

Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>8/5/2021</u>	Sec / Twp / Rng	<u>S-30, T-46, R-22</u>
Parcel ID	<u>04-0-048200</u>	LUG (county, city, township)	<u>Aitkin Co.</u>
Property Owner:	<u>Sondra Kempf</u>	Owners address (if different)	
Property Address:	<u>15983 St Hwy 27 McGrgeor Mn 55760</u>		
City / State / Zip:			

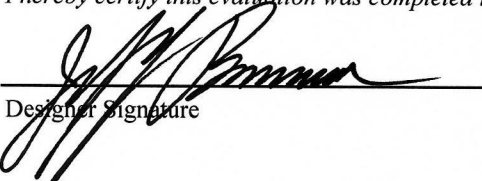
Flow Information and Waste Type / Strength			
Estimated Design flow	<u>300</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments: Pump, collapse, fill, or remove existing poly tank		Any Non-Domestic Waste	<input type="checkbox"/> Yes (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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Well casing depth	<u>deep well</u>	
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 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 type="checkbox"/> Yes	<input checked="" 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>Keep sewer pipe 20' or more from well</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>0.50</u>	Percolation rate (if applicable)	_____
Depth/elev to SHWT	<u>20"</u>	Flooding or run-on potential (comments)	<input type="checkbox"/> Yes <input 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>Sondra Kempf</u>	Date <u>8/5/2021</u>
Property Address / PID: <u>15983 St Hwy 27 McGrgeor Mn 557</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>C9B</u> slope <u>1</u> % direction- <u>SE</u>

Soil Log #1							
		<input checked="" type="checkbox"/> Boring <input type="checkbox"/> Pit	Elevation <u>98.3'</u>	Depth to SHWT <u>20"</u>			
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 5	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
5 - 14	Silt Loam	<35	10YR5/4		Friable	Loose	Granular
14 - 20	Silt Loam	<35	10YR4/4		Friable	Loose	Granular
20 - 26	Silt Loam	<35	10YR4/4	7.5YR5/6	Friable	Weak	Blocky

Comments: In spring of 2021 Bryan H and Adam ladd found mound site with + 18" of good soil

15983 St Hwy 27 McGrgeor Mn 55760 **Soil Log #2**

		<input checked="" type="checkbox"/> Boring	<input type="checkbox"/> Pit	Elevation <u>98.3'</u>	Depth to SHWT <u>20"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0 - 5	Topsoil Loam	<35	10YR3/2		Loose	Loose	Granular
5 - 14	Silt Loam	<35	10YR5/4		Friable	Loose	Granular
14 - 20	Silt Loam	<35	10YR4/4		Friable	Loose	Granular
20 - 26	Silt Loam	<35	10YR4/4	7.5YR5/6	Friable	Weak	Blocky

15983 St Hwy 27 McGrgeor Mn 55760 **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 #

Mound Design - Aitkin county

Property Owner: Sondra Kempf

Date: 8/5/2021

Site Address: 15983 St Hwy 27 McGrgeor Mn 55760

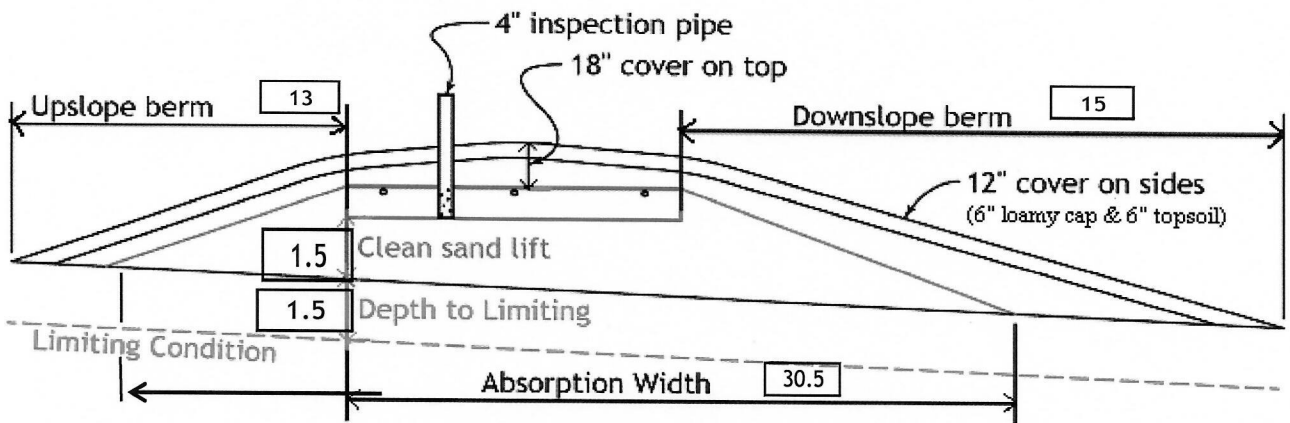
PID: 04-0-048200

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 1000 gal Jacobson septic tank
- 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) 1.50 5x
- 12) inch diameter laterals must be used to meet "4x pipe volume" requirement 2.00 3x
- 13) feet of inch supply line leads to gallons of drainback volume
(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) gpd/ft^2 Absorption area Soil Loading Rate, which gives a mound ratio of (minimum)
 (this must match the soil boring log) desired mound ratio
- 24) percent site slope (0-20% range) (% downslope site slope, if different than upslope)
- 25) inches, or ft. to Redox or other limiting condition (need at least 12" to be a Type I)
 Treatment zone contains inches of 0% soil credit, and inches of 50% soil credit. Giving a:
- 26) inch, or ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**
- 27) ft. base absorption width (with sand beyond rockbed as follows):
 greater of: absorption width OR sand slope
- 28) ft. upslope and sideslope sand upslope
 ft. Downslope sand down slope
- Individual slope ratios give BERM widths (topsoil beyond rockbed) of:
- 29) upslope ratio ft. upslope berm
- 30) sideslope ft. sideslope berms
- 31) downslope ft. downslope berm
- 32) Overall Dimensions: ft. wide by ft. long Rock bed
 ft. wide by 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:
 ft. by ft. by inches under pipe, plus 20% gives yd^3 or $*1.4=$ 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)
 up + downslope + ends + under rock = yd^3 or $*1.4=$ ton
 plus 20%
- 35) Loamy Cap:
 ft. by ft. 6" deep, plus 20% gives yd^3 or $*1.4=$ ton
- 36) Topsoil:
 ft. by ft. 6" deep, plus 20% gives yd^3 or $*1.4=$ ton

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

[Signature] Brummer Septic LLC. L-1347 8/5/2021
 Designer Signature Company License# Date

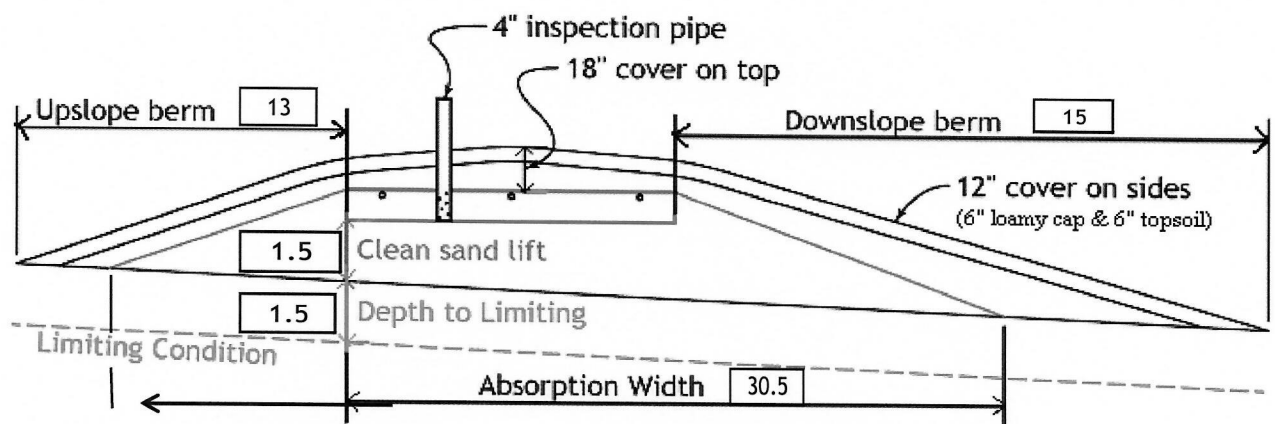
Installer Summary

- 1000 gallon Septic tank (minimum) Tank options: none
- 760 gallon Dose tank (minimum) Install 1000 gal Jacobson septic tank at 24.91 gpi
- 18 GPM @ 23 ft. of head, Pump required
- 3.0 inch swing on Demand float which translates to roughly 2.5 inches of float tether length if time dosing is required --> 4.1 minutes ON time & 5.1 hours OFF time
- 15 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float
- 18 inches from bottom of tank to "Hi Level Alarm" or 28 inches to "Hi level alarm" if time dosed
- 185 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 25.0 ft. long Rock bed
- 3 laterals 1.50 inch diameter 23.0 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

- 30.5 ft. Total sand ABSORPTION width (minimum)
- 9.6 ft. upslope and sideslope (sand beyond rockbed, minimum)
- 10.8 ft. Downslope (sand beyond rockbed, minimum)

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

4:1 upslope ratio	13 ft. upslope berm
4:1 sideslope	14 ft. sideslope berms
4:1 downslope	15 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:	12.0 yd ³ or *1.4=	17 ton	9 inches under pipe
Mound Sand:	81 yd ³ or *1.4=	114 ton	calculation based on 3:1/4:1 slope from top of rockber
Loamy Cap:	38 yd ³ or *1.4=	53 ton	6" deep
Topsoil:	45 yd ³ or *1.4=	63 ton	6" deep

INSPECTOR CHECKLIST - mound

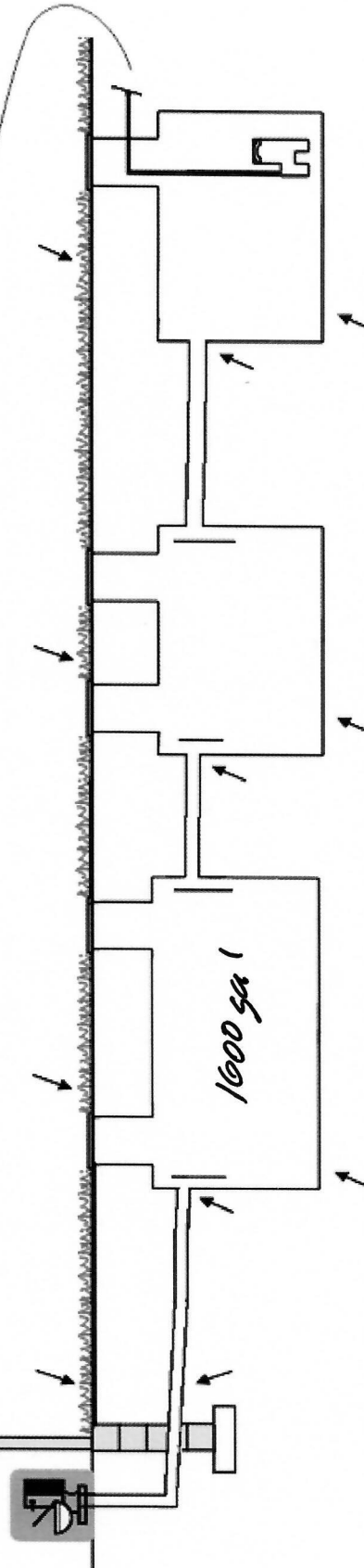
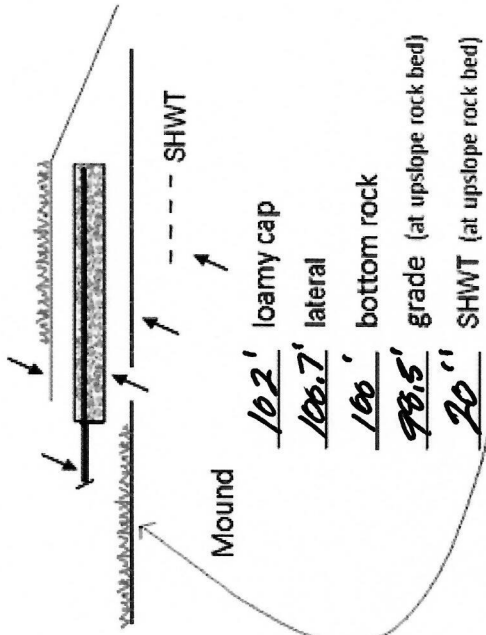
15983 St Hwy 2/ McGrgeor Mn 55/60

- 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 _____ 760 gallons
- dose pump _____ 18 gpm 23 head VERIFY PUMP CURVE 4.1 min ON 5.1 hr OFF
- float setting drop 3.0 inches at 24.9 gpi "DESIGNED" 2.5 inches approx float tether length
74.0 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 25.0
Sand lift depth 18 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)
- Absorption Sand beyond rock 9.6 upslope 10.8 downslope
- Bermed topsoil beyond rockbed 13 upslope 14 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

System Elevations

Elv = 100' benchmark Nail on Tree Near Mound.
Top of Deep Well Cap Elv = 100.8'

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



Sewer pipe exiting house

98.2' Grade

97.9' Pipe

Septic Tank

97.3' Grade

96' inlet

92' Tank bottom

Septic Tank (if applicable)

Grade

inlet

Tank bottom

Pump Tank

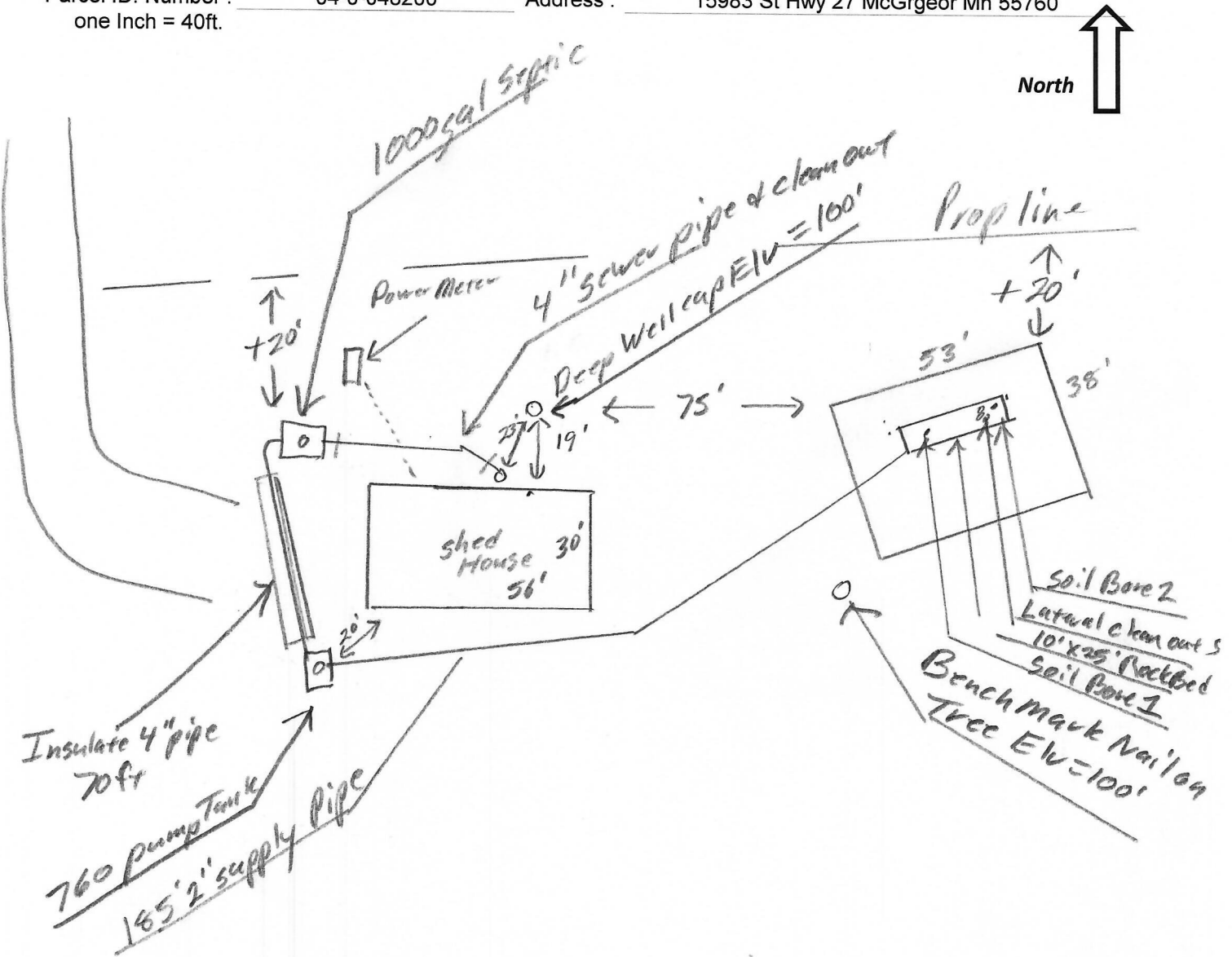
96.9' Grade

95' inlet

91.5' Tank bottom

{ Design Drawing }

Property Owner: Sondra Kempf Date: 8/5/21 Designer's Initials: JB
 Parcel ID. Number: 04-0-048200 Address: 15983 St Hwy 27 McGrgeor Mn 55760
 one Inch = 40ft.



Grade at pump tank Elv. = 96.9'
 Grade at Shed SE corner Elv. = 98.5'
 Top of Deep Well Cap Elv. = 100.8' Grade at Well Elv. = 98.7'

Surface/ SHWT		Nail on Tree = Bench Mark 100'		Existing Grade	
Soil Bore 1	98.3'	Bench Mark	100'		Upslope Edge of Rockbed Elv. = 98.5'
Soil Bore 2	98.3'	Ground Elv. BM	99.1'		Bottom of Rockbed Elv. = 100'
Soil Bore 3		Ground Elv. Tank	97.3'	Septic	Top of Washed Sand Elv. = 100'
	Ground at house	sewer pipe	98.2'		Elv. Of Sewer pipe at house Elv. = 97.9'

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 |

Mound Design Notes - Aitkin county

Property Owner: Sondra Kempf

Date: 8/5/21

Site Address: 15983 St Hwy 27 McGrgeor Mn 55760

PID: 04-0-048200

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

- 1 This is a type I mound for a 2 bedroom House. Existing deep well location is on North side of House.
- 2 Existing poly tank to be pumped, collapsed, filled or removed.
- 3 Existing sewer pipe at house is 23 ft. from deep well.
Top of deep well cap is Elv. = 100.8'
- 4 Bench Mark Elevation= 100' is a nail on a tree near NE corner of mound area.
- 5 Install Jacobson 1000 gal. septic tank for gravity flow from Slab on grade house, install clean-out near house.
Install 760 Jacobson pump tank low enough for drainback from mound.
Insulate 4" effluent pipe from septic tank to pump tank. May insulate sewer pipe from house to tank if needed.
- 6 Elevation contour of rock bed upslope edge is 98.5'.
The area size of the rock bed is 10' x 25' . Absorption area is 25' x 30.5'.
Sand absorption area is 9.6 ft. up slope + 10 ft. rockbed + 10.8 downslope = approx. 30.5 ft. wide sand base.
Berms are 13ft. Upslope, 15ft. Down slope, 10ft. Rock bed = approx. 38ft. Wide.
Overall mound size is approx. 38' wide x 53' long and approx. 3.5' high. End berms are 14 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 760 pump tank will be gravity flow from septic tank. Install the pump for 7 demand doses per day. approx. 74 gallons per dose, 3.0 inches of tank level. Install alarm at 3 inches from pump on level.
- 10 Install all manholes, inspection pipes and clean-outs to grade or above, insulate top of tank.
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)
- 11 **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.

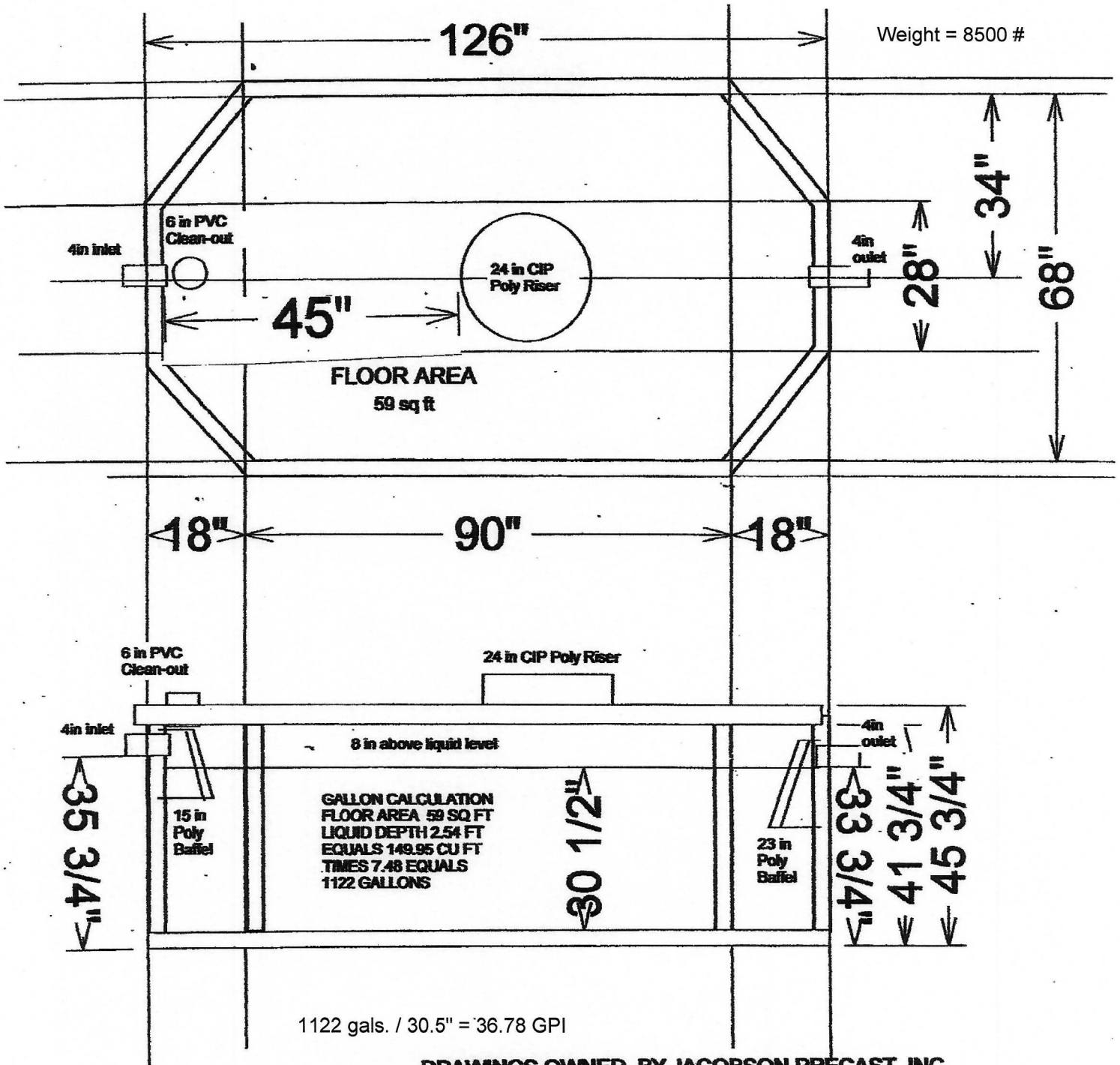
Designed to Aitkin Co. and MPCA recommendations and requirements.


Designer Signature

Brummer Septic LLC.
Design Company

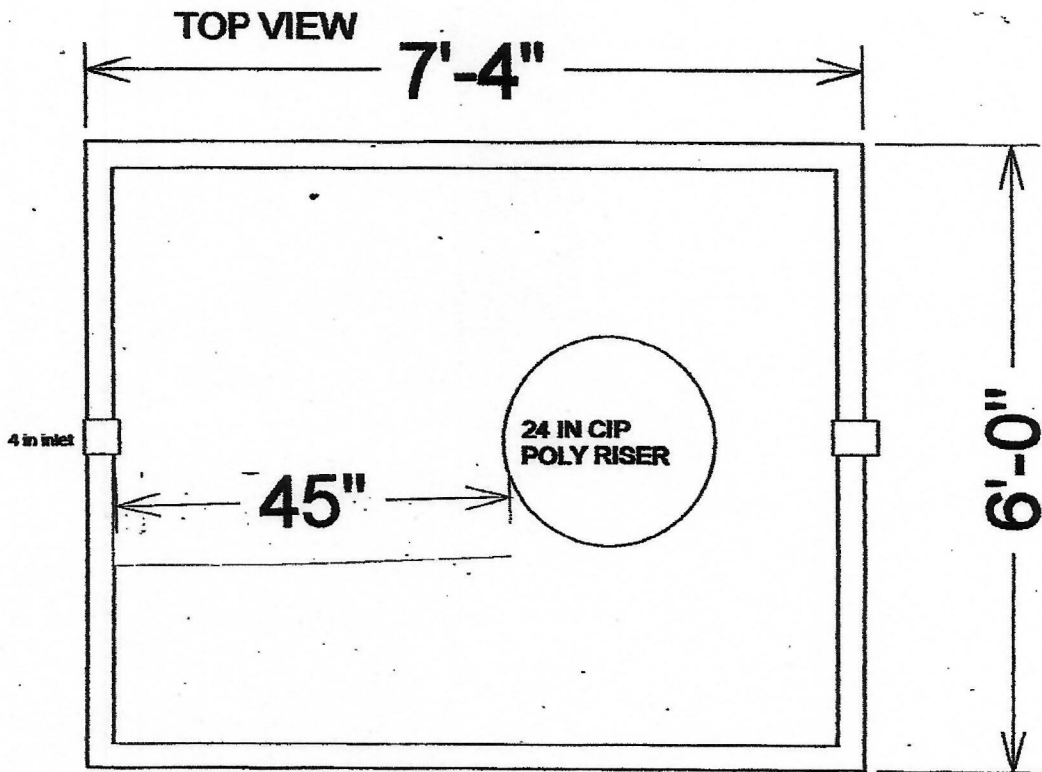
L-1347
License#

1000 GALLON SINGLE COMPARTMENT PUMP TANK

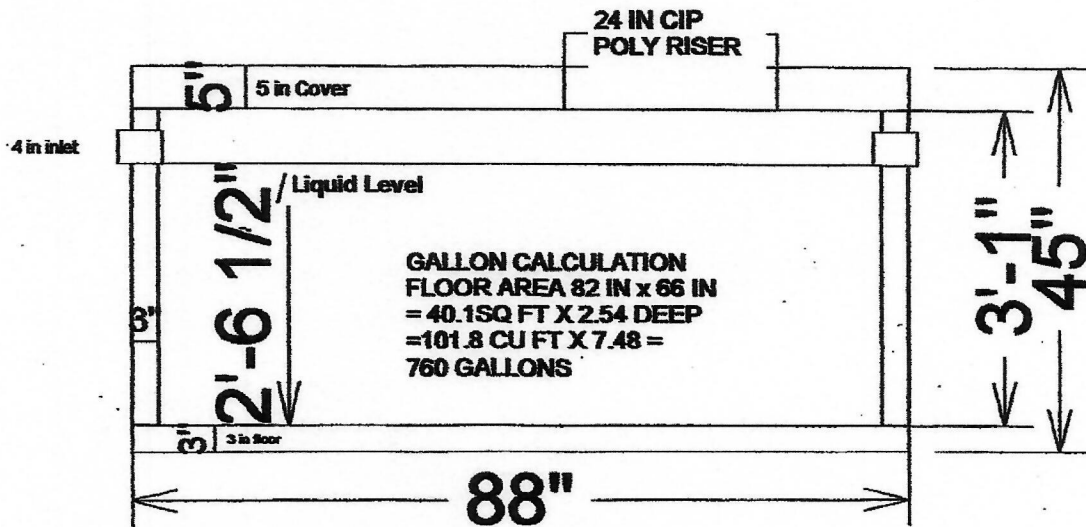


DRAWINGS OWNED BY JACOBSON PRECAST, INC
36641 Hwy 169, Aitkin, Mn 56431
Do not use without permission of the Owner

760 GALLON SINGLE COMPARTMENT PUMP TANK



SIDE VIEW



760 gal. / 30.5" = 24.91 GPI

DRAWINGS OWNED BY JACOBSON PRECAST, INC.
 36637 Hwy 169, Aitkin, Mn 56431
 do not use without permission of the Owner



Detailed Parcel Report

Parcel Number: 04-0-048200

General Information

Township/City: BEAVER TWP
Taxpayer Name: KEMPF, SONDR
Taxpayer Address: 15983 ST HWY 27
MCGREGOR MN 55760
Property Address: 15983 STATE HWY 27
Township: 46 Lake Number: 0
Range: 22 Lake Name:
Section: 30 Acres: 28.06
Green Acres: No School District: 4.00
Plat:
Brief Legal Description: LOT 2 (SW NW)

Tax Information

Class Code 1: Non-Comm Seasonal Residential Recreational
Class Code 2: Rural Vacant Land
Class Code 3: Unclassified
Homestead: Non Homestead
Assessment Year: 2021

Estimated Land Value:	\$53,700.00
Estimated Building Value:	\$99,100.00
Estimated Total Value:	<u>\$152,800.00</u>
Prior Year Total Taxable Value:	\$110,900.00
Current Year Net Tax (Specials Not Included):	\$1,084.00
Total Special Assessments:	\$0.00
**Current Year Balance Not Including Penalty:	\$542.00
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 may not be valid at this scale. Data was mapped at an accuracy of 1:24000, so any representation of the data at a larger scale is not advised.

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.

Kempf



Date: 8/5/2021

Soil Map—Aitkin County, Minnesota
(Kempf)



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

8/5/2021
Page 1 of 3

Aitkin County, Minnesota

C9B—Mora-Ronneby complex, 1 to 4 percent slopes, stony

Map Unit Setting

National map unit symbol: 2z19y

Elevation: 790 to 1,970 feet

Mean annual precipitation: 27 to 36 inches

Mean annual air temperature: 37 to 46 degrees F

Frost-free period: 80 to 150 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mora, stony, and similar soils: 55 percent

Ronneby, stony, and similar soils: 30 percent

Minor components: 15 percent

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

Description of Mora, Stony

Setting

Landform: Moraines, drumlins

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Coarse-loamy lodgment till

Typical profile

A - 0 to 8 inches: silt loam

E - 8 to 11 inches: fine sandy loam

B/E - 11 to 15 inches: fine sandy loam

Bt1 - 15 to 23 inches: fine sandy loam

Bt2 - 23 to 42 inches: fine sandy loam

BCd - 42 to 79 inches: fine sandy loam

Properties and qualities

Slope: 1 to 4 percent

Surface area covered with cobbles, stones or boulders: 0.1 percent

Depth to restrictive feature: 31 to 52 inches to densic material

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 16 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B/D
Forage suitability group: Level Swale, Acid (G090XN005MN)
Other vegetative classification: Level Swale, Acid (G090XN005MN)
Hydric soil rating: No

Description of Ronneby, Stony

Setting

Landform: Moraines, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope, talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till

Typical profile

A - 0 to 10 inches: silt loam
E - 10 to 11 inches: fine sandy loam
B/E - 11 to 17 inches: fine sandy loam
Bt - 17 to 45 inches: fine sandy loam
BCd - 45 to 79 inches: fine sandy loam

Properties and qualities

Slope: 1 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: 31 to 54 inches to densic material
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 8 to 20 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Forage suitability group: Level Swale, Acid (G090XN005MN)
Other vegetative classification: Level Swale, Acid (G090XN005MN)
Hydric soil rating: No

Minor Components

Cebana, stony

Percent of map unit: 8 percent

Landform: Interdrumlins, moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Level Swale, Acid (G090XN005MN)
Hydric soil rating: Yes

Milaca, stony

Percent of map unit: 5 percent
Landform: Drumlins, moraines
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Other vegetative classification: Sloping Upland, Acid (G090XN006MN)
Hydric soil rating: No

Giese, frequently ponded, stony

Percent of map unit: 2 percent
Landform: Moraines, interdrumlins
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Ponded If Not Drained (G090XN013MN)
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Aitkin County, Minnesota
Survey Area Data: Version 21, Jun 4, 2020

Subsurface Sewage Treatment System Management Plan

Property Owner: Sondra Kempf Phone: _____ Date: 8/5/2021
Mailing Address: 15983 St Hwy 27 City: McGregor MN Zip: 55760
Site Address: 15983 St Hwy 27 City: _____ Zip: _____

This management plan will identify the operation and maintenance activities necessary to ensure long-term performance of your septic system. Some of these activities must be performed by you, the homeowner. Other tasks must be performed by a licensed septic service provider.

System Designer: check every 36 months.
Local Government: check every 36 months.
State Requirement: check every 36 months.

(State requirements are based on MN Rules Chapter 7080.2450, Subp. 2 & 3)

My System needs to be checked every 36 months.

Homeowner Management Tasks

Leaks – Check (look, listen) for leaks in toilets and dripping faucets. Repair leaks promptly.

Surfacing sewage – Regularly check for wet or spongy soil around your soil treatment area.

Effluent filter – *Inspect and clean twice a year or more.*

Owner ----> *Alarms* – Alarm signals when there is a problem. Contact a service provider any time an alarm signals.

Event counter or water meter – Record your water use.

-recommend meter readings be conducted (*circle one*: DAILY WEEKLY MONTHLY)

Professional Management Tasks

- Check to make sure tank is not leaking
- Check and clean the in-tank effluent filter
- Check the sludge/scum layer levels in all septic tanks
- Recommend if tank should be pumped
- Check inlet and outlet baffles
- Check the drainfield effluent levels in the rock layer
- Check the pump and alarm system functions
- Check wiring for corrosion and function
- Check dissolved oxygen and effluent temperature in tank
- Provide homeowner with list of results and any action to be taken
- Flush and clean laterals if cleanouts exist

"I understand it is my responsibility to properly operate and maintain the sewage treatment system on this property, utilizing the Management Plan. If requirements in the Management Plan are not met, I will promptly notify the permitting authority and take necessary corrective actions. If I have a new system, I agree to adequately protect the reserve area for future use as a soil treatment system."

Property Owner Signature: _____ Date: _____

Designer Signature: Jeff Brummer Date: 8/5/2021

See Reverse Side for Management Log

Maintenance Log

Activity	Date Accomplished									
<i>Check frequently:</i>										
Leaks: check for plumbing leaks										
Soil treatment area check for surfacing										
Lint filter: check, clean if needed										
Effluent screen: if owner-maintained										
Water usage rate (monitor frequency _____)										
<i>Check annually:</i>										
Caps: inspect, replace if needed										
Sludge & Scum/Pump										
Inlet & Outlet baffles										
Drainfield effluent leaks										
Pump, alarm, wiring										
Flush & clean laterals if cleanouts exists										
Other: _____										
Other: _____										

Notes: Check alarm at least once a year. Pump Tanks at least once every 3 years.

Mow Mound Area at least once a year to keep brush and trees from growing

No Traffic on mound area, No Snowmobiles, No ATV's, No Parking.

Mitigation/corrective action plan: _____
