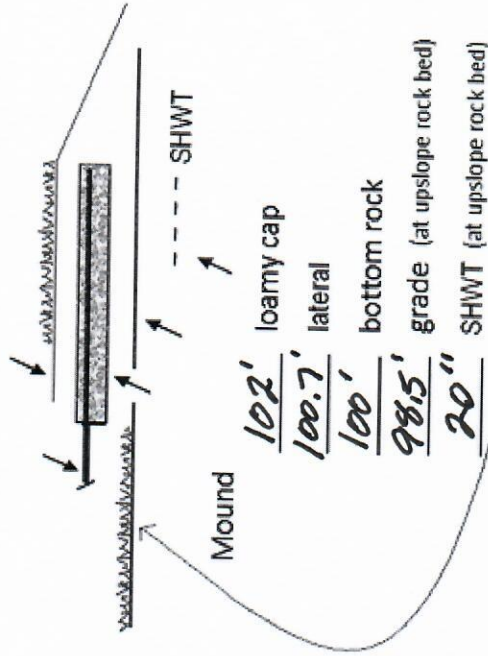
- Air inlet at end of laterals, and at top feed manifold if necessary. VERIFY
clean outs (no hard 90's)
- 4" inspection pipe to bottom of rock, anchored VERIFY

- Abandon existing system - if necessary Re-use existing tank certification
monitoring plan and type _____
well abandonment form - if necessary _____

System Elevations

Elev = 100' benchmark Nail on Pine Tree North of Shed

(Grade elevations are existing. If a different final grade is desired it should be shown and described here.)



Mound

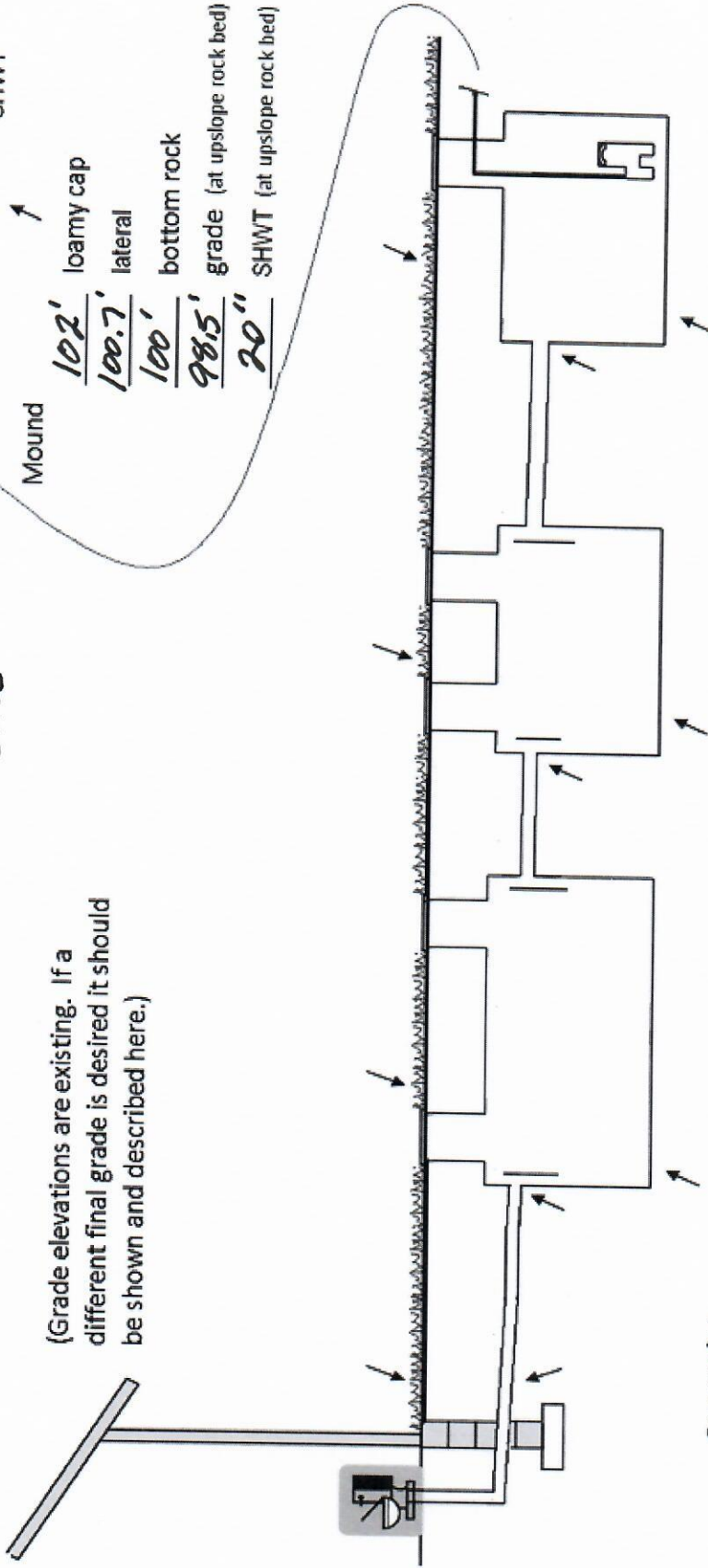
102' loamy cap

100.7' lateral

100' bottom rock

98.5' grade (at upslope rock bed)

20" SHWT (at upslope rock bed)



Sewer pipe exiting house

98.7' Grade

97.6' Pipe

Septic Tank

97.5' Grade

96.5' inlet

92.5' Tank bottom

Septic Tank (if applicable)

Grade

inlet

Tank bottom

Pump Tank

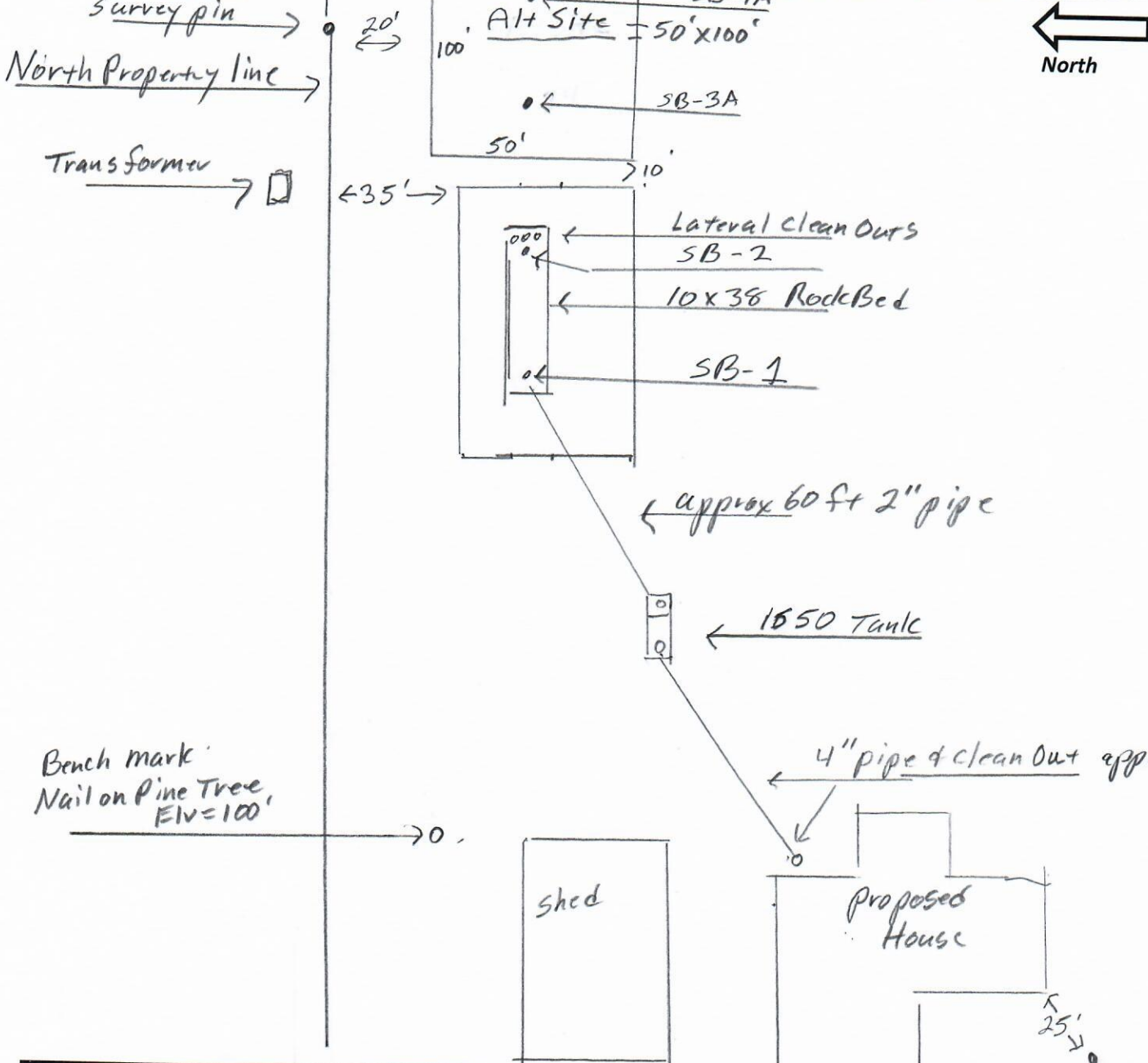
97.5' Grade

96.3' inlet

92.5' Tank bottom

{ Design Drawing }

Property Owner: James Simpson
 Parcel ID. Number: 52-0-013207 Address: 49116 405th Pl. Palisade Mn 56469
 Date: 3/25/21 Designer's Initials: JB
 one Inch = 40ft.



Surface/ SHWT	Nail on Tree = Bench Mark 100'		Existing Grade	
Soil Bore 1	98.4'/20"	Bench Mark	100'	Upslope Edge of Rockbed Elv. = 98.5'
Soil Bore 2	98.4'/20"	Ground Elv. BM	98.6'	Bottom of Rockbed Elv. = 100'
Soil Bore 3	98.1'/15"	Ground Elv. Tank	97.5'	Top of Washed Sand Elv. = 100'
Soil Bore 4	98'/15"	Proposed house	98.7'	Elv. Of Sewer pipe at house Elv. = 97.6'
			Slab	

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
- Component Location
- OHW ordinary high water
- Lot Easements
- Access Route for Tank Maintenance
- Property Lines
- Structures
- Setbacks

Mound Design Notes - Aitkin county

Property Owner: James Simpson

Date: 3/25/21

Site Address: 49116 405th Pl. Palisade Mn 56469

PID: 52-0-013207

Comments: **Mound design may not follow Aitkin co. Auto fill form for mound design.**

- 1 This is a type I mound for a 3 bedroom House. Proposed deep well location will be SW of House.
- 2 Proposed house Elevation not set at time of design, slab on grade house, gravity flow to tank.
- 3 North property line has survey pin near transformer.
Alternate Septic site is East of mound area approx. 50 ft. x 100 ft.
- 4 Bench Mark Elevation is a nail on a Pine tree near NE corner of Shed.
- 5 Install Jacobson 1650 Compartment tank for gravity flow from Slab on grade house (Elv. not set)
- 6 Elevation contour of rock bed upslope edge is 98.5'.
The area size of the rock bed is 10' x 38' . Absorption area is 38' x 32.4'.
Sand absorption area is 8.6 ft. up slope + 10 ft. rockbed + 13.8 downslope = approx. 32.4 ft. wide sand base.
Berms are 12ft. Upslope, 19ft. Down slope, 10ft. Rock bed = approx. 41ft. Wide.
Overall mound size is approx. 41' wide x 70' long and approx. 3.5' high. End Berms are 16 ft wide.
- 7 The bench mark is the nail on the tree near mound area, BM = Elv. 100'.
Installer to double check bench mark. Installer should confirm bench mark and sand height Elv. with inspector.
Installer should record bench mark Elv. and sand height on installation inspection form.
- 8 The top of the washed sand and bottom of rock bed is Elv. 100'.
It is important that the soils do not get compacted, and that clean washed sand is used.
- 9 The Jacobson 1650 compartment tank will be gravity flow from dwelling. Install the pump for 7 demand doses per day. approx. 77 gallons per dose, 6.1 inches of tank level. Install alarm at 3 inches from pump on level.
Install all manholes, inspection pipes and clean-outs to grade or above, insulate top of tank.
- 10 Recommend Installing an Effluent filter on septic tank outlet, install electric alarm on filter.
Install a 2" supply pipe from tank to end manifold in rock bed, install so pipe drains back to tank.
Install 1.5" laterals with 9" of rock under them. (Install Lateral clean-outs at far end of laterals. Recommended)
Drill 1/4" holes for Perf sizing, 36" on centers.
Install 4" inspection pipe to bottom of rock bed, secure in rock bed and raise to above final grade.

Designed to Aitkin Co. and MPCA recommendations and requirements.



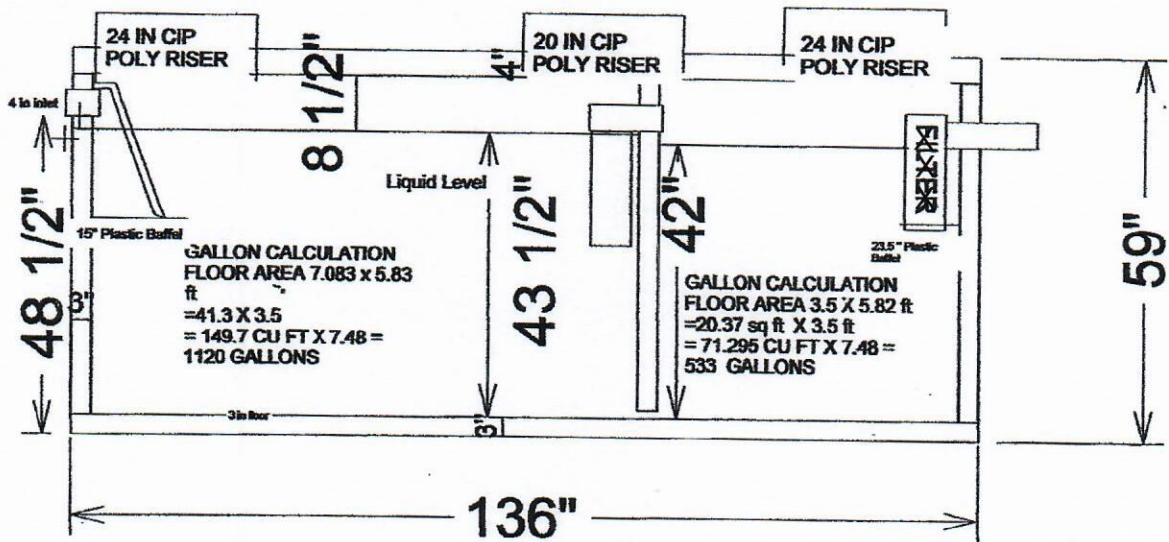
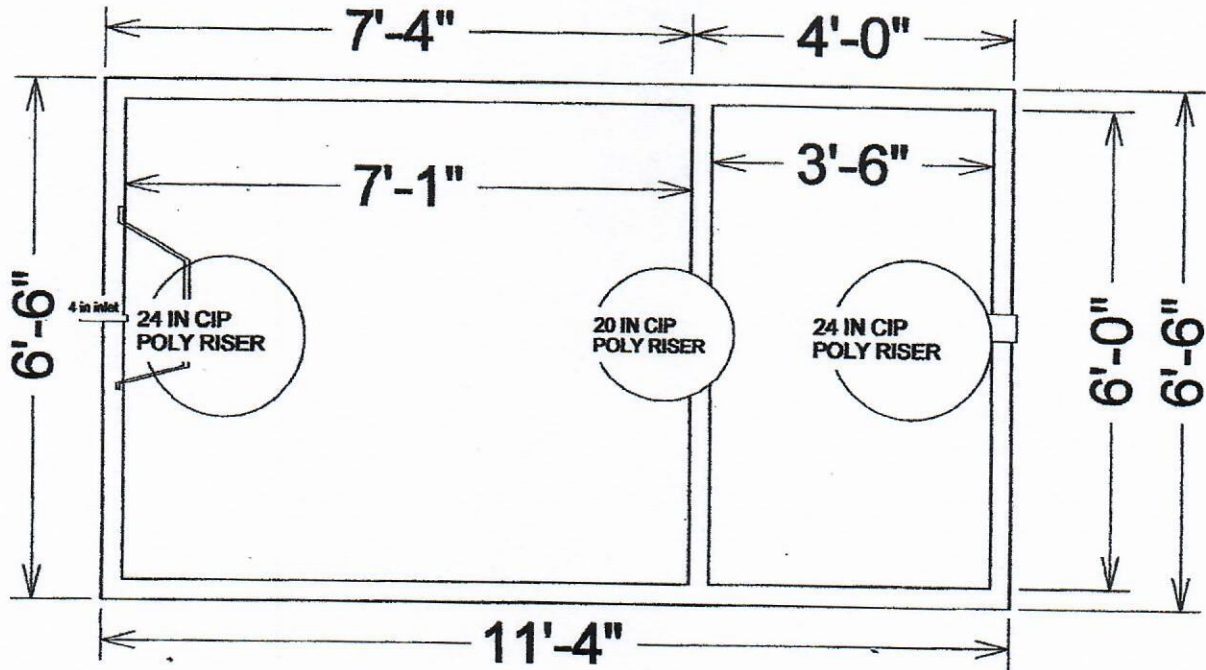
Designer Signature

Brummer Septic LLC.
Design Company

L-1347
License#

1650 Gallon 2 Compartment Septic Tank

TOP VIEW



$533 / 42" = 12.69 \text{ GPI}$

SIDE VIEW

Drawings Owned BY Jacobson Precast, Inc.
36641 HWY 169, Aitkin, Mn 56431



Detailed Parcel Report

Parcel Number: 52-0-013207

General Information

Township/City:	49-27 UNORG	Lake Number:	1914700
Taxpayer Name:	SIMPSON, JAMES P	Lake Name:	ESQUAGAMAH - BACK LOT
Taxpayer Address:	49440 405TH PLACE	Acres:	5.18
	PALISADE MN 56469	School District:	1.00
Property Address:	49116 405TH PL		
Township:	49		
Range:	27		
Section:	13		
Green Acres:	No		
Plat:			
Brief Legal Description:	PT SE SE AS IN DOC 362334 (TRACT F)		

Tax Information

Class Code 1:	Residential 1 unit
Class Code 2:	Unclassified
Class Code 3:	Unclassified
Homestead:	Owner Homestead
Assessment Year:	2021

Estimated Land Value:	\$17,100.00
Estimated Building Value:	\$24,700.00
Estimated Total Value:	<u>\$41,800.00</u>
Prior Year Total Taxable Value:	\$41,800.00
Current Year Net Tax (Specials Not Included):	\$294.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$294.00
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.



Simpson



Date: 3/24/2021



These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Soil Map—Aitkin County, Minnesota
(Simpson)



Soil Map may not be valid at this scale.

Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Aitkin County, Minnesota

625—Sandwick loamy sand

Map Unit Setting

National map unit symbol: gjj4
Elevation: 980 to 1,310 feet
Mean annual precipitation: 20 to 27 inches
Mean annual air temperature: 37 to 41 degrees F
Frost-free period: 95 to 105 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Sandwick

Setting

Landform: Swales on moraines
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy outwash over loamy till

Typical profile

E - 0 to 6 inches: loamy sand
Bw,E' - 6 to 34 inches: sand
2E/B,2Btg - 34 to 55 inches: loam
2Cg - 55 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Level Swale, Low AWC, Acid (G088XN007MN)
Other vegetative classification: Level Swale, Low AWC, Acid (G088XN007MN)

Hydric soil rating: Yes

Minor Components

Dusler 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

Alstad and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Northwood and similar soils

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

Stuntz and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 21, Jun 4, 2020

Aitkin County, Minnesota

1353B—Cutaway loamy fine sand, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: gjd4

Elevation: 980 to 1,310 feet

Mean annual precipitation: 20 to 27 inches

Mean annual air temperature: 37 to 41 degrees F

Frost-free period: 95 to 105 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Cutaway and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cutaway

Setting

Landform: Moraines

Landform position (two-dimensional): Backslope, summit

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy outwash over loamy till

Typical profile

A - 0 to 2 inches: loamy fine sand

E,Bw,E' - 2 to 26 inches: loamy sand

2E/B,2B/E - 26 to 49 inches: loam

2C - 49 to 60 inches: loam

Properties and qualities

Slope: 1 to 6 percent

Depth to restrictive feature: More than 80 inches

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 41 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water capacity: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: B

Forage suitability group: Sloping Upland, Acid (G088XN006MN)

Other vegetative classification: Sloping Upland, Acid (G088XN006MN)

Hydric soil rating: No

Minor Components

Northwood and similar soils

Percent of map unit: 6 percent

Landform: Depressions

Hydric soil rating: Yes

Sandwick and similar soils

Percent of map unit: 6 percent

Landform: Swales

Hydric soil rating: Yes

Dusler and similar soils

Percent of map unit: 3 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Aitkin County, Minnesota

Survey Area Data: Version 21, Jun 4, 2020