

ENVIRONMENTAL SYSTEMS LLC.

2358 HWY# 23
MORA MN. 55051
Ph. 320-241-7036
06/10/2024

BOX MOUND DESIGN

LOCATION: 20086 472nd LANE MCGREGOR MN

PID: 29-1-132100

OWNER: SCOTT & NANCY HINTZ

SYSTEM TYPE: TYPE III BOX MOUND

DESIGN FLOW: 2- BEDROOM DESIGNED @ 300 GPD

TREATMENT AREA: 250 SQ.FT.

SLOPE: 0 %

**SEPTIC TANK: EXISTING 1350 GAL. SPLIT/COMBO
(Tank will need to be certified before installation)**

PUMP TANK: 1000 AGL CEMSTONE #9551001

PUMP: GOULDS PE51

**METER/CONTROL: SJE RHOMBUS #TDIW924H8C21E
(Timed dose with event counter)**

KEVIN HERWIG M.P.C.A. 3945



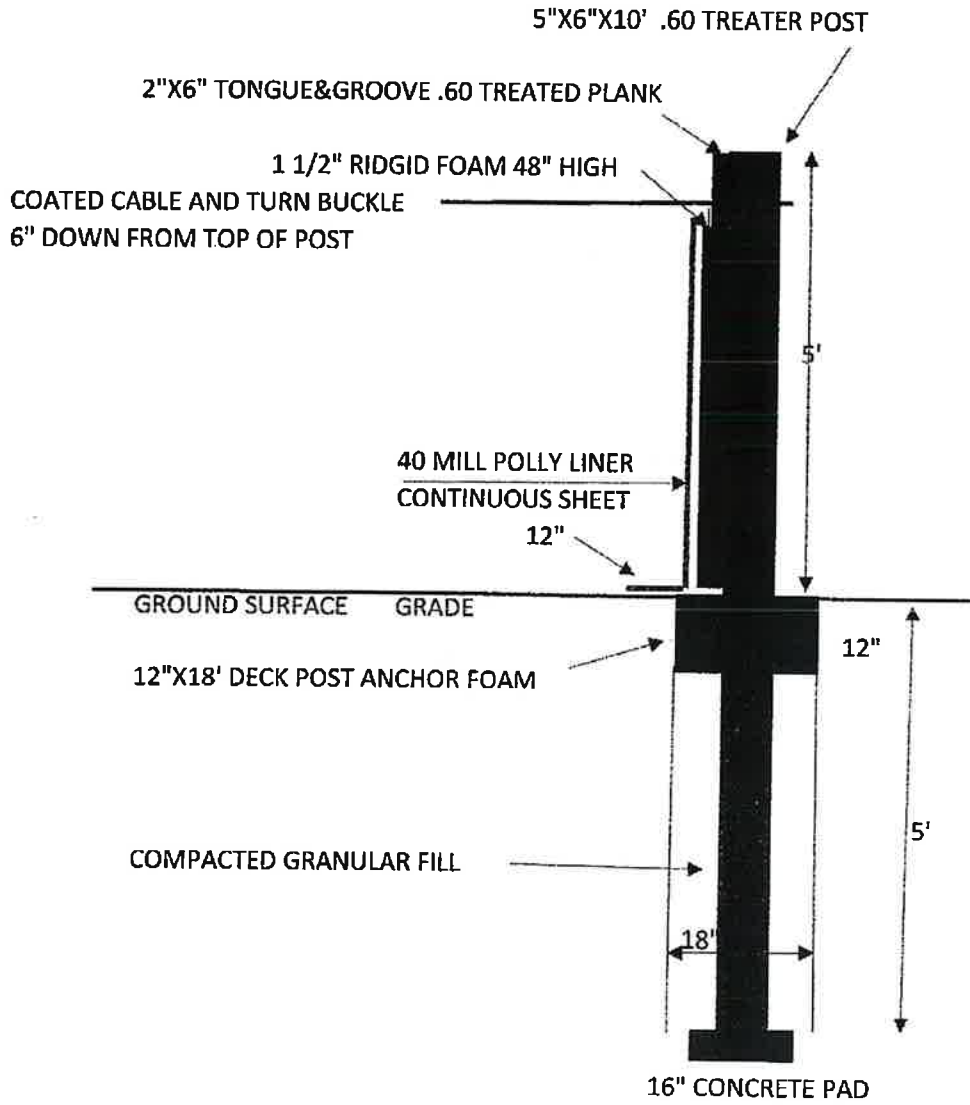
Construction Notes

- **Existing septic tank is to be pumped and certified before use**
- **Existing rock bed is to be removed in the area near the property line for a width of three feet for the entire length of the existing bed, the excavated area is to be filled with washed sand and topped with 6 inches of topsoil.**
- **The box mound area is to be graded to an Elevation of 99.42**
- **Final surface rough up of box mound surface is to be done after box construction is completed**
- **The new pump tank will need to be installed before box construction**
- **Cemstone pump tank # 9551001 must be used or pump setting will be incorrect.**
- **Maximum post spacing for the box mound is 5 feet center to center**

Box Mound Material Specifications

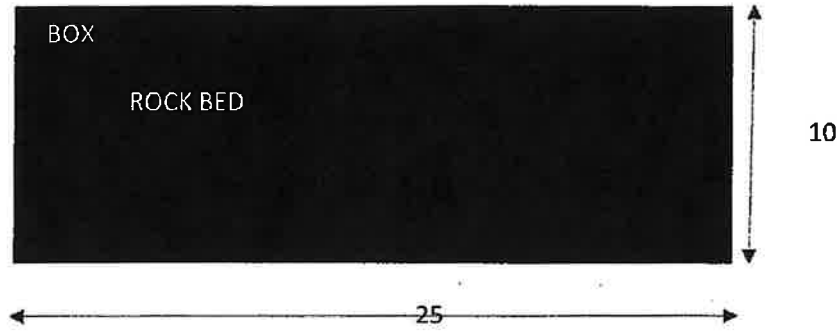
Poly liner-	40 Millimeter Continuous Sheet
Insulation-	1 ½" Rigid Foam
Cable-	3/8" Poly Coated Steel
Eye-Bolts	7/16" Galvanized Steel
Turn Buckles-	7/16" Galvanized Steel
Cable Clamps-	Galvanized Steel
Posts-	10'x5"X6" Treated .60
Planks-	2"X6" Tongue and Groove Treated .40
Concrete Pads-	4"X16" Round (pole barn pad)

POST AND SHEETING LAYOUT

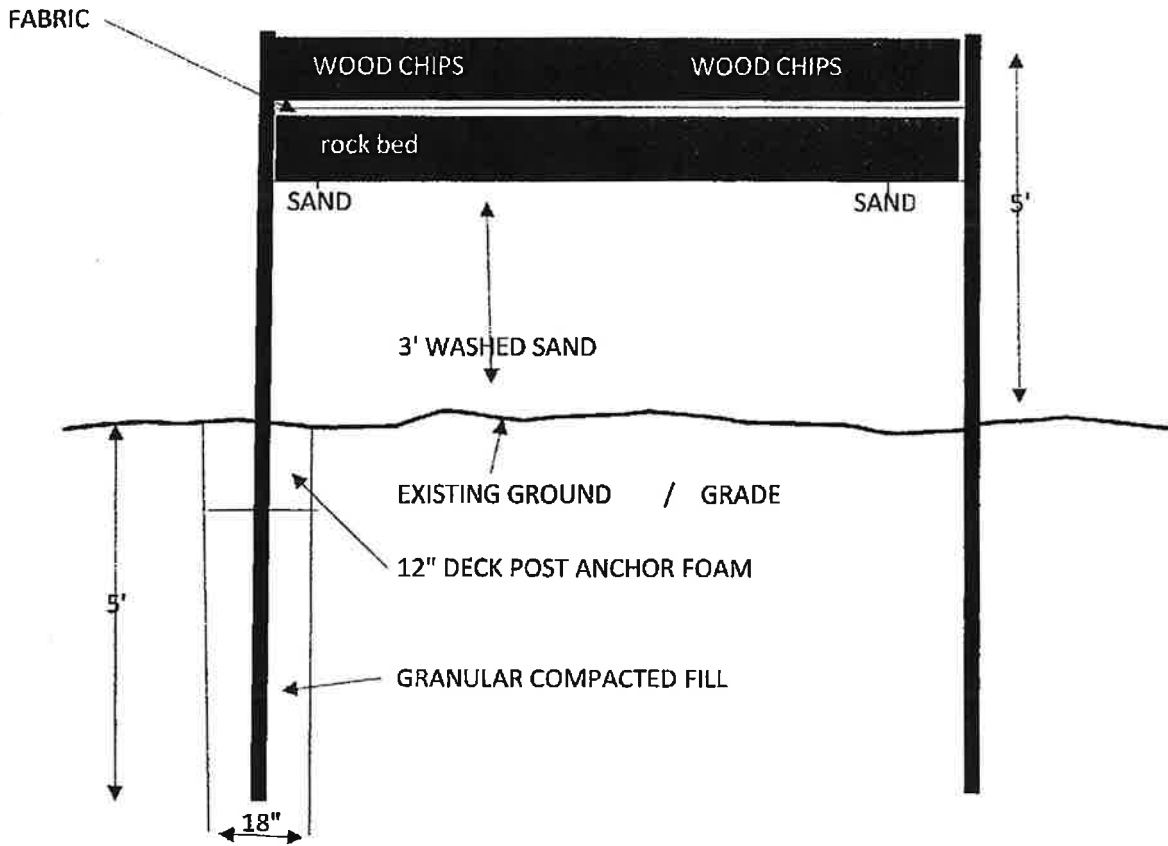


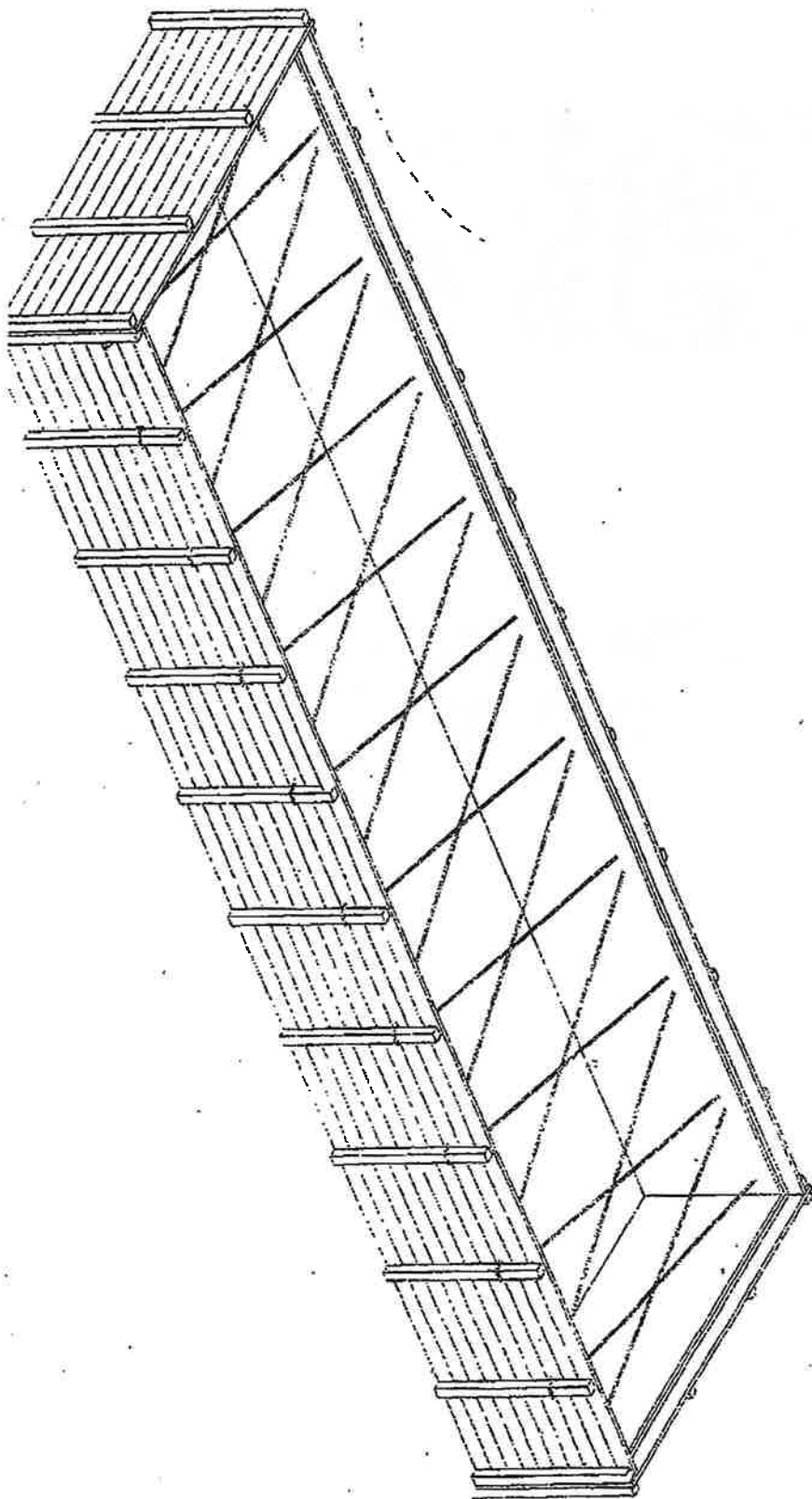
BOX MOUND DETAILS

TOP VIEW



END VIEW MATERIAL PROFILE





Preliminary & Field Evaluation Form

www.SepticResource.com ver

Owner Information			
Date	<u>5/10/2024</u>	Sec / Twp / Rng	<u>29/49/23</u>
Parcel ID	<u>29-1-132100</u>	LUG (county, city, township)	<u>AITKIN COUNTY</u>
Property Owner:	<u>SCOTT & NANCY HINTZ</u>	Owners address (if different)	
Property Address:	<u>20086 472nd LANE</u>		
City / State / Zip:	<u>McGREGOR MN 55760</u>		

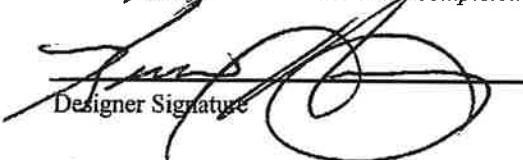
Flow Information and Waste Type / Strength			
Estimated Design flow	<u>300</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments:		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		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	<u>>55'</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)	<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	_____				

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>1.20</u>	Percolation rate (if applicable)	_____
Depth/elev to SHWT	<u>14"</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>-36.00</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)	<u>FEW COLOR VARIATIONS</u>		

I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.


 Designer Signature

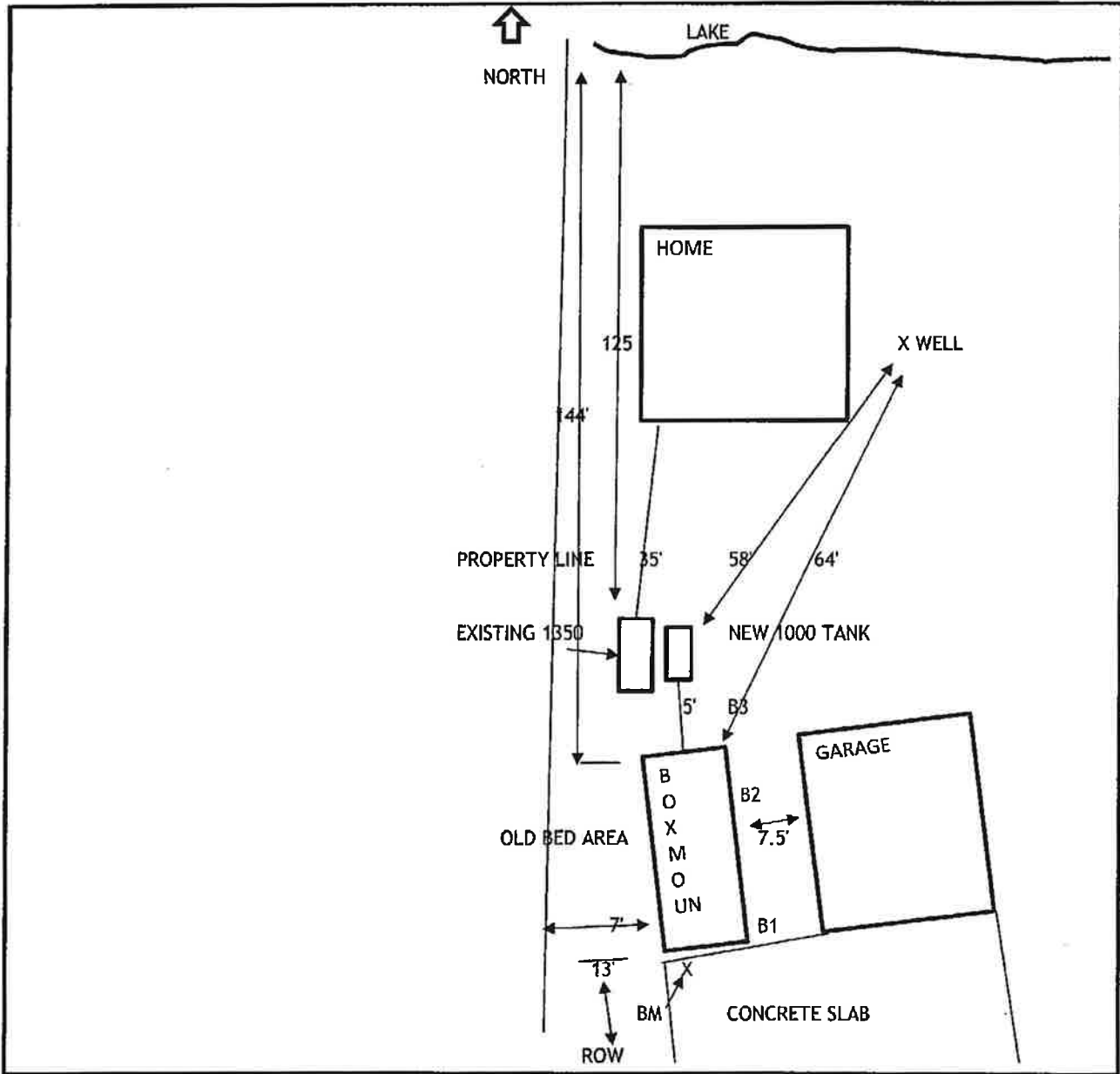
ENVIRONMENTAL SYSTEMS
 Company

3945
 License #

Project ID:

v 03.15.2023

Property Owner/Client: SCOTT HINTZ



Map scale:

Indicated north

Show slope/contours

Elevations in feet

Benchmark: ft

System Corners:

Soil Observation:

NW:	<input type="text" value="99.56"/>	ft
NE:	<input type="text" value="99.42"/>	ft
SW:	<input type="text" value="99.8"/>	ft
SE:	<input type="text" value="99.7"/>	ft

#1:	<input type="text" value="99.8"/>	ft
#2:	<input type="text" value="99.6"/>	ft
#3:	<input type="text" value="99.42"/>	ft
#4:	<input type="text" value=""/>	ft

PUMP TANK INLET	<input type="text" value="96.5"/>	ft
Other:	<input type="text" value=""/>	ft
	<input type="text" value=""/>	ft
	<input type="text" value=""/>	ft

Date Completed:

Mound Design - Aitkin county

Property Owner: SCOTT & NANCY HINTZ

Date: 5/10/2024

Site Address: 20086 472nd McGREGOR

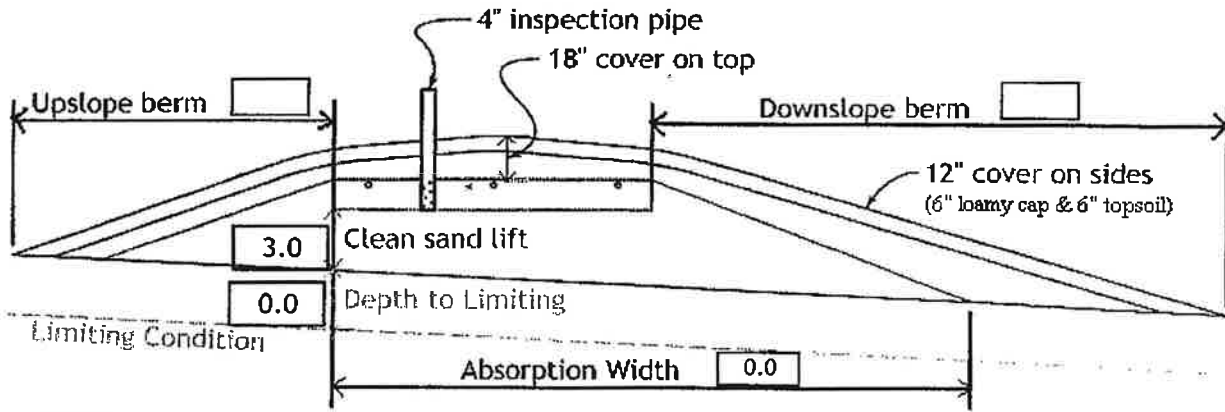
PID: 29-1-132100

Comments: THIS IS A BOX MOUND DESIGN

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
- 4) Gal Septic tank (code minimum) Gal Septic tank (design size / LUG req'd)
Tank options: Multiple tanks or compartments req'd
- 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 2.00 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)

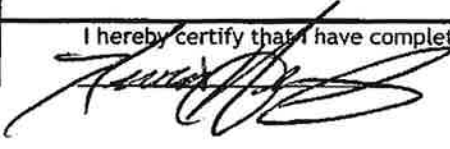
- 23) gpd/ft² Absorption area Soil Loading Rate, which gives a mound ratio of (minimum)
 (this must match the soil boring log) desired mound ratio
- 24) percent site slope (0-20% range) (% downslope site slope, if different than upslope)
- 25) inches, or ft. to Redox or other limiting condition (need 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

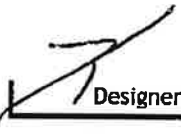


Note:
 For 0 to 1% slopes, *Absorption Width* is measured from the *Bed* equally in both directions.
 For slopes >1%, *Absorption Width* is measured downhill from the upslope edge of the *Bed*.

- 33) Rock Bed: ft. by ft. by inches under pipe, plus 20% gives yd³ 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 = yd³ or *1.4= ton
 plus 20%
- 35) Loamy Cap: ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton
- 36) Topsoil: ft. by ft. 6" deep, plus 20% gives yd³ or *1.4= ton

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

 ENVIRONMENTAL SYSTEMS 3945 5/10/2024



Designer Signature

Company

License#

Date

Installer Summary

gallon Septic tank (minimum) Tank options: Multiple tanks or compartments req'd

gallon Dose tank (minimum) at gpi

GPM @ ft. of head, Pump required

inch swing on Demand float which translates to roughly inches of float tether length
if time dosing is required --> minutes ON time & hours OFF time

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

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

ft. of inch supply line with manifold connection

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

inch, or ft. Sand Lift Mound

ft. wide by ft. long Rock bed

laterals inch diameter ft. long ft. lateral spacing

inch perfs ft. perforation spacing

Effluent filter & alarm

clean out & valve box assemblies

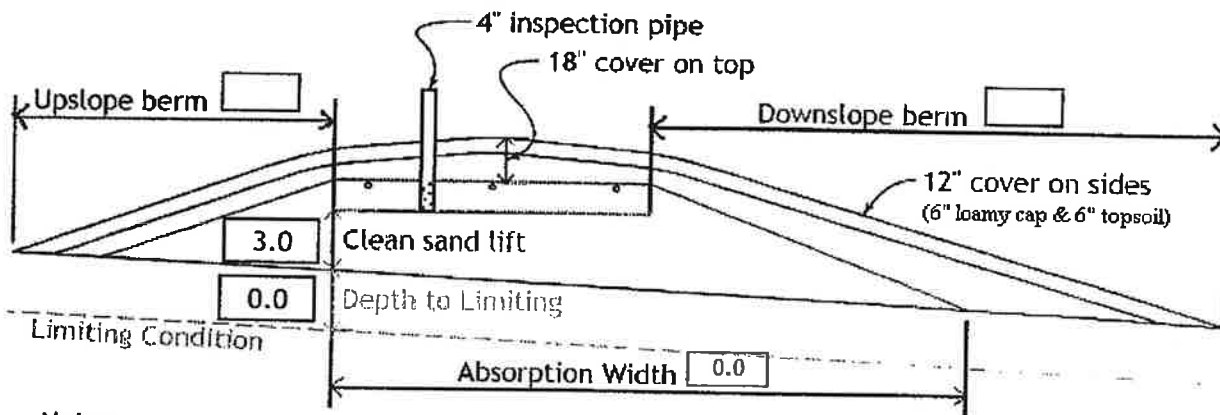
ft. Total sand ABSORPTION width (minimum)

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

ft. Downslope (sand beyond rockbed, minimum)

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

<input type="text" value="0"/>	upslope ratio	<input type="text" value="0"/>	ft. upslope berm
<input type="text" value="0"/>	sideslope	<input type="text" value="0"/>	ft. sideslope berms
<input type="text" value="0"/>	downslope	<input type="text" value="0"/>	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:	<input type="text" value="9.0"/> yd ³ or *1.4=	<input type="text" value="13"/> ton
Mound Sand:	<input type="text" value="28"/> yd ³ or *1.4=	<input type="text" value="39"/> ton

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

Loamy Cap:

6	yd ³ or *1.4=	8	ton
---	--------------------------	---	-----

 6" deep
 Topsoil:

6	yd ³ or *1.4=	8	ton
---	--------------------------	---	-----

 6" deep

INSPECTOR CHECKLIST - mound

Z0086 4/2nd MCGREGOR

- 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 EXISTING 1350 gallons Multiple tanks or compartments 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 CEMSTONE 1000 gallons

- dose pump 18 gpm 16 head VERIFY PUMP CURVE 4.3 min ON 9 hr OFF

- float setting drop 3.3 inches at 23.5 gpi "DESIGNED" 2.7 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 25.0
Sand lift depth 36 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)

- Absorption Sand beyond rock 0.0 upslope 0.0 downslope

- Bermed topsoil beyond rockbed 0 upslope 0 sideslope 0 downslope

- cover depth of 12-18"+ VERIFY
3 laterals (1-2' from edge of rock)
2.00 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
 monitoring plan and type _____
 well abandonment form - if necessary _____

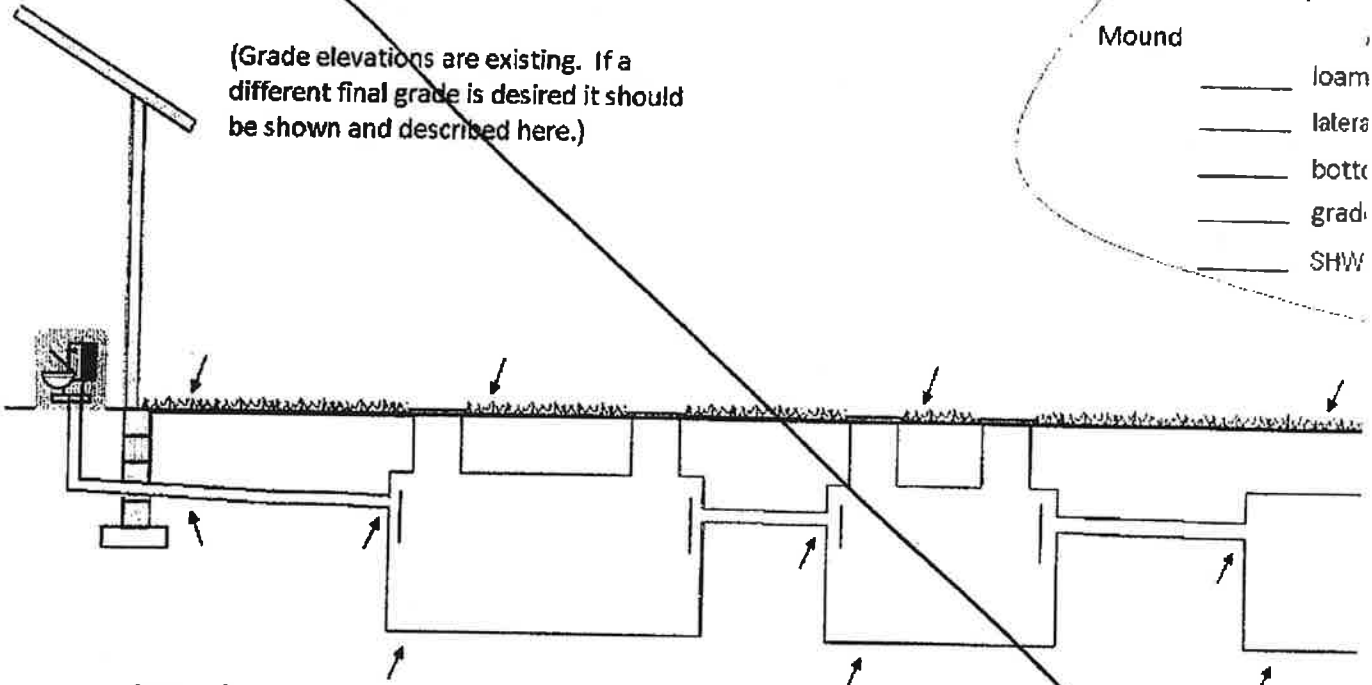
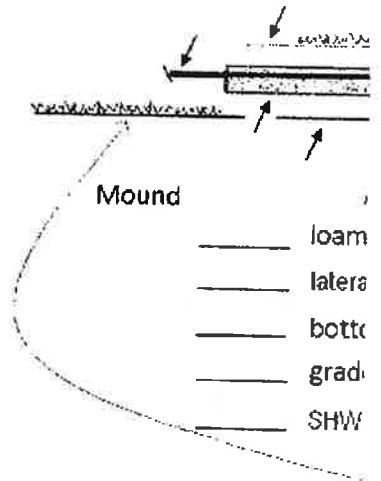
YES Re-use existing tank certification

NEXT PAGE

System Elevations

benchmark _____

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



Sewer pipe exiting house

_____ Grade

_____ Pipe

Septic Tank

_____ Grade

_____ inlet

_____ Tank bottom

Septic Tank (if applicable)

_____ Grade

_____ inlet

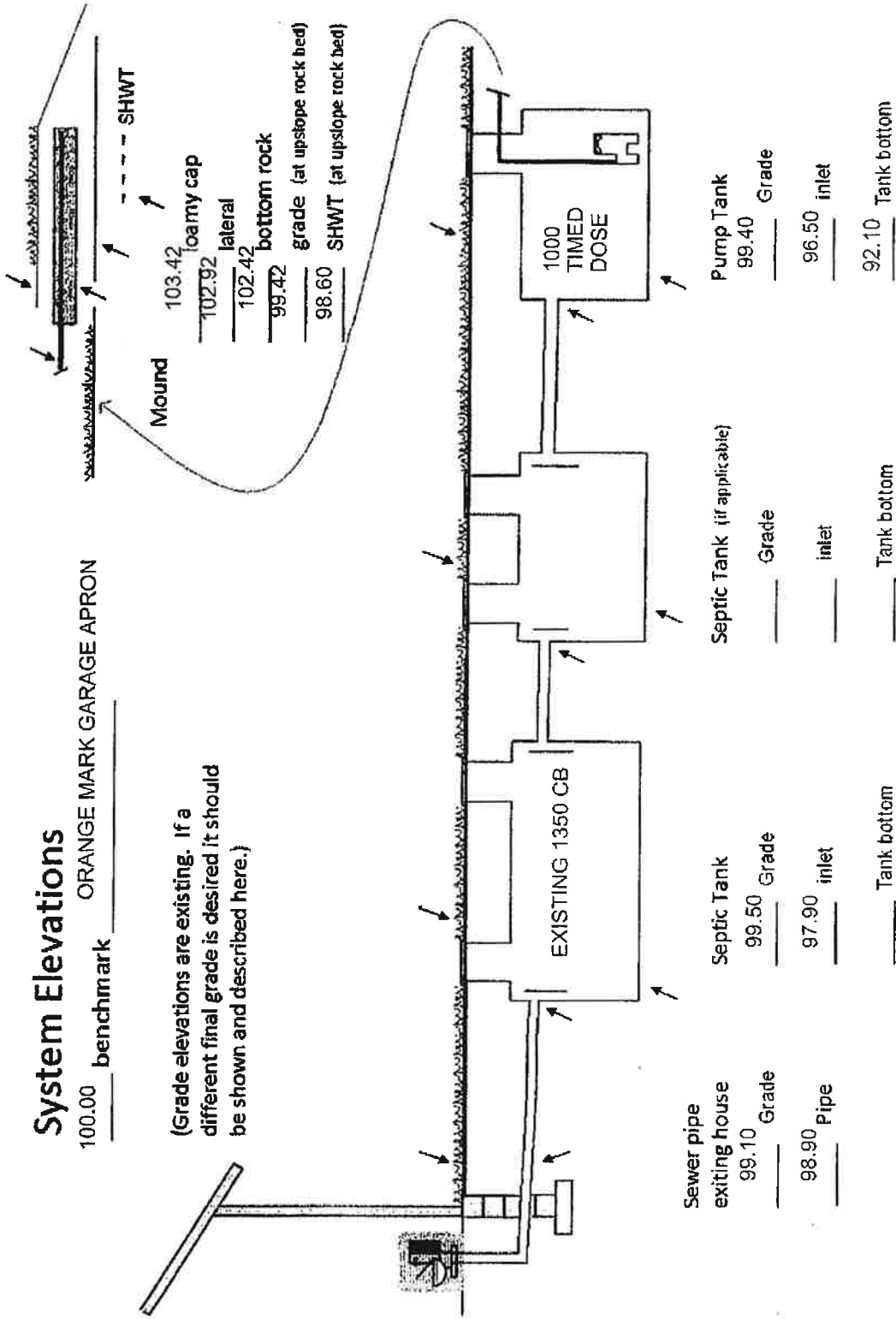
_____ Tank bottom

Pump T.

System Elevations

100.00 benchmark ORANGE MARK GARAGE APRON

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



Mound

103.42 foamy cap

102.92 lateral

102.42 bottom rock

99.42 grade (at upslope rock bed)

98.60 SHWT (at upslope rock bed)

Sewer pipe exiting house
Grade 99.10
Pipe 98.90

Septic Tank
Grade 99.50
inlet 97.90
Tank bottom

Septic Tank (if applicable)
Grade
inlet
Tank bottom

Pump Tank
Grade 99.40
inlet 96.50
Tank bottom 92.10

Soil Observation Log

www.SepticResource.com vers 12.4

Owner Information	
Property Owner / project: <u>SCOTT & NANCY HINTZ</u>	Date <u>5/10/2024</u>
Property Address / PID: <u>20086 472nd McGREGOR</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent mat'l's:	<input 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 checked="" type="checkbox"/> Shoulder <input type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>B39A</u> slope <u>1</u> % direction- <u>downhill</u>

Soil Log #1							
		<input type="checkbox"/> Boring	<input checked="" type="checkbox"/> Pit	Elevation <u>99.8</u>	Depth to SHWT <u>18"</u>		
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-5	Loamy Sand	<35	10YR2/4		Friable	Weak	Granular
5-9	Loamy Sand	<35	10YR3/2		Friable	Weak	Granular
9-18	Med Sand	<35	10YR3/4		loose friable firm rigid	Weak	Granular
18-30	Med Sand	<35	10YR5/3	7.5YR4/6	Friable	loose weak moderate strong	single grain granular blocky prismatic platy massive
30-50	Med Sand	<35	10YR6/4	10YR5/8	Loose	Loose	Single grain

Comments:

20086 472nd McGREGOR

Soil Log #2

Boring

Pit

Elevation 99.6

Depth to SHWT 12"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-4	Loamy Sand	<35	10YR3/2		Friable	Weak	Granular
4-12	Med Sand	<35	10YR4/6	7.5YR4/6	Friable	Weak	Blocky
12-29	Med Sand	<35	10YR5/3	7.5YR4/6	Friable	Weak	Blocky
		<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

20086 472nd McGREGOR

Soil Log #3

Boring

Pit

Elevation 99.42

Depth to SHWT 10"

Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-4	Loamy Sand	<35	10YR3/2		Friable	Weak	Granular
4-10	Med Sand	<35	10YR4/6		Friable	Weak	Blocky
10-12	Med Sand	<35	10YR4/6	7.5YR4/6	Friable	Weak	Blocky
12-20	Med Sand	<35	10YR5/3	7.5YR4/6	Friable	Weak	Blocky
		<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.

Kevin Perry ENVIRONMENTAL SYSTEMS #3945

Surge Tank Capacity

Property Owner: SCOTT and NANCY HINTZ Date: 5/10/2024

Site Address: 20086 472nd McGREGOR MN. PID: _____

Comments: _____

instructions: = req'd input = input or default = calculated field

1) Input the estimated daily flows of a peak/full capacity week.

	gpd	Time dosed amount to bed / downstream	daily +/- to surge tank	Surge tank cumulative total
Monday	300	300	0	0
Tuesday	300	300	0	0
Wednesday	300	300	0	0
Thursday	300	300	0	0
Friday	300	300	0	0
Saturday	300	300	0	0
Sunday	300	300	0	0
				... > <input type="text" value="0"/>

*manually enter Sunday's total

gpd (calculated average flow)

2) Enter the "design" average flow (must be equal to or larger than the calculated average flow)

gpd (design average flow) (components after the surge tank must be capable of this flow)

note: MN7080 prescriptive design sizing assumes that Average flow = 2/3 Peak flow (design flow).
With Surge tank or time dosed applications, the peak and average can become nearly the same value. As a result, the dispersal area must be sized at 1.5 times the average flow (time dosed amount) to maintain the Long Term Acceptance Rate of the dispersal area.


3) Enter Sunday's "surge tank cumulative total" in the box as shown to the upper right. *

4) Results:

$$\begin{array}{rcl} \text{surge capacity} & = & \text{design avg flow} + \text{maximum daily surge amount} \\ \hline \text{300} & = & 300 + 0 \end{array}$$

Latest design guidance formula suggests:

$$\begin{array}{rcl} \text{surge capacity} & = & \text{daily peak} + \text{daily avg} + \text{plus 20\%} \\ \hline \text{720} & = & 300 + 300 + \text{plus 20\%} \end{array}$$


Designer Signature

ENVIRONMENTAL SYSTEMS
Company

3945
License#

Date

LOCATION MEEHAN

WI+MN

Established Series
Rev. HFG-LLD-JJJ
12/2006

MEEHAN SERIES

The Meehan series consists of very deep, somewhat poorly drained soils formed in sandy alluvium on outwash plains, stream terraces, beach ridges, and glacial lake plains. Permeability is rapid or very rapid. Saturated hydraulic conductivity is high or very high. Slopes range from 0 to 3 percent. Mean annual precipitation is about 30 inches near the type location. Mean annual air temperature is about 42 degrees F.

TAXONOMIC CLASS: Mixed, frigid Aquic Udipsamments

TYPICAL PEDON: Meehan sand - on a plane 1 percent slope in a woodland at an elevation of about 291 meters. (Colors are for moist soil unless otherwise stated.)

A--0 to 4 inches; very dark grayish brown (10YR 3/2) sand, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very friable; many very fine, fine and medium roots and common coarse roots; very strongly acid; clear wavy boundary. (0 to 9 inches thick)

Bw1--4 to 12 inches; dark yellowish brown (10YR 4/6) sand; weak medium subangular blocky structure; very friable; common very fine and fine and few medium roots; many medium distinct strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; common fine prominent dark grayish brown (10YR 4/2) iron depletions in the matrix; strongly acid; clear wavy boundary. (0 to 12 inches thick)

Bw2--12 to 29 inches; brown (10YR 5/3) sand; weak medium and coarse subangular blocky structure; very friable; few very fine and fine roots; common fine prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; strongly acid; clear smooth boundary. (Combined thickness of the Bw horizons ranges from 6 to 45 inches.)

C--29 to 60 inches; light yellowish brown (10YR 6/4) sand; single grain; loose; common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid.

TYPE LOCATION: Juneau County, Wisconsin; about 3.5 miles north of New Miner; 80 feet north and 1290 feet west of the center of Sec. 9, T. 20 N., R. 4 E. USGS New Miner, Wis. Quad. Latitude - 44 degrees 13 minutes 14 seconds N. Longitude - 90 degrees 1 minute 53 seconds W. NAD 27.

RANGE IN CHARACTERISTICS: Depth to the base of soil development ranges from 24 to 48 inches. The particle-size control section contains less than 50 percent fine sand or very fine sand and more than 30 percent medium, coarse, and very coarse sand as a weighted average. The soil moisture control section is not dry for as much as 35 consecutive days during the 120 days following the summer solstice. Volume of gravel ranges from 0 to 15 percent to a depth of 60 inches. Reaction typically ranges from extremely acid to slightly acid in the solum but ranges to neutral in the upper part, where the soil is limed. Reaction ranges from extremely acid to neutral in the substratum. Redox concentrations are typically throughout the pedon below the A or Ap horizon. Redox depletions with chroma of 2 or less and saturation are within a depth of 40 inches. Where the color is that of the uncoated sand grains, some pedons do not have redox depletions.

Some pedons have a thin O horizon with hue of 5YR, 7.5YR, or 10YR or the hue is neutral. Value is 2 and chroma is 0 to 2.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Cultivated areas have an Ap horizon, with hue of 10YR and value and chroma of 2 or 3. Texture of the A or Ap horizon is loamy sand or sand. The Ap or A horizon either has less than 0.6 percent organic carbon or if more than 0.6 percent, is less than 10 inches thick.

Some pedons have an E horizon with hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 or 3. Texture is loamy sand, loamy coarse sand, sand, or coarse sand.

The Bw horizon typically has hue of 10YR, but some pedons have hue of 7.5YR. Value is 4 to 6 and chroma is 3 to 8. Some pedons have a Bg horizon with hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2. Texture of the Bw or Bg horizon is sand, loamy sand, coarse sand, or loamy coarse sand. Bw horizons with spodic colors have less than 0.6 percent organic carbon.

The C horizon has hue of 7.5YR, 10YR, or 2.5Y; value of 4 to 7; and chroma of 3 or 4. Some pedons have a Cg horizon with hue of 7.5YR, 10YR, or 2.5Y; value of 4 to 7; and chroma of 2. Texture of the C or Cg horizon is coarse sand or sand.

COMPETING SERIES: These are Aylmer, Clearriver, Hiwood, Lino, Perchlake, Poppleton, Redby, Rushlake, Sciota, and Winterfield series. A similar soil is the Morocco series. Aylmer soils are dry in the moisture control section for 35 to 45 consecutive days following the summer solstice. Clearriver soils have an argillic horizon. Hiwood soils have less than 30 percent medium sand and coarser in the control section. Lino soils average less than 5 percent coarse and very coarse sand in the control section. Perchlake have E&Bt or other thin illuvial horizons totaling less than 6 inches thick. Poppleton and Redby soils average 50 percent or more fine sand or less than 25 percent medium sand or coarser and less than 50 percent very fine sand in the series control section. Rushlake soils have carbonates within 102 centimeters. Sciota soils have more than 50 percent fine sand in the particle-size control section. Winterfield soils are on flood plains and have an irregular decrease in organic carbon with increasing depth. Morocco soils are mesic.

GEOGRAPHIC SETTING: Meehan soils are on outwash plains, stream terraces, beach ridges, and glacial lake plains. Slopes range from 0 to 3 percent. These soils formed in very deep sandy alluvium (lacustrine or outwash). Mean annual precipitation ranges from 22 to 35 inches. Mean annual air temperature ranges from 37 to 45 degrees F. The frost free period ranges from about 90 to 140 days. Elevation ranges from 670 to 1950 feet.

GEOGRAPHICALLY ASSOCIATED SOILS: These are Friendship, Isan, Menahga, Newson, Nymore, and Roscommon series. The excessively drained Menahga and Nymore soils; the moderately well-drained Friendship soils; and the poorly drained and very poorly drained Isan, Newson, and Roscommon soils are in a drainage sequence with the Meehan soils.

DRAINAGE AND PERMEABILITY: Somewhat poorly drained. The potential for surface runoff is negligible or very low. Permeability is rapid or very rapid. Saturated hydraulic conductivity is high or very high. These soils have an apparent seasonal high water table 0.5 to 2.5 feet for some time during the period October to June in most years.

USE AND VEGETATION: Many areas remain in woodland. Native vegetation is mixed coniferous and deciduous forest. Common trees are jack pine, white and black spruce, paper birch, northern pin oak, red pine, eastern white pine, quaking aspen, balsam fir, and red maple. Many areas have been cleared and are used for cropland. Common crops are corn, small grains, and hay. Some areas have been replanted to trees or are used for pastureland.

DISTRIBUTION AND EXTENT: Central Wisconsin, east-central and northern Minnesota and northern Lower Michigan. These soils are extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: St. Paul, Minnesota

SERIES ESTABLISHED: Wood County, Wisconsin, 1971.

REMARKS: Diagnostic features recognized in this pedon are: aquic feature - redox depletions with chroma of 2 or less and aquic conditions within 40 inches of the soil surface.

12/2006- There are 5230 acres correlated as a loamy substratum phase in Waupaca County, WI. A new series may be needed. Also, there are 580 acres correlated as a sandstone substratum phase in Portage County, WI. Do these acres fit the Partridge series?

National Cooperative Soil Survey
U.S.A.

Subsurface Sewage Treatment System Operating Permit Application

Use this form to apply for an operating permit.
* Indicates required field

**Aitkin County Environmental Services
Planning & Zoning**
307 Second St. NW, Room 219
Aitkin, MN 56431
218-927-7342
aitkinpz@co.aitkin.mn.us

Facility Information:

*Permittee name:	SCOTT HINTZ				
*Mailing address:	20086 472nd LANE	*City:	McGREGOR	*State:	MN *Zip: 55760
*Email:	Nancy.hintz@icloud.com		*Phone:	612-802-4590	
*Parcel ID:	29-1-132100				
Property address:	20086 472nd Lane McGregor Mn.. 55760				
*System type:	TYPE III BOX MOUND	*Treatment level:	C		
*System design flow (gpd):	300	*Residential/Commercial:	RES		
*System components:	EXISTING TANK- NEW 1000 PUMP TANK - BOX MOUND 3' OF SAND				

Service Provider:

*Name:	*Signed Contract: <input type="checkbox"/> Yes <input type="checkbox"/> No
--------	--

Monitoring Requirements:

Parameter	Effluent limits	Frequency	Location
*Design flow (gpd)	300 gpd	MONTHLY	EVENT COUNTER/METER
Average flow (gpd)			
*Ponding/Surfacing in soil treatment	NOT ALLOWED	BI-ANNUALY	BOX MOUND
CBOD ₅ (mg/L)			
TSS (mg/L)			
FO&G (mg/L)			
Fecal Coliform bacteria (#/100mL)			
Total Nitrogen, Total Phosphorus (mg/L)			
Operational Field Tests, may include: Temperature, Dissolved Oxygen and pH			

Monitoring Requirements Comment Field:

Maintenance Requirements:

Maintenance requirements shall be performed as specified in the Management Plan as prepared by the system's Designer.

System component	Maintenance	Frequency
External grease Interceptor		
*Septic tank/Trash tank	CHECK LEVELS PUMP AS NEED	(ANNUALLY) PUMP 3 YEARS MAX.
*Pump tank and controls	CHECK FOR PROPER FUNCTION	
Effluent screen		
Advanced treatment product		
UV light disinfection device		
*Soil treatment and dispersal	INSPECT FOR PONDING OR SURFACING	

Monitoring Protocol

Any sampling and laboratory testing procedures shall be performed in accordance with the proprietary treatment product's protocol, Standard Methods, and at a Minnesota Department of Health approved laboratory. Results shall be submitted to the permitting authority at: Aitkin County Environmental Services, 307 2nd St NW, Room 219, Aitkin, MN 56431 no later than the expiration date listed.

Contingency Plan

In the event the wastewater treatment system does not meet required performance requirements as contained in this operating permit, the owner shall notify Aitkin County Environmental Services within thirty (30) days of receiving non-compliant information. The owner is responsible to obtain the services of a Minnesota Pollution Control Agency (MPCA) licensed Service Provider or other qualified practitioner to complete the required corrective measures.

Authorization

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system at the address named above in accordance with the requirements of this operating permit, attached Management Plan and contract with the Service Provider/Inspector.

This permit is effective on the issuance date and term identified above. This permit and the authorization to treat and disperse wastewater shall expire on the expiration date identified above. The Permittee is not authorized to discharge after the above date of expiration. The Permittee shall submit monitoring and maintenance information on forms as required by Aitkin County Environmental Services prior to the above date of expiration for operating permit renewal. If not renewed within ninety (90) calendar days of the expiration date, it may be required that the system be abandoned in accordance with MN Rule 7080.2500. This permit is not transferable as to person or place.

The owner is required to obtain the services of a Minnesota Pollution Control Agency (MPCA) licensed and trained: 1) Service Provider or Inspector to provide ongoing system operation, maintenance, and monitoring and 2) Maintainer to pump the system's sewage tanks and components. The owner is responsible to provide the name of the Service Provider or Inspector business prior to the issuance of this operating permit. **The owner has secured the services of (named above) as the Service Provider or Inspector for this system through a signed contract.** The Service Provider or Inspector is hereby authorized to provide the required monitoring data and routine maintenance service records to both Aitkin County Environmental Services.

[For systems that generate high strength wastewater, the following items should be added to the operating permit: "If there is a change of use within the facility (i.e., change in menu, increase in food capacity, change in water use fixtures, etc.), the permittee is required to notify Aitkin County Environmental Services and the Service Provider before any changes occurs. Changes to the facility that could potentially impact performance of the wastewater treatment and dispersal system shall not take place until appropriate evaluation has been completed."]

I hereby certify with my signature as the Permittee that I understand the provisions of the wastewater treatment and dispersal system operating permit including maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by the use of this system. If I fail to comply with the provisions of this operation permit, I understand that penalties may be issued. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the operating permit.

*Permittee Name: (Print):	
*Title:	*Date:
*Permittee Signature:	

Instructions for Completing an Operating Permit

The following instructions provide an explanation for local units of government to complete the operating permit template. This is intended to provide guidance to local units of governments (LGU) in developing operating permits for Type III, Type IV and Type V systems, including both residential and commercial systems. The template could be modified for holding tanks or any other system. Since the Management Plan is considered part of the operating permit, it needs to be attached to the operating permit. A signed contract, between the owner and Service Provider, should be attached to the operating permit to help ensure the owner has made the necessary arrangements to have the system maintained and monitored.

Wastewater Treatment and Dispersal Operating Permit No. – Aitkin County will assign an operating permit number to be able to track the system over the years.

Issuance Date – fill in the date the operating permit is issued. The operating permit should not be issued until all required information is submitted.

Expiration Date – fill in the date when this operating permit expires. The first time an operating permit is issued to an owner, it should be issued for one (1) year. This helps ensure the owner actually does the required maintenance and monitoring during the first year. If the owner complies, the operating permit can then be issued for a longer period of time as determined by the local unit of government (typically 3 to 5 years). However, if the owner does not comply the first year, the second operating permit could, again, be issued for a period of one (1) year.

Permittee Name, Business Name, Telephone Number, and Address – fill in the name, address, email and phone number of the owner. If this is a business, fill in name of the business, too.

Property ID Number – these are simply identifiers used by local units of government in the event the property address changes over time.

System Type – fill in as Type III, Type IV or Type V system. Holding tanks may also be issued operating permits (Type II system).

Treatment Level – specify Treatment Level A, A2, B, B2, C, TN or TP. Treatment Level A = Carbonaceous Biochemical Oxygen Demand, five day (CBOD₅) 15 milligrams per liter (mg/L), Total Suspended Solids (TSS) 15 mg/L, Fecal Coliform Bacteria 1000 per 100 milliliter (mL); Treatment Level A2 = CBOB₅ 15 mg/L, TSS 15 mg/L; Treatment Level B = CBOD₅ 25 mg/L, TSS 30 mg/L, Fecal Coliform Bacteria 10,000 per 100 mL; Treatment Level B2 = CBOD₅ 25 mg/L, TSS 30 mg/L; Treatment Level C = CBOD₅ 125 mg/L, TSS 60 mg/L, Oil and Grease (O&G) 25 mg/L; Total Nitrogen (TN) = 20 mg/L or less, or Total Phosphorus (TP) = 2 mg/L or less.

System Design Flow – fill in the design flow specified on the construction permit for the system, along with the projected average daily flow for the system. Average daily flow is generally 60 to 70 percent of design flow.

Residential/Commercial – specify if the system is residential or commercial. You may specify additional information, such as classification of dwelling, number of bedrooms; or type of commercial establishment.

System Components – provide a brief description of the system components. An example would be the following: 600 gallon trash tank, 600 gallon Brand X proprietary treatment device, 1 Brand Y Ultra Violet (UV) light disinfection unit, 500-gallon pump tank, pump, floats and controls, and 250-foot shallow trenches using pressure distribution.

Monitoring Requirements (Table)

The monitoring requirements specified in an operating permit are unique to the site and soil conditions of the property (its environmental sensitivity) and system complexity. The monitoring requirements include specific parameters to be monitored, target limits and the frequency and location of monitoring. The monitored parameters, at a minimum, would include: 1) wastewater flow - the most basic parameter to know in understanding system performance, 2) ponding/surfacing in the soil treatment system. Monitoring for CBOD₅, TSS, fecal coliform bacteria and nitrogen are unique to the site, its receiving environment and complexity of the wastewater system. Field tests for temperature, pH and dissolved oxygen can be performed by the Service Provider to serve as general indicators of system performance.

- Flow** – flow to each system needs to be determined as specified in the Management Plan or as determined by the local unit of government. Flow can be determined several ways, using water meters, event counters, and running time clocks. Telemetry can also be used and has the advantage that flow can be determined continually.

The determination for the frequency of flow measurement is done on a case-by-case basis. At first, daily flow monitoring may be needed to determine average flow and peak flows to a system. After a period of time, weekly or monthly flow determination may be acceptable. Flow determinations once a year generally provide limited information.
- CBOD₅** – monitoring for CBOD₅ is not typically required for the majority of wastewater systems used for single-family homes generating typical domestic strength effluent. However, monitoring for CBOD₅ may be needed periodically. For example, there may be a need to audit systems as part of the product registration process in Minnesota or if the Service Provider is trying to troubleshoot a system. For commercial systems, monitoring for CBOD₅ is generally necessary to determine CBOD₅ removal efficiencies of proprietary treatment devices and/or organic loading rates to the soil's infiltrative surface.
- TSS** – monitoring for TSS is not typically required for most residential wastewater systems that generate typical domestic strength effluent. However, turbidity measurements may be taken in the field by Service Providers. Monitoring for TSS may be needed periodically as part of an audit process for the registration of proprietary treatment products in Minnesota. For commercial systems, monitoring for TSS may be necessary.
- O&G** – monitoring for Oil and Grease (O&G) is not typically required for most residential wastewater systems; however, it is an important parameter to monitor for facilities that have food preparation and service and for residences that generate high strength wastewater.

5. **Fecal Coliform Bacteria** – monitoring for fecal coliform bacteria should generally be required for systems listed as Treatment Level A and Treatment Level B systems where reduced vertical soil separation is used.
6. **Total Nitrogen and Total Phosphorus** – monitoring for Total Nitrogen (TN) may be needed in areas identified as nitrogen sensitive environments. Monitoring for Total Phosphorus (TP) may be required in phosphorus sensitive lake environments.
7. **Operational Field Tests** – these are tests performed by the Service Provider to help 'monitor' system performance and identify problems (troubleshooting a system). Although field tests are not a strict monitoring requirement, they are appropriate to list in the operating permit if specified in the Management Plan or in the product's Operation and Maintenance Manual. The local unit of government will determine if the permittee is required to report field test results as part of the operating permit.
8. **Ponding/Surfacing in Soil Treatment** – all systems should be monitored periodically as specified in the Management Plan to determine extent and frequency of ponding in soil treatment systems. A check for surfacing is needed.

Maintenance Requirements (Table)

This table lists some of the basic maintenance requirements for each major component of the wastewater system. Since you can't possibly list all the maintenance requirements in this table, it is best to reference the Management Plan. You could also reference the proprietary products Operation and Maintenance Manual.

1. **System Component** – list each system component, including the external grease interceptor, septic tank, trash tank, surge tank, effluent screen, pump tank and controls, proprietary treatment product, disinfection device, and soil treatment and dispersal system.
2. **Maintenance** – briefly identify the maintenance requirements of each major system component. For additional information, you could also reference the proprietary product documents listed on the MPCA website at <http://www.pca.state.mn.us/programs/ists/productregistration.html>.
3. **Frequency** – briefly identify the frequency of maintenance as per the systems Management Plan and Operation and Maintenance Manual.

Monitoring Protocol – this section of the operating permit states that testing needs to be performed in accordance with approved methods and the results submitted to the: 1) local unit of government and 2) manufacturer within a specified time frame. Fill in the name and address of both entities in the spaces provided.

Contingency Plan – this briefly describes requirements if the system does not function as intended. The owner must notify the local unit of government within thirty (30) days of receiving non-compliant information. The Management Plan may identify some of the corrective actions required or the permittee will need to consult their Service Provider. The owner is responsible to obtain the services of a MPCA-licensed Service Provider or other qualified practitioner to complete the required corrective measures. More detail could be added here by the local unit of government.

Authorization – Note that this permit is not transferable.

Next, fill in the name of the Service Provider in the next space; the owner is required to identify who the MPCA licensed Service Provider will be (in a contract). This is needed to ensure the owner has made the necessary arrangements to have the system maintained and monitored.

The Service Provider is authorized to provide monitoring data and routine maintenance service records directly to the local unit of government and to the manufacturer of the treatment product. For systems generating high strength wastewater, the following should be added to the operating permit: "if there is a change of use within the facility (i.e., change in menu, increase in food capacity, change in water use fixtures, etc.), the permittee is required to notify the local unit of government and the Service Provider before the change(s) occurs." Changes to the facility that could potentially impact performance of the wastewater treatment and dispersal system shall not take place until appropriate evaluation has been completed.

The final paragraph contains a general indemnification statement. The permittee is reminded that this permit is not transferable and that a new operating permit would be needed by a new property owner.

Signature of Permittee (and date of signature) – the owner signs and dates the operating permit.

Subsurface Sewage Treatment System Management Plan

Property Owner: SCOTT HINTZ Phone: 320-532-4181 Date: 06/10/2024
Mailing Address: 20086 472nd LANE City: _____ Zip: _____
Site Address: 20086 472nd LANE City: McGREGOR MN. Zip: 55760

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 or maintenance provider.

System Designer: Recommends SSTS check every 36 months.
Local Government: Recommends SSTS check every _____ months.
State Requirement: Requires SSTS 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.

Alarms – Alarm signals when there is a problem. Contact a service or maintenance 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 N/A)

Licensed septic service provider or maintenance provider (Check all that apply):

- Check to make sure tank is not leaking
- Check and clean the in-tank effluent filter (if exists)
- 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: 7-12-24

Designer Signature:  Date: _____

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: _____

**MAINTENANCE SERVICE, MONITORING AND INSPECTION
CONTRACT FOR SSTS OPERATING PERMIT**

It is hereby agreed this ____ day of _____, _____ by and between
_____ (Service Provider/Inspector) and Client:

CLIENT NAME AND SITE LOCATION	
Owner/Client:	SCOTT HINTZ
Company Name:	
Site Address:	20086 472nd LANE
City, State, Zip	McGREGOR MN. 55706
Parcel ID:	29-1-132100
LGU or Permitting Authority:	Aitkin County

That in consideration of the payments provided herein, the Inspector shall provide services to perform Preventative Maintenance, Monitoring and Inspection of the Subsurface Sewage Treatment System (SSTS) located at the property described in the Aitkin County Operating Permit.

Each inspection includes an examination of the SSTS followed by a written report to the client. This inspection report shall contain recommendations for operation and maintenance for failure-preventative measures, if any are deemed appropriate by the inspector and a list of recommended corrective measures or replacement parts. The Inspector is authorized to submit a copy of the report to the Aitkin County Environmental Services Department.

This contract does not assume any responsibilities or obligations, which are normally the responsibilities of the Client, as related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

The Inspector can only contract or subcontract for parts or labor after authorization. Billings for service calls shall be made on a case by case basis. This contract only covers maintenance, monitoring and inspection services per current Aitkin County Operating Permit and does not cover alarm calls of any kind.

The Inspector shall be provided access to the site and the system in order to perform the following services:

(Check the boxes needed to fill the requirements of the Operating Permit)

SEPTIC TANK AND LIFT STATIONS INSPECTION

- Check septic tank and compartments for solids buildup and general appearance. If necessary, have tanks pumped.
*(*Cost of pumping is the responsibility of the client).*
- Check effluent filter for buildup and clean, if applicable.
- Check pumping system, including control panel and floats.
- Record and date the readings of the elapsed time meter and event counter(s).

- Check dosing settings (in the control panel, if applicable).
- Other: _____

PRETREATMENT DEVICE

- Inspect pretreatment unit (aerobic tank, sand filter, etc.) per manufacturer's recommendation.
- Inspect and clean any parts per manufacturer's recommendation.
- Inspect and clean laterals, if applicable.
- Inspect the appearance of the wastewater inside the unit for color, turbidity and examination of odors.
- Sample effluent per Operating Permit monitoring requirements.
*(*Cost of sampling and analysis is the responsibility of the Client)*
- Other: _____

DISPERSAL FIELD/TREATMENT AREA

- Inspect for visible signs of failure (surface discharge, soggy ground, wet spots, settling, etc.)
- If liquid level monitors are installed, levels will be observed and recorded.
- Flush filters and clean cartridges, if applicable.
- Check field control unit solenoid operations or manual control, if applicable.
- Other: _____

In no event shall the Inspector be responsible for special or consequential damages, including but not limited to, loss of time, injury to personal property or any other consequential damages or incidental or economic loss due to equipment failure or for any other reason. This contract does not assume any responsibilities or obligations, which are normally, the responsibility of the Client or as, related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

This contract shall be effective: Beginning _____, _____
and Ending _____, _____

Cost for Maintenance Service, Monitoring and Inspection Contract is:

\$ _____/yr. For _____ years totaling \$ _____

The Inspector agrees to provide inspection, monitoring and routine maintenance service only under this contract. The Client remedies for breach of this contract shall be limited to refund of any of the amounts paid in advance for service. This contract may be renewed 30 days from the ending date.

Payment for all services shall be paid _____.

Owner/Client:

Sign: _____

Print: _____

Date: _____

Inspector:

Sign: _____

Print: _____

Date: _____

