

# Preliminary & Field Evaluation Form

www.SepticResource.com vers 12.4

Owner Information			
Date	<u>8/22/2021</u>	Sec / Twp / Rng	<u>8 51 26</u>
Parcel ID	<u>20-0-011700</u>	LUG (county, city, township)	<u>MACVILLE</u>
Property Owner:	<u>Kevin Gulbra</u>	Owners address (if different)	
Property Address:	<u>63498</u>		
City / State / Zip:	<u>SWATRA MINN</u>		

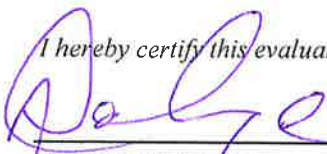
Flow Information and Waste Type / Strength			
Estimated Design flow	<u>450</u>	Anticipated Waste strength	<input type="checkbox"/> Hi Strength <input checked="" type="checkbox"/> Domestic
Comments:		Any Non-Domestic Waste	<input type="checkbox"/> Yes (class V) <input checked="" type="checkbox"/> No
		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>50 PLUS</u>	
Easements on lot located (see site map)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Drainfield w/in 100' of residential well	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Property lines determined (see site map)	<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 checked="" type="checkbox"/> Yes	<input 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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Site map prepared with previous items included	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Construction related issues	<hr/> <hr/>				



**Soil Information**

		Evidence of site:	
		Cut	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Filled	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Compacted	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Disturbed	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Original soils	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Soil logs completed and attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Perk test completed and attached (if applicable)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Soil loading rate (gpd/ft <sup>2</sup> )	<u>0.78</u>	Percolation rate (if applicable)	<u>                    </u>
Depth/elev to SHWT	<u>24.00</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>-12.00</u>		
Depth/elev to standing water (if applicable)	<u>                    </u>	Flood elevation (if applicable)	<u>                    </u>
Depth/elev to bedrock (if applicable)	<u>                    </u>	Elevation of ordinary high water level (if applicable)	<u>                    </u>
Soil Survey information determined (see attachment)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Floodplain designation and elev - 100 yr/10 yr (if applicable)	<u>                    </u>
Differences between soil survey and field evaluation (if applicable)	<u>NONE</u>		

*I hereby certify this evaluation was completed in accordance with MN 7080 and any local req's.*  
  
\_\_\_\_\_  
Designer Signature

LANGES NURSERY AND LANDSCAPE INC  
Company

1174  
License #



# Soil Observation Log

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Owner Information	
Property Owner / project: <u>Kevin Gulbra</u>	Date <u>8/22/2021</u>
Property Address / PID: <u>63498</u>	

Soil Survey Information	
<input type="checkbox"/> refer to attached soil survey	
Parent matl's:	<input checked="" type="checkbox"/> Till <input checked="" type="checkbox"/> Outwash <input type="checkbox"/> Lacustrine <input type="checkbox"/> Alluvium <input type="checkbox"/> Organic <input type="checkbox"/> Bedrock
landscape position:	<input type="checkbox"/> Summit <input checked="" type="checkbox"/> Shoulder <input type="checkbox"/> Side slope <input type="checkbox"/> Toe slope
soil survey map units:	<u>928D 204E</u> slope <u>10</u> %    direction- <u>downhill</u>

Soil Log #1							
		<input type="checkbox"/> Boring	<input checked="" type="checkbox"/> Pit	Elevation _____		Depth to SHWT _____	
Depth (in)	Texture	fragment %	matrix color	redox color	consistence	grade	shape
0-8	Topsoil	<35	10/YR 3/2		Friable	Moderate	Blocky
9-28	Clay Loam	<35 35 - 50 >50	10/YR5/3		Firm	Moderate	Blocky
29	Clay	<35	10YR 5/3	7.5YR 4/6	Firm	Strong	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

Comments:

ALL THREE PIT VERY SIMILAR IN SOILS COLOR AND SLOPE

63498

**Soil Log #2**



# Mound Design - Aitkin county

Property Owner: KEVIN GULBRA

Date: 9/2/2021

Site Address: 63498 OSPREA AVE

PID: 20-0-011700

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
- 4)  Gal Septic tank (code minimum)       Gal Septic tank (design size / LUG req'd)  
Tank options: none
- 5)  GPD/ft<sup>2</sup> 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)      2.00      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<sup>2</sup> Absorption area Soil Loading Rate,      which gives a mound ratio of  (minimum)





(this must match the soil boring log) desired mound ratio **2.7**

24) **8** percent site slope (0-20% range) **8** (% downslope site slope, if different than upslope)

25) **24** inches, or **2.0** 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) **12** inch, or **1.0** ft. Sand Lift Mound **CRITICAL FOR FUTURE CERTIFICATIONS!!!**

27) **27.0** ft. base absorption width (with sand beyond rockbed as follows):  
**33.1** greater of: absorption width OR sand slope

28) **0.0** ft. upslope and sideslope sand upslope **6.1**  
**17.0** ft. Downslope sand down slope **16.5**

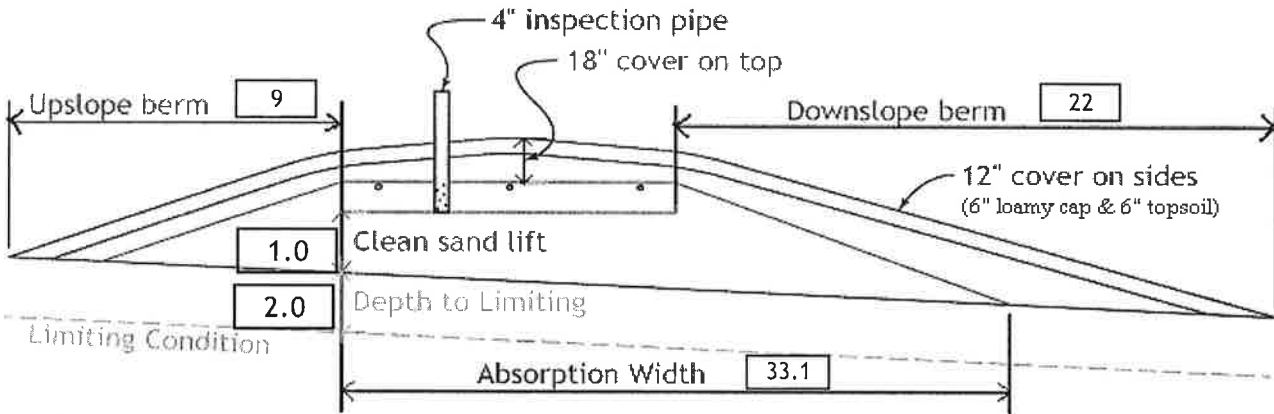
Individual slope ratios give BERM widths (topsoil beyond rockbed) of:

29) **4:1** upslope ratio **9** ft. upslope berm

30) **4:1** sideslope **15** ft. sideslope berms

31) **4:1** downslope **22** ft. downslope berm

32) Overall Dimensions: **10.0** ft. wide by **37.5** ft. long Rock bed  
**41** 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 **6** inches under pipe, plus 20% gives **13** yd<sup>3</sup> or \*1.4= **18** 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)  
**13.4** up + **50.8** downslope + **11.6** ends + **19.4** under rock = **114** yd<sup>3</sup> or \*1.4= **160** ton  
 plus 20%

35) Loamy Cap:  
**37** ft. by **64** ft. 6" deep, plus 20% gives **53** yd<sup>3</sup> or \*1.4= **74** ton

36) Topsoil:  
**41** ft. by **68** ft. 6" deep, plus 20% gives **62** yd<sup>3</sup> or \*1.4= **87** ton

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

*[Signature]* **LANGE NURSERY AND LANDSC** **1174** **9/2/2021**  
 Designer Signature Company License# Date

## Installer Summary

**1000** gallon Septic tank (minimum)

Tank options: none



500 gallon Dose tank (minimum) at 12.89 gpi

27 GPM @ 14 ft. of head, Pump required  
 9.5 inch swing on Demand float which translates to roughly 5.8 inches of float tether length  
 if time dosing is required --> 4.4 minutes ON time & 9 hours OFF time

22 inches from bottom of tank to "pump ON" float, or 12 inches to "timer ON" float  
 25 inches from bottom of tank to "Hi Level Alarm" or 35 inches to "Hi level alarm" if time dosed

40 ft. of 2.0 inch supply line with end feed manifold connection  
 (Tip: "top feed" manifold to control drainback)

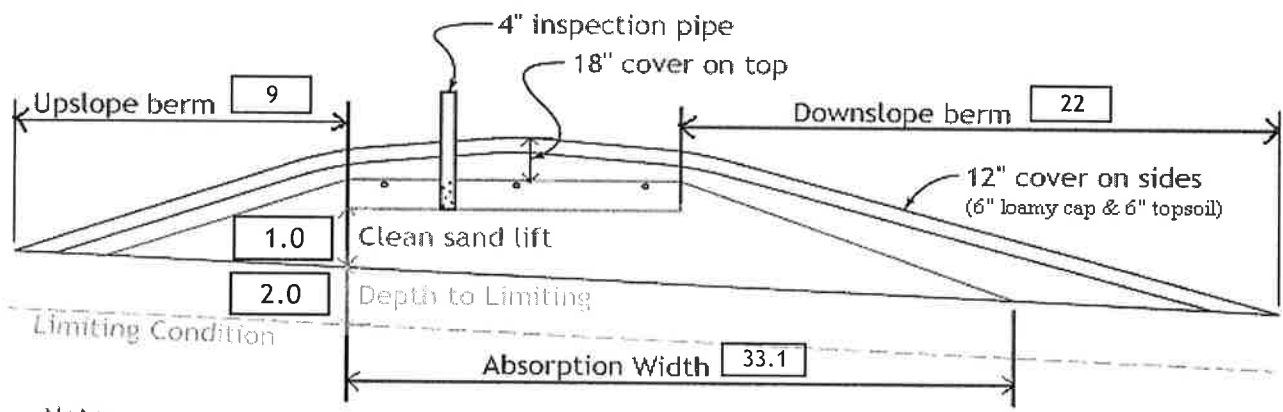
12 inch, or 1.0 ft. Sand Lift Mound  
 10.0 ft. wide by 37.5 ft. long Rock bed  
 3 laterals 2.00 inch diameter 35.5 ft. long 3.0 ft. lateral spacing  
 1/4" inch perfs 3.0 ft. perforation spacing

No Effluent filter & alarm  
 3 clean out & valve box assemblies

33.1 ft. Total sand ABSORPTION width (minimum)  
 6.1 ft. upslope and sideslope (sand beyond rockbed, minimum)  
 17.0 ft. Downslope (sand beyond rockbed, minimum)

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

4:1 upslope ratio	9 ft. upslope berm
4:1 sideslope	15 ft. sideslope berms
4:1 downslope	22 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*.

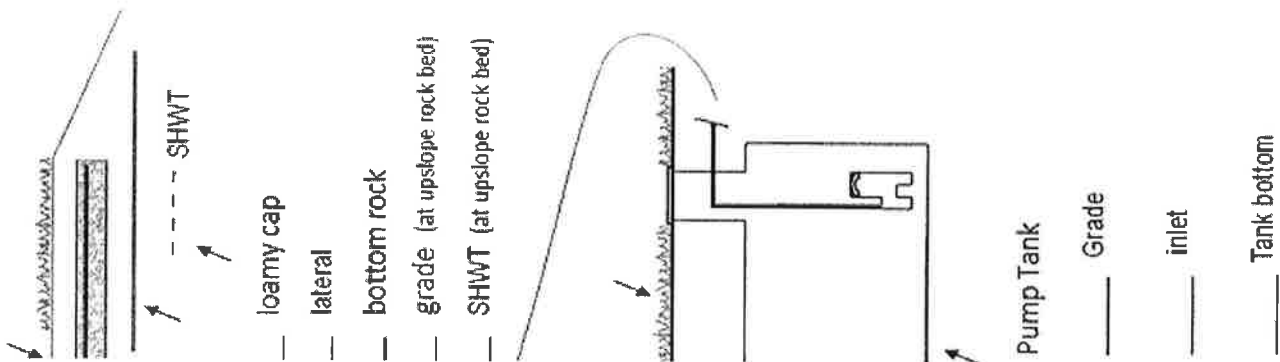
Rock Bed:	13.0 yd <sup>3</sup> or *1.4=	18 ton	6 inches under pipe
Mound Sand:	114 yd <sup>3</sup> or *1.4=	160 ton	calculation based on 3:1/4:1 slope from top of rockbe
Loamy Cap:	53 yd <sup>3</sup> or *1.4=	74 ton	6" deep
Topsoil:	62 yd <sup>3</sup> or *1.4=	87 ton	6" deep

**INSPECTOR CHECKLIST - mound**

- 63498 OSPREA AVE
- 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 sc 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 \_\_\_\_\_ 500 gallons \_\_\_\_\_
- dose pump \_\_\_\_\_ 27 gpm 14 head VERIFY PUMP CURVE 4.4 min ON 9 hr OFF
- float setting drop 9.5 inches at 12.9 gpi "DESIGNED" 5.8 inches approx float tether length  
120.0 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 12 inches. (Jar test : 2" sand leaves < 1/8" silt after 30 min)
- Absorption Sand beyond rock 6.1 upslope 17.0 downslope
- Bermed topsoil beyond rockbed 9 upslope 15 sideslope 22 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 \_\_\_\_\_ Re-use existing tank certification  
monitoring plan and type \_\_\_\_\_  
well abandonment form - if necessary \_\_\_\_\_





# Elevations and Slopes Report

ID No: 72

Customer Name: kevin gulbrua

Date:

Tests By: Enter Company Name

DRP: Enter Company DRP

MPCA License No:

<b>Site Address:</b>	<b>Legal Description:</b>
6398 osprey av	
macville, aitkin	macville, aitkin

## Site Elevations

Benchmark: well cap                      Transit Reading: 2.42   Ft                      Elevation: 100   Ft

Description	Reading (Ft)	Elevation (Ft)
BM: well cap	2.42	100
pit 1	1.25	101.17
pit 2	7.33	95.09
pit 3	10.8	91.62
sand base of proposed building	4.17	98.25
new slap	4.75	97.67
swale 20 north of slap	6	96.42
20ft north of n/w corner	5.5	96.92
60ft up slope from previous	1.58	100.84
proposed rock bed original gra	2.17	100.25
10 down grade	3	99.42
X inlet	6.75	95.67
X pump hieght	3.25	99.17
X dis pipe	-0.58	103

## Site Slopes

Description	Distance (Ft)	Drop (Ft)	Slope (%)
pit 1 to pit 3	120	9.5	7.9
pit 1 to pit 2	60	6.1	10.2
pit 2 to pit 3	60	3.5	5.8
60ft up slope from previous to 20ft north of n/w corner	60	3.9	6.5
proposed rock bed original gra to 10 down grade	10	0.8	8
dis pipe to pump hieght	40	3.8	9.5







## Septic System Management Plan for Above Grade Systems

The goal of a septic system is to protect human health and the environment by properly treating wastewater before returning it to the environment. Your septic system is designed to kill harmful organisms and remove pollutants before the water is recycled back into our lakes, streams and groundwater.

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 maintainer or service provider. However, it is **YOUR** responsibility to make sure all tasks get accomplished in a timely manner.

The University of Minnesota's *Septic System Owner's Guide* contains additional tips and recommendations designed to extend the effective life of your system and save you money over time.

*Proper septic system design, installation, operation and maintenance means safe and clean water!*

Property Owner	Kevin Gulbrack	Email	NA
Property Address	62968 Osprey Ave Swatara MN 55785	Property ID	20-0-011700
System Designer	Dave Lange	Contact Info	218-380-6939
System Installer	Dave Lange	Contact Info	218-380-6939
Service Provider/Maintainer	Buwa Sept Soluion	Contact Info	218-259-1542
Permitting Authority	Atkin Co	Contact Info	218-927-7342
Permit #		Date Inspected	

Keep this Management Plan with your Septic System Owner's Guide. The Septic System Owner's Guide includes a folder to hold maintenance records including pumping, inspection and evaluation reports. Ask your septic professional to also:

- Attach permit information, designer drawings and as-built of your system, if they are available.
- Keep copies of all pumping records and other maintenance and repair invoices with this document.
- Review this document with your maintenance professional at each visit; discuss any changes in product use, activities, or water-use appliances.

For a copy of the *Septic System Owner's Guide*, visit [www.bookstores.umn.edu](http://www.bookstores.umn.edu) and search for the word "septic" or call 800-322-8642.

**For more information see <http://septic.umn.edu>**





## Homeowner Management Tasks

These *operation and maintenance* activities are your responsibility. *Chart on page 6 can help track your activities.*

**Your toilet is not a garbage can. Do not flush anything besides human waste and toilet paper. No wet wipes, cigarette butts, disposal diapers, used medicine, feminine products or other trash!**

The system and septic tanks needs to be  
checked every 36 months

Your service provider or pumper/maintainer should evaluate if your tank needs to be pumped more or less often.

### Seasonally or several times per year

- *Leaks.* Check (listen, look) for leaks in toilets and dripping faucets. Repair leaks promptly.
- *Soil treatment area.* Regularly check for wet or spongy soil around your soil treatment area. If surfaced sewage or strong odors are not corrected by pumping the tank or fixing broken caps and leaks, call your service professional. *Untreated sewage may make humans and animals sick.* Keep bikes, snowmobiles and other traffic off and control borrowing animals.
- *Alarms.* Alarms signal when there is a problem; contact your service professional any time the alarm signals.
- *Lint filter.* If you have a lint filter, check for lint buildup and clean when necessary. If you do not have one, consider adding one after washing machine.
- *Effluent screen.* If you do not have one, consider having one installed the next time the tank is cleaned along with an alarm.

### Annually

- *Water usage rate.* A water meter or another device can be used to monitor your average daily water use. Compare your water usage rate to the design flow of your system (listed on the next page). Contact your septic professional if your average daily flow over the course of a month exceeds 70% of the design flow for your system.
- *Caps.* Make sure that all caps and lids are intact and in place. Inspect for damaged caps at least every fall. Fix or replace damaged caps before winter to help prevent freezing issues.
- *Water conditioning devices.* See Page 5 for a list of devices. When possible, program the recharge frequency based on *water demand (gallons)* rather than *time (days)*. Recharging too frequently may negatively impact your septic system. Consider updating to demand operation if your system currently uses time,
- *Review your water usage rate.* Review the Water Use Appliance chart on Page 5. Discuss any major changes with your service provider or pumper/maintainer.

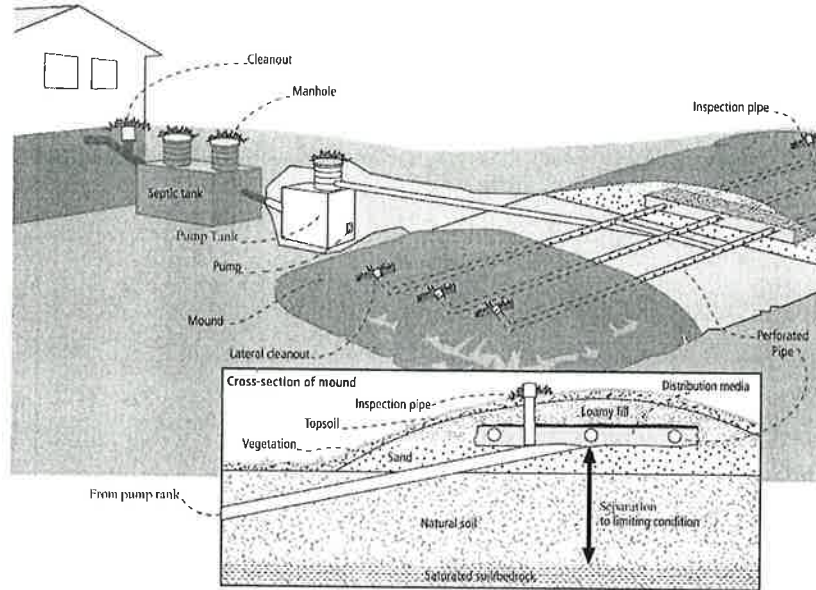
### During each visit by a service provider or pumper/maintainer

- Make sure that your service professional services the tank through the manhole. (NOT though a 4" or 6" diameter inspection port.)
- Ask how full your tank was with sludge and scum to determine if your service interval is appropriate.
- Ask your pumper/maintainer to accomplish the tasks listed on the Professional Tasks on Page 4.





Your Septic System



Septic System Specifics	
System Type: <input checked="" type="radio"/> I <input type="radio"/> II <input type="radio"/> III <input type="radio"/> IV* <input type="radio"/> V* (Based on MN Rules Chapter 7080.2200 – 2400) *Additional Management Plan required	<input type="checkbox"/> System is subject to operating permit* <input type="checkbox"/> System uses UV disinfection unit* Type of advanced treatment unit _____

Dwelling Type	Well Construction
Number of bedrooms: <u>3</u> System capacity/ design flow (gpd): <u>450</u> Anticipated average daily flow (gpd): <u>200</u> Comments _____ Business? : <input type="radio"/> Y <input checked="" type="radio"/> N What type? _____	Well depth (ft): <u>82 Ft.</u> <input checked="" type="checkbox"/> Cased well Casing depth: <u>82 Ft</u> <input type="checkbox"/> Other (specify): _____ Distance from septic (ft): <u>50+</u> Is the well on the design drawing? <input checked="" type="radio"/> Y <input type="radio"/> N

Septic Tank	
<input type="checkbox"/> First tank Tank volume: <u>1000</u> gallons Does tank have two compartments? <input checked="" type="radio"/> Y <input type="radio"/> N <input type="checkbox"/> Second tank Tank volume: <u>500</u> gallons <input type="checkbox"/> Tank is constructed of _____ <input type="checkbox"/> Effluent screen: <input type="radio"/> Y <input checked="" type="radio"/> N Alarm <input type="radio"/> Y <input checked="" type="radio"/> N	<input checked="" type="checkbox"/> Pump Tank <u>500</u> gallons <input type="checkbox"/> Effluent Pump make/model: <u>Zoller 98</u> Pump capacity <u>34</u> GPM TDH <u>14</u> Feet of head <input type="checkbox"/> Alarm location <u>patistol</u>

Soil Treatment Area (STA)	
Mound/At-Grade area (width x length): _____ ft x _____ ft Rock bed size (width x length): <u>10</u> ft x <u>38</u> ft Location of additional STA: _____ Type of distribution media: <u>Rock</u>	<input checked="" type="checkbox"/> Inspection ports <input checked="" type="checkbox"/> Cleanouts <input type="checkbox"/> Surface water diversions <input type="checkbox"/> Additional STA not available





## Professional Management Tasks

These are the operation and maintenance activities that a pumper/maintainer performs to help ensure long-term performance of your system. At each visit a written report/record must be provided to homeowner.

### Plumbing/Source of Wastewater

- Review the Water Use Appliance Chart on Page 5 with homeowner. Discuss any changes in water use and the impact those changes may have on the septic system.
- Review water usage rates (if available) with homeowner.

### Septic Tank/Pump Tanks

- *Manhole lid.* A riser is recommended if the lid is not accessible from the ground surface. Insulate the riser cover for frost protection.
- *Liquid level.* Check to make sure the tank is not leaking. The liquid level should be level with the bottom of the outlet pipe. (If the water level is below the bottom of the outlet pipe, the tank may not be watertight. If the water level is higher than the bottom of the outlet pipe of the tank, the effluent screen may need cleaning, or there may be ponding in the soil treatment area.)
- *Inspection pipes.* Replace damaged or missing pipes and caps.
- *Baffles.* Check to make sure they are in place and attached, and that inlet/outlet baffles are clear of buildup or obstructions.
- *Effluent screen.* Check to make sure it is in place; clean per manufacturer recommendation. Recommend retrofitted installation if one is not present.
- *Alarm.* Verify that the alarm works.
- *Scum and sludge.* Measure scum and sludge in each compartment of each septic and pump tank, pump if needed.

### Pump

- *Pump and controls.* Check to make sure the pump and controls are operating correctly.
- *Pump vault.* Check to make sure it is in place; clean per manufacturer recommendations.
- *Alarm.* Verify that the alarm works.
- *Drainback.* Check to make sure it is draining properly.
- *Event counter or elapsed time meter.* Check to see if there is an event counter or elapsed time meter for the pump. If there is one or both, calculate the water usage rate and compare to the anticipated use listed on Design and Page 2. Dose Volume: \_\_\_\_\_ gallons: Pump run time: \_\_\_\_\_ Minutes

### Soil Treatment Area

- *Inspection pipes.* Check to make sure they are properly capped. Replace caps and pipes that are damaged.
- *Surfacing of effluent.* Check for surfacing effluent or other signs of problems.
- *Lateral flushing.* Check lateral distribution; if cleanouts exist, flush and clean at recommended frequency.
- *Vegetation* - Check to see that a good growth of vegetation is covering the system.

**All other components – evaluate as listed here:**







**Water-Use Appliances and  
Equipment in the Home**

Appliance	Impacts on System	Management Tips
Garbage disposal	<ul style="list-style-type: none"> <li>• Uses additional water.</li> <li>• Adds solids to the tank.</li> <li>• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of a garbage disposal is not recommended.</li> <li>• Minimize garbage disposal use. Compost instead.</li> <li>• To prevent solids from exiting the tank, have your tank pumped more frequently.</li> <li>• Add an effluent screen to your tank.</li> </ul>
Washing machine	<ul style="list-style-type: none"> <li>• Washing several loads on one day uses a lot of water and may overload your system.</li> <li>• Overloading your system may prevent solids from settling out in the tank. Unsettled solids can exit the tank and enter the soil treatment area.</li> </ul>	<ul style="list-style-type: none"> <li>• Choose a front-loader or water-saving top-loader, these units use less water than older models.</li> <li>• Limit the addition of extra solids to your tank by using liquid or easily biodegradable detergents. Limit use of bleach-based detergents and fabric softeners.</li> <li>• Install a lint filter after the washer and an effluent screen to your tank</li> <li>• Wash only full loads and think even – spread your laundry loads throughout the week.</li> </ul>
Dishwasher	<ul style="list-style-type: none"> <li>• Powdered and/or high-phosphorus detergents can negatively impact the performance of your tank and soil treatment area.</li> <li>• New models promote “no scraping”. They have a garbage disposal inside.</li> </ul>	<ul style="list-style-type: none"> <li>• Use gel detergents. Powdered detergents may add solids to the tank.</li> <li>• Use detergents that are low or no-phosphorus.</li> <li>• Wash only full loads.</li> <li>• Scrape your dishes anyways to keep undigested solids out of your septic system.</li> </ul>
Grinder pump (in home)	<ul style="list-style-type: none"> <li>• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.</li> </ul>	<ul style="list-style-type: none"> <li>• Expand septic tank capacity by a factor of 1.5.</li> <li>• Include pump monitoring in your maintenance schedule to ensure that it is working properly.</li> <li>• Add an effluent screen.</li> </ul>
Large bathtub (whirlpool)	<ul style="list-style-type: none"> <li>• Large volume of water may overload your system.</li> <li>• Heavy use of bath oils and soaps can impact biological activity in your tank and soil treatment area.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid using other water-use appliances at the same time. For example, don’t wash clothes and take a bath at the same time.</li> <li>• Use oils, soaps, and cleaners in the bath or shower sparingly.</li> </ul>
<b>Clean Water Uses</b>	<b>Impacts on System</b>	<b>Management Tips</b>
High-efficiency furnace	<ul style="list-style-type: none"> <li>• Drip may result in frozen pipes during cold weather.</li> </ul>	<ul style="list-style-type: none"> <li>• Re-route water directly out of the house. Do not route furnace discharge to your septic system.</li> </ul>
Water softener Iron filter Reverse osmosis	<ul style="list-style-type: none"> <li>• Salt in recharge water may affect system performance.</li> <li>• Recharge water may hydraulically overload the system.</li> </ul>	<ul style="list-style-type: none"> <li>• These sources produce water that is not sewage and should not go into your septic system.</li> <li>• Reroute water from these sources to another outlet, such as a dry well, draintile or old drainfield.</li> </ul>
Surface drainage Footing drains	<ul style="list-style-type: none"> <li>• Water from these sources will overload the system and is prohibited from entering septic system.</li> </ul>	<ul style="list-style-type: none"> <li>• When replacing, consider using a demand-based recharge vs. a time-based recharge.</li> <li>• Check valves to ensure proper operation; have unit serviced per manufacturer directions</li> </ul>





Homeowner Maintenance Log

Track maintenance activities here for easy reference. See list of management tasks on pages 3 and 4.

Activity	Date accomplished									
<b>Check frequently:</b>										
Leaks: check for plumbing leaks*										
Soil treatment area check for surfacing**										
Lint filter: check, clean if needed*										
Effluent screen (if owner-maintained)***										
Alarm**										
<b>Check annually:</b>										
Water usage rate (maximum gpd _____)										
Caps: inspect, replace if needed										
Water use appliances – review use										
Other:										


\*Monthly

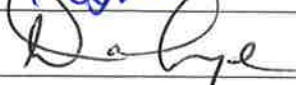
\*\*Quarterly

\*\*\*Bi-Annually

Notes:

"As the owner of this SSTS, 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 this 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 9-2-21

Management Plan Prepared By:  Certification # 1174

Permitting Authority: Atkin zoning

