Preliminary & Field Evaluation Form

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Owner Information

Date	6/26/2018	Sec / Twp / Rng	
Parcel ID	24-0-035800	LUG (county, city, township)	Aitkin Co.
Property Owner:	Thomas Rosier	Owners address (if different)	
Property Address:	39388 318th Ln. Aitkin MN 56431		
City / State / Zip:			

Flow Information and Waste Type / Strength

Estimated Design flow: 450

Comments: Replacing the existing mound with
A Higher one approx 22" higher
Will be a Type III mound
Becky was out on 6/22/2018 to look at the wetland

Anticipated Waste strength	☐ Hi Strength	☑ Domestic
Any Non-Domestic Waste	☐ Yes (class V)	☑ No
Sewage ejector/grinder pump	☐ Yes	☑ No
Water softener	☐ Yes	☑ No
Garbage Disposal	☐ Yes	☑ No
Daycare / In home business	☐ Yes	☑ No

Site Information

Existing & proposed lot improvements located (see site map)	☐ Yes	☑ No	Well casing depth	Proposed new well	
Easements on lot located (see site map)	☐ Yes	☑ No	Drainfield w/in 100' of residential well	☑ Yes	☐ No
Property lines determined (see site map) By Others	☑ Yes	☐ No	Site w/in 200' of transient noncommunity water supply (TNCWS)	☐ Yes	☑ No
Req'd setbacks determined (see site map)	☑ Yes	☐ No	Site w/in an inner wellhead mgmt zone (CWS/NTNCWS)	☐ Yes	☑ No
Utilities located & identified (gopher state one call)	☐ Yes	☑ No	Buried water supply pipe w/in 50' of system	☐ Yes	☑ No
Access for system maintenance (shown on site map)	☑ Yes	☐ No	Site located in Shoreland (w/in 1000' of lake, 300' of river)	☑ Yes	☐ No
Soil treatment area protected	☑ Yes	☐ No	Site map prepared with previous items included	☑ Yes	☐ No

Construction related issues: Remove old rockbed and any bad sand then replace washed sand to Elv. = 100'

Soil Observation Log

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Owner Information

Property Owner / project: Thomas Rosier Date 6/26/2018

Property Address / PID: 39388 318th Ln. Aitkin MN 56431

Soil Survey Information

☐ refer to attached soil survey

Parent matl's: ☑ Till ☐ Outwash ☐ Lacustrine ☐ Alluvium ☐ Organic ☐ Bedrock

landscape position: ☐ Summit ☐ Shoulder ☐ Side slope ☐ Toe slope

soil survey map units: 928D slope 0 % direction- Flat

Soil Log #1

☑ Boring ☐ Pit Elevation 97.5' Depth to SHWT 8"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 4	Topsoil Sandy Loam	<35	10YR3/2		Friable	Weak	Granular
4 - 10	Clay Loam	<35	5YR5/4		Friable	Loose	Blocky
8"	Clay Loam	<35	5YR5/4	7.5YR5/6	Friable	Weak	Blocky
		<35			Loose	Loose	Granular
		<35			Loose	Loose	Granular

Comments: On 6-22-18 met with Becky on site agreed on Elv. for seperation from wetland. Elv. is where wetland meets non wetland. Elv. 97' - Did soil Boring at 97.5' had 8" to mottles. use 97' as upslope Edge.

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

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

25) 0 inches, or 0.0 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) 36 inch, or 3.0 ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**

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

28) 5.0 ft. upslope and sideslope sand upslope 12.0
5.0 ft. Downslope sand down slope 12.0

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

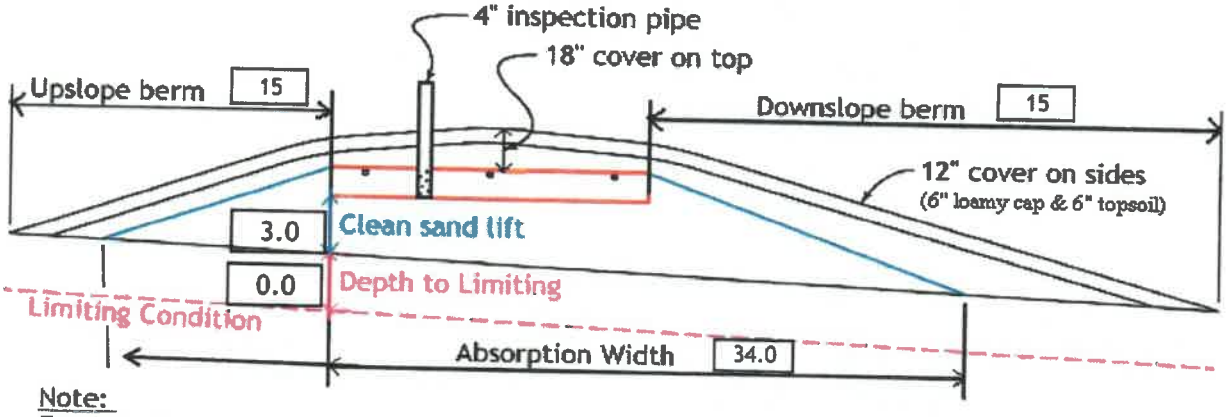
29) 3:1 upslope ratio 15 ft. upslope berm

30) 3:1 sideslope 15 ft. sideslope berms

31) 3:1 downslope 15 ft. downslope berm

Raising Rock Bed of Existing Mound & Use Existing absorption area Rebuild Berms at 3:1.

32) Overall Dimensions: 10.0 ft. wide by 37.5 ft. long Rock bed
40 ft. wide by 68 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 37.5 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)
54.7 up + 54.7 downslope + 17.8 ends + 41.7 under rock = 203 yd³ or *1.4= 284 ton
plus 20%

35) Loamy Cap:
36 ft. by 64 ft. 6" deep, plus 20% gives 51 yd³ or *1.4= 71 ton

36) Topsoil:
40 ft. by 68 ft. 6" deep, plus 20% gives 60 yd³ or *1.4= 84 ton

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

Designer Signature	Company	License#	Date
	Brummer Septic LLC.	L-1347	6/26/2018

INSPECTOR CHECKLIST - mound

39388 318th Ln. Aitkin MN 56431

☐ 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 Effluent filter & alarm req'd

☐ 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_____ 520 gallons

☐ dose pump _____ 27 gpm 18 head VERIFY PUMP CURVE 2.6 min ON 5.2 hr OFF

☐ float setting drop 4.2 inches at 16.6 gpi "DESIGNED" 3.1 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

☐ 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 37.5

☐ Sand lift depth 36 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)

☐ Absorption Sand beyond rock 12.0 upslope 12.0 downslope

☐ Bermed topsoil beyond rockbed 15 upslope 15 sideslope 15 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 _____

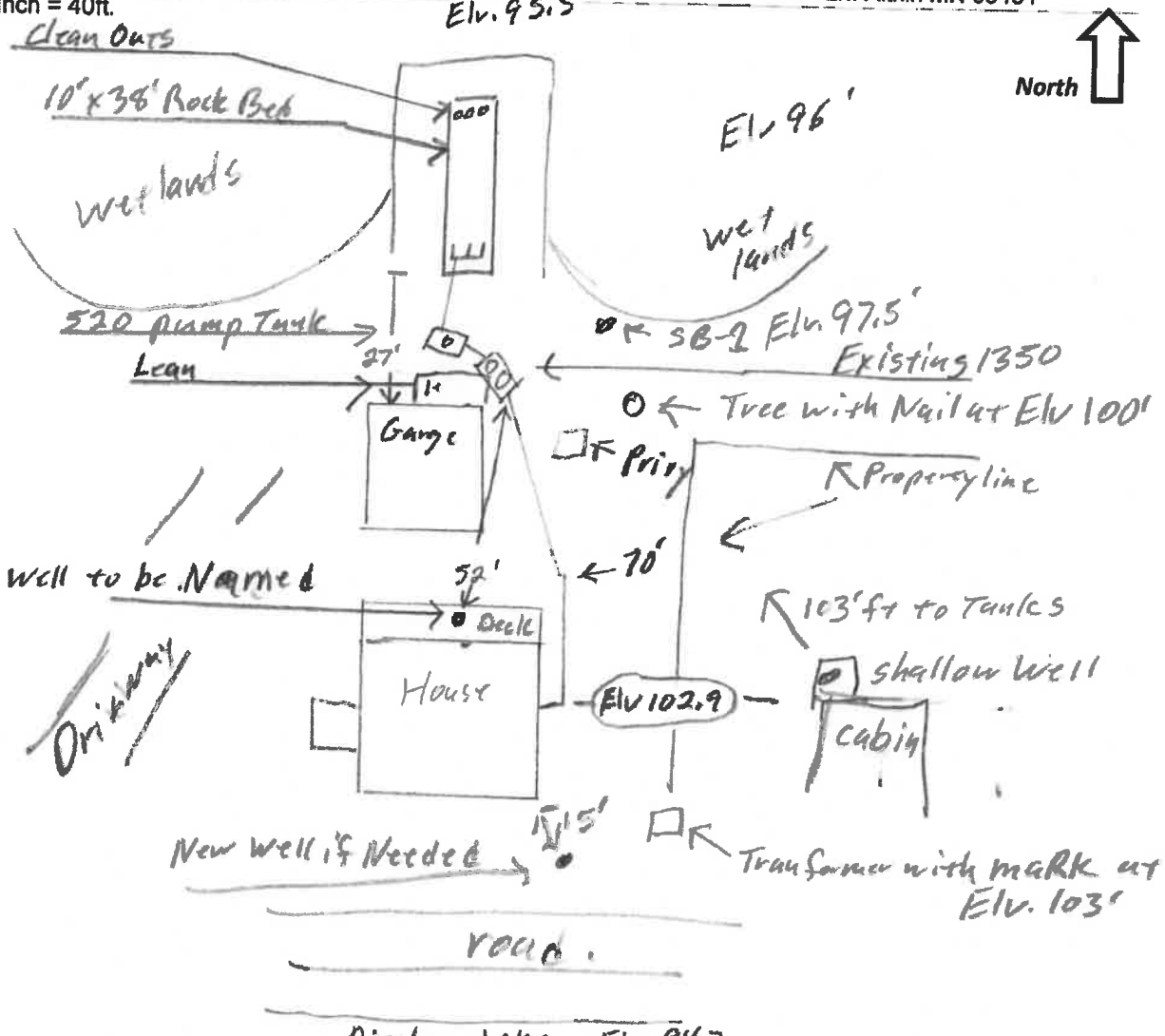
☐ well abandonment form - if necessary

{ Design Drawing }

Property Owner: Thomas Rosier Date: 6/26/18 Designer's Initials: JB

Parcel ID. Number: 24-0-035800 Address: 39388 318th Ln. Aitkin MN 56431

one Inch = 40ft.



	Surface/ SHWT	Nail on Tree = Bench Mark 100'		Existing Grade
Soil Bore 1	97.5/8"	Bench Mark	100'	Grade at mound Elv=100.6
Soil Bore 2		Ground Elv. BM	99.9'	Bottom of Existing Rockbed = 98.6'
Soil Bore 3		Ground Elv. Tank	100.5'	Bottom of new rockbed Elv.= 100'
Ground at sewer pipe		near house	102.9'	

Please show all that apply (Existing)

Wells within 100ft. Of Drain field.

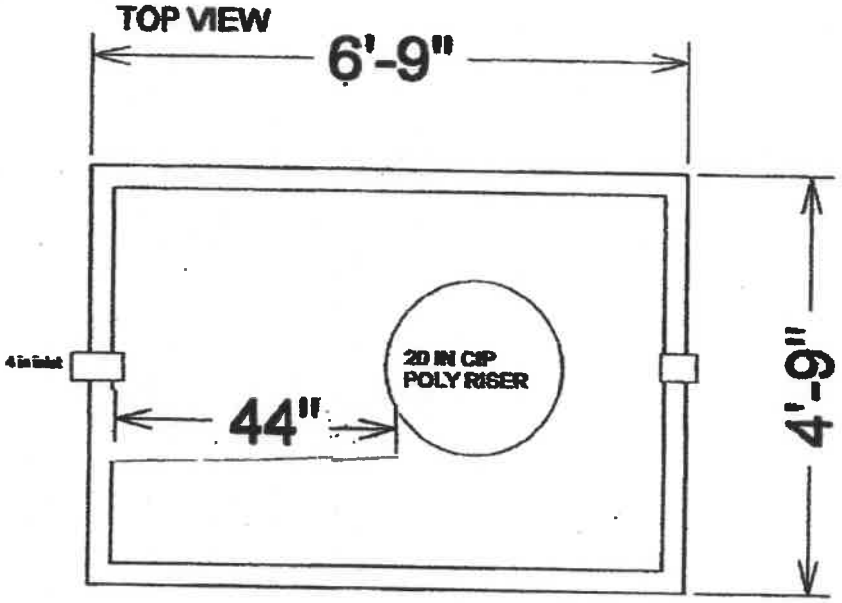
Water lines within 10 ft. of Drain field.

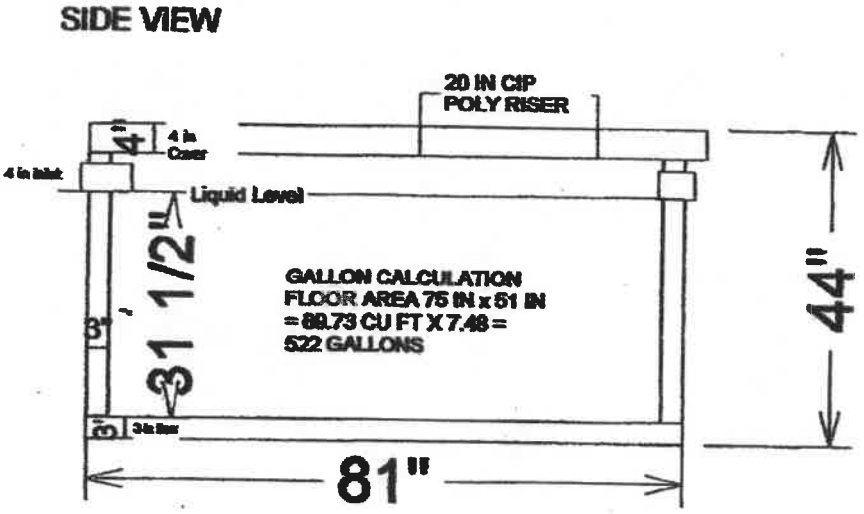
Drain field Areas:

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

520 Gallon Pump Tank





522 gals. / 31.5" = 16.57 GPI

Aitkin County

Detailed Parcel Report

Parcel Number: 24-0-035800

General Information

Township/City:	NORDLAND TWP		
Taxpayer Name:	JORGENSON, RUTH		
Taxpayer Address:	516 HIDDENVIEW ROAD CARLTON MN 55718		
Property Address:	39388 318th Ln		
Township:	46	**Lake Number:**	1014600
Range:	26	**Lake Name:**	RIPPLE LAKE (NORDLAND TWP)
Section:	18	**Acres:**	4.00
Green Acres:	No	**School District:**	1.00
Plat:			
Brief Legal Description:	W 660 FT OF NW NE LESS 40 X 200 FT & PART OF LOT 5 S OF TRACT LESS 40 X200 FT E OF CREEK IN DOC 186512		

RD 75'

Tax Information

Class Code 1:	Non-Comm Seasonal Residential Recreational
Class Code 2:	Unclassified
Class Code 3:	Unclassified
Homestead:	Non Homestead
Assessment Year:	2018

Estimated Land Value:	$134,200.00
Estimated Building Value:	$98,900.00
Estimated Total Value:	$233,100.00
Prior Year Total Taxable Value:	$212,900.00
Current Year Net Tax (Specials Not Included):	$1,776.00
Total Special Assessments:	$0.00
****Current Year Balance Not Including Penalty:**	$888.00
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.**

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