# **Preliminary & Field Evaluation Form**

24-062

Type III Mound, Varinace from Lake setback

www.SepticResource.com vers 12.4

			Owner	Information					
Date <u>5</u>	5/22/2024			Sec / Twp / Rng	S-9, T-49, R-23				
Parcel ID 2	9-0-019508	3		LUG (county, city, township)	Aitkin Co.				
Property Owner: A	ndrew Ank	rum		Owners address (if different)					
Property Address: 19	9042 509th	Ln. McGre	gor MN 55760	2216 Thell F	Rd				
City / State / Zip:				Wrenshall M	IN 55797				
Flow Information and Waste Type / Strength									
Estimated Design flov	. 45								
Estimated Design Hov	45	<u> </u>		Anticipated Waste strength	Hi Strength	✓ Domestic			
Comments: Type III M	lound in sau	ne location a	s existing mound	Any Non-Domestic Waste	Yes (class V)	✓ No			
Owner will need a v Existing mount	ariance froi	m the lake set	back for 65 ft.	Sewage ejector/grinder pump	Yes	✓ No			
Aitkin Co Operating P	ermot Requ	iired		Water softener	Yes	✓ No			
				Garbage Disposal	Yes	✓ No			
			Daycare / In home business	Yes	✓ No				
			Site I	nformation					
Existing & proposed loin improvements located		Yes	☑ No	Well casing depth	Existing deep	well			
Easements on lot locat (see site map)	ed	✓ Yes	☐ No	Drainfield w/in 100' of residential well	✓ Yes	☐ No			
Property lines determine (see site map)		✓ Yes rveyed	☐ No	Site w/in 200' of transient noncommunity water supply (T	Yes V No				
Req'd setbacks determ (see site map)	ined	✓ Yes	☐ No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	Yes	✓ No			
Utilities located & idea (gopher state one call)	ntified	Yes	✓ No	Buried water supply pipe w/in 50' of system	Yes	✓ No			
Access for system mai (shown on site map)	ntenance	✓ Yes	☐ No	Site located in Shoreland Yes (w/in 1000' of lake, 300' of river)		☐ No			
		Site map prepared with previous items included	✓ Yes						
Construction related is	sues	-							

			Soil Information		
Original soils	☑ Yes	□ No	Evidence of site: Cut Filled Compacted Disturbed	☐ Yes ☐ Yes ☐ Yes ☑ Yes	✓ No ✓ No ✓ No ─ No
Soil logs completed and attached	✓ Yes	☐ No	Perk test completed and attached (if applicable)	Yes	✓ No
Soil loading rate (gpd/ft <sup>2</sup> )	0.60		Percolation rate (if applicable)		<u> </u>
Depth/elev to SHWT  Depth to system bottom	( +24"	)	Flooding or run-on potential (comments)	Yes	✓ No
maximum (or elev minimum)  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)	1216.56'	=;
Soil Survey information determined (see attachment)	✓ Yes	☐ No	Floodplain designation and elev - 100 yr/10 yr (if applicable)	1223.9'	
Differences between soil survey and field evaluation (if applicable)			Lake Elv.= 1216.7 on 5/22/2024	ļ	

	æ.	
I hereby certify this evaluation was completed in	n accordance with MN 7080 and any local req's.	
Marini	Brummer Septic LLC.	L-1347
Designer Ashabare	Company	License #

19042 509	th Ln. McGregor	MN 55760		oil Log #2			V-12-15
	[V]	Boring	] Pit Elevation	A= 0:	David a CHIVIT		
Depth (in)	Texture	fragment %	matrix color	redox color	Depth to SHWT		-
		l garant y	mad ix color	redox color	consistence	grade	shape
0 - 6	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
6 - 18	Sandy Loam	<35	10YR5/4		Loose	Loose	Granular
18 - 24	Loam	<35	10YR5/3	7.5YR5/6 & 10YR6/2	Loose	Loose	Granular
19042 509t	h Ln. McGregor	MN 55760	S	oil Log #3		T PARTY	
	Пво	ring 🔲 Pit			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.	
Jeff Mmunum	Brummer Septic LLC.	L-1347
Designer Agrature	Company	License #

# **Soil Observation Log**

					www.	SepticResourc	e.com vers 12.4
			Owner Info	ormation			
Property Own	ner / project:	Andrew A	ıkrum	Date	5/22	2/2024	
Property Add	dress / PID:	19042 509th	Ln. McGregor MN 5	55760			
1 4 1			Soil Survey I	nformation	refer	to attached s	oil survey
Parent matl's:	:		✓ Outwash	Lacustrine Allu	ıvium 🔲 C	)rganic	☐ Bedrock
landscape po	sition:	Summit	Shoulder	✓ Side slope	Toe slope		
soil survey m	nap units:	454E	e	slope 12	% direction-	North	=
						XII - CIRCI - SV	
			Soil Lo				
Daniel (i=)		Boring   Gracement 0/	Pit Elevation		epth to SHWT		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 5	Topsoil Sandy Loam	<35	10YR3/2		Loose	Loose	Granular
5 - 13	Sandy Loam	m <35 10YR5/4			Loose	Loose	Granular
13 - 20	Loam	<35	10YR5/3	7.5YR5/6 & 10YR6/2	Loose	Loose	Granular
Comments:	1	1					•

2011 purple code

# Mound Design - Aitkin county

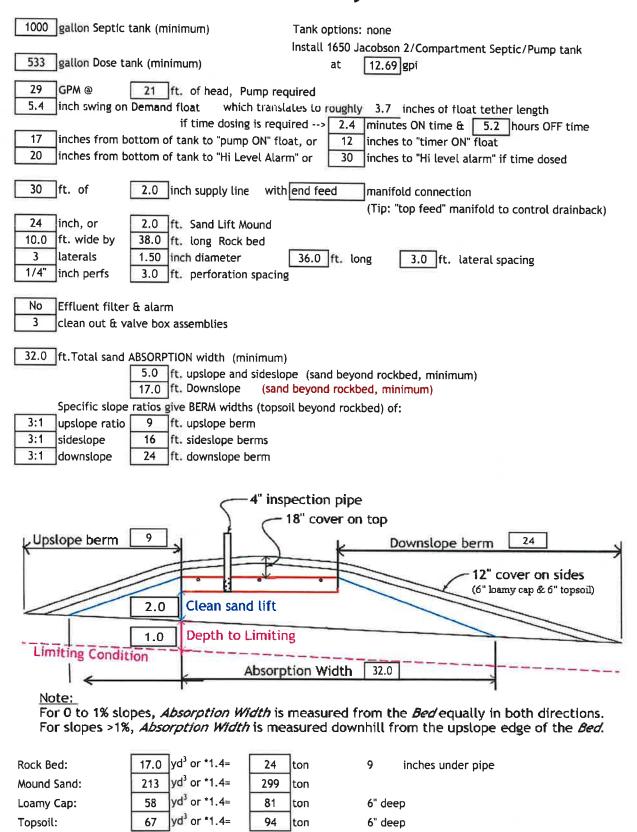
www.SepticResource.com (vers 15.2)

Property Owner:	Andrew Ankrum	Date: 5/22/2024
Site Address:	19042 509th Ln. McGregor MN 55760	PID: 29-0-019508
Comments:	Type III on Disturber Soil, will need a var	riance for lake setback.
instructions: = ent	er data = adjust if desire	ed = computer calculated - DO NOT CHANGE!
1) 3 bedroom	Type III Residential	System
2) 450 GPD design f	low Raise manholes t	o above 100 yr flood Elevation.
3) No Garbage disp	osal or pumped to septic Install 16	50 Jacobson 2/Compartment Septic/Pump tank
4) 1000 Gal Septic ta		al Septic tank (design size / LUG req'd) nk options: none
5) 1.2 GPD/ft² mou	nd sand loading rate contour load	ing rate of 12 req's a min 37.5 ft. long rockbed
6) 10.0 ft rockbed w	vidth 38.0 ft rockbed length Us	se 38 ft. long Rockbed
7) 3.0 ft lateral spa		(maximum of 3 for both) anifold connection
8) 3 laterals	36.0 feet long 13.0 perfs / lat	teral 39 perfs total sthe first perf starts at the middle feed manifold)
9) 1/4" inch perfs at		.74 gpm flow rate per perforation
for this perf size & sp	pacing, & pipe size on line 12, max perfs/li	ateral = 16 , line #8 must be less> OK
10) 7.0 doses per day	y (4 minimum)	<del></del>
11) 64 gallons per de	ose (treatment volume)	
12) 1.50 inch diamete	r laterals must be used to meet "4x pipe v	
13) 30 feet of	2.0 inch supply line leads to	2.00 3x  5 gallons of drainback volume  (Tip: "top feed" manifold to control the drainback)
14) 69 gallons TOTA	L pump out volume (treatment + drainbac	
	lift from pump to mound laterals, leads to	
16) <b>29 GPM</b> @	21 feet of head, Pump requirement	(note: >50gpm may require an extra 3-6' of head)
17) 500 gal Dose tank leads to a	(code minimum) 533 gal Dose t	ank (design size / LUG req'd) at 12.69 gpi
	_	2.4 min ON (confirm pump rate with drawdown i.2 hrs OFF test and adjust as necessary)
	pottom of tank to "Pump OFF" float	
	<del>-</del>	inches to "Timer ON" float if time dosed inches to "Hi Level" float if time dosed
	ve capacity (after High Level Alarm is act	<del></del>

23)	0.60 gpd/ft <sup>2</sup> Absorption area Soil Loading Rate, which gives a mound ratio of (this must match the soil boring log) desired mound ratio 2.0 (minimum)
24)	12 percent site slope (0-20% range) 12 (% downslope site slope, if different than upslope)
25)	inches, or 1.0 ft. to Redox or other limiting condition (need at least 12" to be a Type I)  Treatment zone contains 0 inches of 0% soil credit, and 0 inches of 50% soil credit. Giving a:
26)	24 inch, or 2.0 ft. Sand Lift Mound CRITICAL FOR FUTURE CERTIFICATIONS!!!
27)	20.0 ft. base absorption width (with sand beyond rockbed as follows:)  32.0 greater of: absorption width OR sand slope
28)	0.0 ft. upslope and sideslope sand upslope 5.0 Use 5 ft upslope 10.0 ft. Downslope sand down slope 17.0 Use 17 ft downslope Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
29)	3:1 upslope ratio 9 ft. upslope berm
30)	
31)	3:1 downslope 24 ft. downslope berm
32)	Overall Dimensions:  10.0 ft. wide by 43 ft. wide by 70 ft. long Rock bed ft. long Mound footprint
*	Upslope berm  18" cover on top  12" cover on sides (6" loamy cap & 6" topsoil)  Limiting Condition  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)  23.6 up + 98.1 downslope + 19.6 ends + 36.6 under rock = 213 yd <sup>3</sup> or *1.4= 299 ton plus 20%
35)	Loamy Cap:  39 ft. by 66 ft. 6" deep, plus 20% gives 58 yd3 or *1.4= 81 ton
36)	Topsoil:  43 ft. by 70 ft. 6" deep, plus 20% gives 67 yd3 or *1.4= 94 ton
	I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.
	Brummer Septic LLC. L-1347 5/22/2024
	Designer signer are Company License# Date

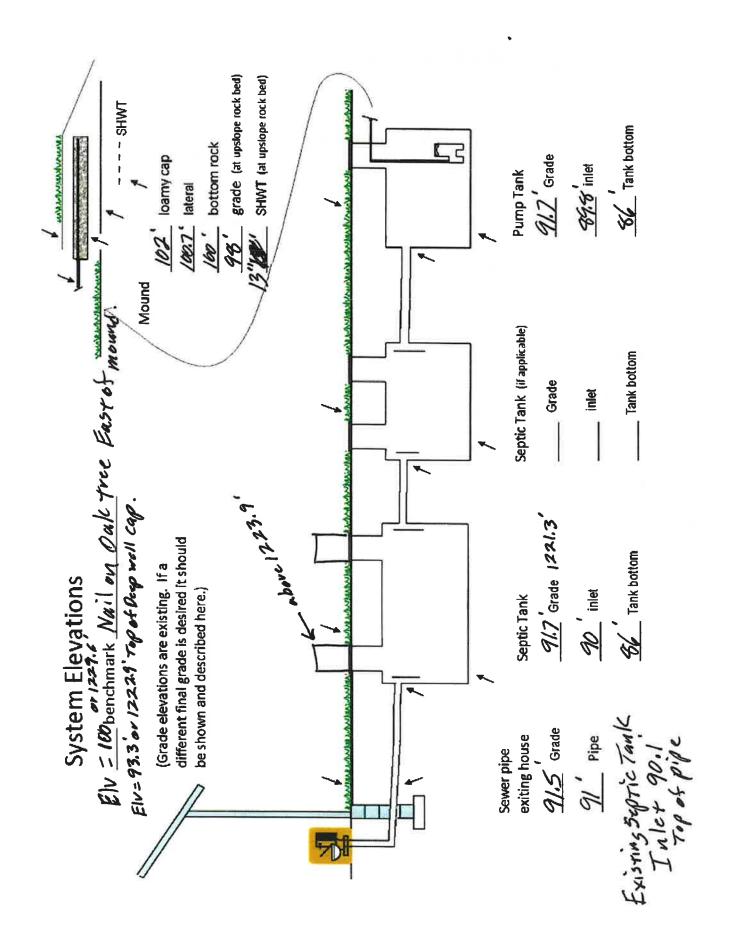
Aitkin Co Operating Permit Required

## **Installer Summary**

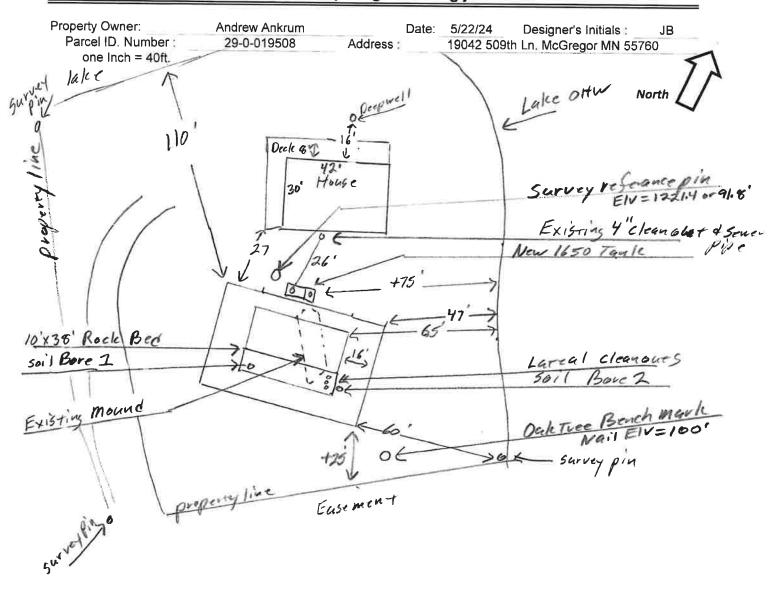


## **INSPECTOR CHECKLIST** - mound

	19042 509th Ln. McGregor MN 55/60
	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 1000 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
Ш	dose pump 29 gpm 21 head VERIFY PUMP CURVE 2.4 min ON 5.2 hr OFF
	Characteristics of the Control of th
Ш	float setting drop 5.4 inches at 12.7 gpi "DESIGNED" 3.7 inches approx float tether length
	69.0 gal dose divided by gpi "INSTALLED" = inches float drop (field corrected
	LABEL pump requirements and drawdown on riser or panel
Н	Cam lock reachable from grade - 30" max. J-hook weep hole. Supply line access (no hard 90's)
Ш	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
Ш	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 24 inches. (Jar test: 2" sand leaves < 1/8" silt after 30 min)
$\square$	Absorption Sand beyond rock 5.0 upslope 17.0 downslope
Ш	Bermed topsoil beyond rockbed 9 upslope 16 sideslope 24 downslope
	VEDICY
	cover depth of 12-18"+ VERIFY
$\vdash$	3 laterals (1-2' from edge of rock)
	1.50 inch pipe size (Sch40 pipe & fittings)
	ft lateral spacing
$\vdash$	1/4" inch perforations
	3.0 ft perforation spacing
	VEDIEV
$\square$	Air inlet at end of laterals, and at top feed manifold if necessary.
	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



{ Design Drawing }



Deep well Grade Elv.= 92' Top of Deep Well Cap Elv.= 93.3' or 1222.9' Approx. bottom of main floor Elv.= 1225' Survey Reference pin in Yard Elv.= 91.8' or 1221.4' Big Sandy Lake Elv.= 87.3' or 1216.9' on 5/22/2024

	Surface/ SHWT	Nail on Oak Tree = Bench Mark 100'		Mark 100'	Existing Grade		
Soil Bore 1	97.7' / 13"	Bench Mark	100'	or 1229.6'	Upslope Edge of Rockbed Elv.= 98' or 1227.6'		
Soil Bore 2	97.8' / 18"	Ground Elv. BM	97.9'		Bottom of Rockbed Elv.= 100'		
Soil Bore 3		Ground Elv. Tank	91.7'	1221.3	Top of Washed Sand Elv.= 100'		
	Ground at	Existing house	91.5	Clean-out	Existing Septic Tank In-let Elv.= 90.1'		

Lot Easements

Please show all that apply (Existing) Wells within 100ft. Of Drain field.

Water lines within 10 ft. of Drain field.

TVALCE INTES WITHIT TO IL. OF BIGHT HE

Drain field Areas:

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

Setbacks

Disturbed/Compacted Areas Access Route for Tank Maintenance

Component Location Property Lines
OHW ordinary high water Structures

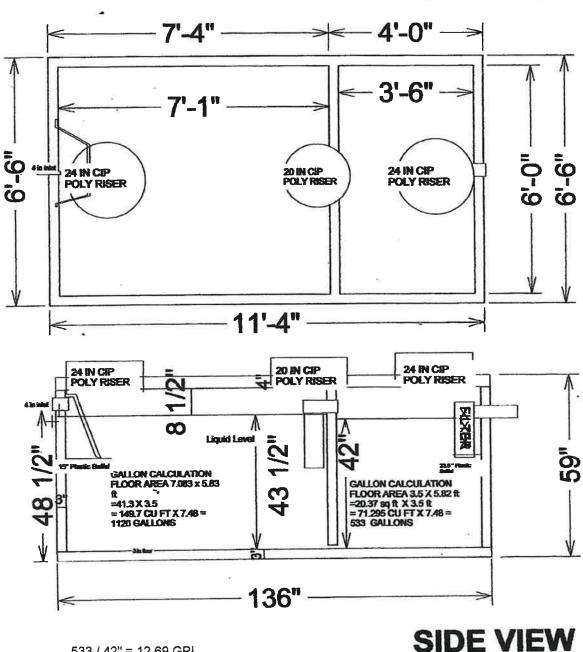
## Mound Design Notes - Aitkin county

_					-,	
Р	roperty Owner:	Andrew A		_ Date:	5/22/24	
	Site Address:	19042 509th Ln. McGre	gor MN 55760	_ PID: _	29-0-019508	
	Comments:	Mound design m	nay not follow Aitki	n co. Auto fill	form for mound design.	
1	This io a type III	mound , ( Suil Separation	n 13", disturbed soils	s) sized for a 3	bedroom system.	
	Owner will need	d a variance for lake se	tback to the absorp	otion area of t	ne mound,	
	Designer measi	ured 65 ft from NE corn	er of the absorptio	n area, Recon	mend a 60 ft setback varian	ce
	Tank will be loca	ated in 100 Yr. Flood area	a. Elv.= 1223.9' . Bot	tom of main flo	or of hose approx. Elv.= 1225'	
	In the event of a	a flood all electrical pov	wer to the mound n	nust be discor	nnected until tank is pumped	I.
2	Existing Deep we	ell location is on the North	h side of the house.	Top of Deep V	Vell Cap Elv.= 93.3' or 1222.9'	
3	Existing tank to b	be pumped, collapsed, re	moved. Existing mo	und to be remo	ved to original soils.	
	This new mound	I will be across the same	location as existing	mound, benche	ed against the hill.	
4		avity flow from South side				
5	Install new 1650	Jacobson 2/compartmen	nt tank for gravity flow	w from house.		
	Existing tank loca	ation will be close to new	tank location. If pos	sible cover tan	k with 2 ft of cover soil	
	try to incorporate	it into mound berm and	raise manholes and	inspection pipe	es to above flood Elv. = 94.3' or	r 1223.9'
	( If tank is ever	flooded it must be pum	ped before power	is returned to	mound pump, tank gets silt i	in it )
	Instail tank low e	enough for drainback from	n mound to pump tar	nk.		
				istall alarm on l	Effluent filter. Insulate tank tops	<b>S</b> .
		s are at 3:1. Mound is on				
7					oprox. 25ft. from South propert	
					osorption area corner approx. 6	35 ft to lake
					prox. 32 ft. wide sand base.	
		pslope, 24ft. Down slope				
		ize is approx. 43' wide x 7				
8		is the nail on the Oak tre				
					nd sand height Elv. with inspec	tor.
		ecord bench mark Elv. ar		stallation inspe	ction form.	
		and and bottom of rock be				
		at the soils do not get cor				
10		650 tank will be gravity flo				
					t 3 inches from pump on level.	
					commend min. 4" above grade	)
		y pipe from tank to end m				
	Install 1.5" latera	ils with 9" of rock under the	hem. (Install Lateral	clean-outs at f	ar end of laterals. Recommen	ded )
11		f holes spaced 3 ft.				
12	Install 4" inspecti	ion pipe to bottom of rock	k bed, secure in rock	bed and raise	to above final grade.	
3	Designer does no	inter on Effluent pump, ca ot guarantee or warranty	anv Type III system:	ve gallons per ( s.	event to Owner.	
		in Co. and MPCA recom				
	O MA	920	TeAN			
	Designer Sign	esture.		Septic LLC.	L-1347	
1	Presidire signi	atuic	Design Co	лпрапу	License#	

This System will require an Aitkin Co. Operator permit, annual inspection Owner and installer are responsible for owner knowing how system is maintained.

# 1650 Gallon 2 Compartment **Septic Tank**

# **TOP VIEW**



533 / 42" = 12.69 GPI

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



## Minnesota Well Index

#### **General Information**

Unique Well ID:

598854

WILSON, Well Name: **ANDY** 

County:

**Aitkin** Aquifer: Quat. buried artes.

aquifer

Well Elevation (msl

in foot):

1224

Drilled Depth (ft): 64

Well Completed (ft):

64

Date Drilled:

06/16/1997

Township:

49

Range:

23

Dir:

W

Section:

9

Subsection:

**AAADCB** 

Use:

domestic

Well Status:

**Active** 

Depth To

Bedrock:

Driller:

Co.

**Northland Well** Entry Date:

11/10/1997

Update Date:

12/14/2017

**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	Hardnes s	Lith Primary	Lith Seconda ry	Interpretation
SAND	0	8	BROWN	SOFT	SAND		sand-brown
CLAY	8	15	GRAY	MEDIUM	CLAY		clay-gray
SANDY CLAY	15	49	GRAY	SOFT	CLAY		clay+sand-gray
SAND	49	64	GRAY	SOFT	SAND		sand-gray



## **Detailed Parcel Report**

Parcel Number: 29-0-019508

## **General Information**

House

Township/City:

SHAMROCK TWP

**Taxpayer Name:** 

ANKRUM, ANDREW & KRISTINA

**Taxpayer Address:** 

2216 THELL RD

WRENSHALL MN 55797

**Property Address:** 

19042 509th Ln

Township:

49

Lake Number:

1006200

Range:

23

Lake Name:

**BIG SANDY LAKE** 

Section:

9

Acres:

0.42

Green Acres:

No

School District:

4.00

Plat:

**Brief Legal Description:** 

.42 AC IN LOT 1 AS IN DOC 268622 AND 1/8 INT IN TRACT I AS DESCRIBED IN DOC

403325

## **Tax Information**

Class Code 1:

Non-Comm Seasonal Residential Recreational

Class Code 2:

Unclassified

Class Code 3:

Unclassified

Homestead:

Non Homestead

Assessment Year:

2024

Estimated Land Value:

\$231,400.00

**Estimated Building Value:** 

\$136,600.00

**Estimated Total Value:** 

\$368,000.00

**Prior Year Total Taxable Value:** 

\$418,000.00

**Current Year Net Tax (Specials Not Included):** 

\$2,520.00

**Total Special Assessments:** 

\$0.00

\*\*Current Year Balance Not Including Penalty:

\$2,520.00

**Delinquent Taxes:** 

No

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

<sup>\*\*</sup> Balance Due on a parcel does not include late payment penalties.



## **Detailed Parcel Report**

Parcel Number: 29-0-019509

### **General Information**

West lot.

Township/City:

SHAMROCK TWP

Taxpayer Name:

ANKRUM, ANDREW & KRISTINA

**Taxpayer Address:** 

2216 THELL RD

WRENSHALL MN 55797

**Property Address:** 

19046 509TH LN

Township:

49

Lake Number:

1006200

Range:

23

Lake Name:

**BIG SANDY LAKE** 

Section:

9

Acres:

0.52

Green Acres:

No

**School District:** 

4.00

Plat:

**Brief Legal Description:** 

.52 AC IN LOT 1 AS IN DOC 377015 AND 1/8 INT IN TRACT I AS DESCRIBED IN DOC

403325

## **Tax Information**

Class Code 1:

Non-Comm Seasonal Residential Recreational

Class Code 2:

Unclassified

Class Code 3:

Unclassified

Homestead:

Non Homestead

Assessment Year:

2024

Estimated Land Value:

\$205,700.00

**Estimated Building Value:** 

\$3,100.00

**Estimated Total Value:** 

\$208,800.00

**Prior Year Total Taxable Value:** 

\$252,800.00

**Current Year Net Tax (Specials Not Included):** 

\$1,504.00

**Total Special Assessments:** 

\$0.00

\*\*Current Year Balance Not Including Penalty:

\$1,504.00

**Delinquent Taxes:** 

No

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

<sup>\*\*</sup> Balance Due on a parcel does not include late payment penalties.



## **Detailed Parcel Report**

Parcel Number: 29-0-023000

## **General Information**

sliver lot.

Township/City:

SHAMROCK TWP

**Taxpayer Name:** 

ANKRUM, ANDREW & KRISTINA

**Taxpayer Address:** 

**2216 THELL RD** 

WRENSHALL MN 55797

**Property Address:** 

Township:

49

Lake Number:

1999000

Range:

23

Lake Name:

**PRAIRIE RIVER - BACK LOT** 

Section:

10

Acres:

0.07

Green Acres:

No

School District:

4.00

Plat:

**Brief Legal Description:** 

.07 AC IN NW-NW AS IN DOC 268622

## **Tax Information**

Class Code 1:

Non-Comm Seasonal Residential Recreational

Class Code 2:

Unclassified

Class Code 3:

Unclassified

Homestead:

Non Homestead

Assessment Year:

2024

Estimated Land Value:	\$500.00
Estimated Building Value:	\$0.00
Estimated Total Value:	\$500.00

**Prior Year Total Taxable Value:** 

\$500.00

**Current Year Net Tax (Specials Not Included):** 

\$2.00

**Total Special Assessments:** 

\$0.00

\*\*Current Year Balance Not Including Penalty:

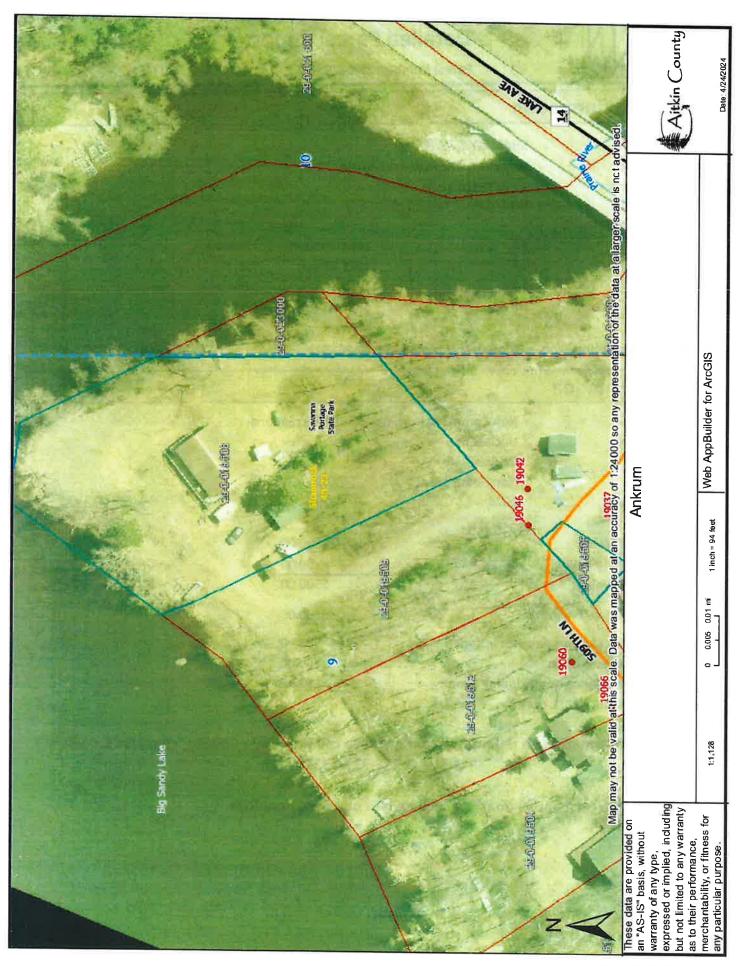
\$2.00

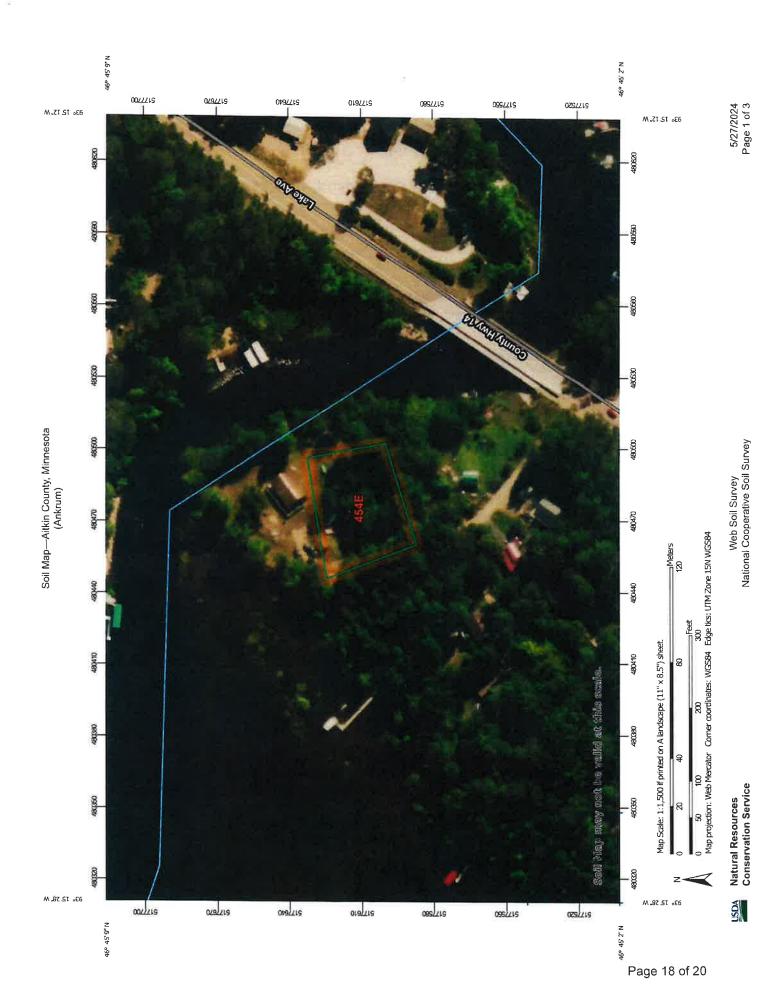
**Delinquent Taxes:** 

No

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

<sup>\*\*</sup> Balance Due on a parcel does not include late payment penalties.





## Aitkin County, Minnesota

# 454E—Mahtomedi loamy coarse sand, 12 to 25 percent slopes

### Map Unit Setting

National map unit symbol: gjgy 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**

Mahtomedi and similar soils: 90 percent

Minor components: 10 percent

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

### **Description of Mahtomedi**

#### Setting

Landform: Outwash plains

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 1 inches: loamy coarse sand E - 1 to 14 inches: loamy coarse sand Bw - 14 to 25 inches: gravelly sand C - 25 to 60 inches: gravelly sand

#### Properties and qualities

Slope: 12 to 25 percent

Depth to restrictive feature: More than 80 inches

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 content: 15 percent

Available water supply, 0 to 60 inches: Low (about 4.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Ecological site: F090AY019WI - Dry Sandy Uplands

Forage suitability group: Steep; Coarse Testure; Low AWC

(G090AN018MN)

Other vegetative classification: Steep; Coarse Testure; Low AWC

(G090AN018MN) Hydric soil rating: No

### **Minor Components**

### Soils with more gravel

Percent of map unit: 2 percent

Hydric soil rating: No

### Soils with less gravel

Percent of map unit: 2 percent

Hydric soil rating: No

#### Leafriver

Percent of map unit: 2 percent Landform: Depressions

Hydric soil rating: Yes

#### Meehan

Percent of map unit: 2 percent

Hydric soil rating: No

#### Newson

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 24, Sep 9, 2023