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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	Trang Kuefler	Email	tranghphan@hotmail.com
Property Address	18XXXX- 329th Pl Isle	Property ID	16-1-090100
System Designer	ARK Septic LLC	Contact Info	763-760-4172
System Installer		Contact Info	
Service Provider/Maintainer		Contact Info	
Permitting Authority	Aitkin County	Contact Info	
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 and search for the word "septic" or call 800-322-8642.

For more information see http://septic.umn.edu

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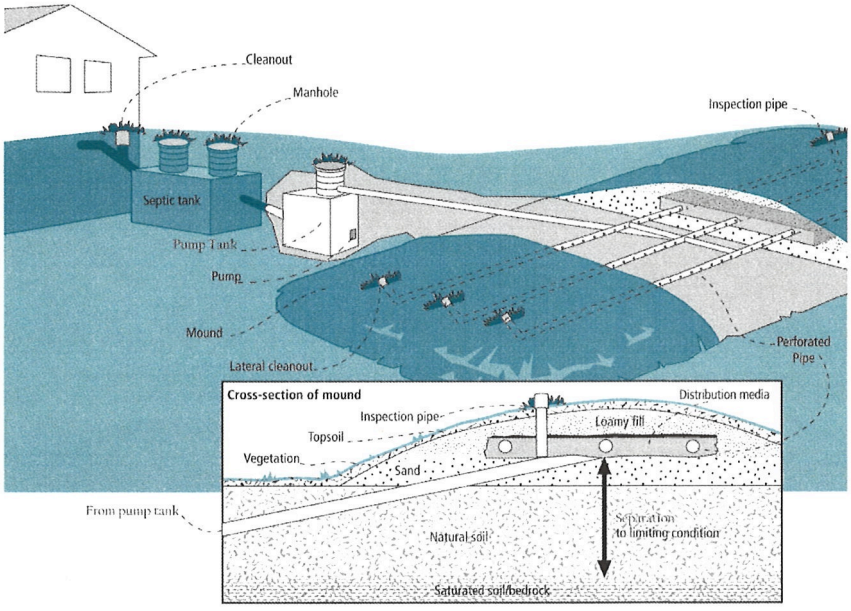
Your Septic System



Septic System Specifics

System Type: ◯ I ◯ II ◉ III ◯ IV* ◯ V*

(Based on MN Rules Chapter 7080.2200 – 2400)

**Additional Management Plan required*

☐ System is subject to operating permit*

☐ System uses UV disinfection unit*

Type of advanced treatment unit _____

Dwelling Type

Number of bedrooms: 3

System capacity/ design flow (gpd): 450

Anticipated average daily flow (gpd): _____

Comments _____

Business? : ◯ Y ◉ N What type? _____

Well Construction

Well depth (ft): deep

- ☐ Cased well Casing depth: _____
- ☐ Other (specify): _____

Distance from septic (ft): 50+

Is the well on the design drawing? ◉ Y ◯ N

Septic Tank

- ☐ First tank *Tank volume:* 1500 *gallons*
  Does tank have two compartments? ◉ Y ◯ N
- ☐ Second tank *Tank volume:* _____ *gallons*
- ☐ Tank is constructed of Concrete
- ☐ Effluent screen: ◯ Y ◉ N Alarm ◉ Y ◯ N

- ☐ Pump Tank 1000 *gallons*
- ☐ Effluent Pump *make/model:* _____
  Pump capacity 27 GPM
  TDH 26 Feet of head
- ☐ Alarm location above pump

Soil Treatment Area (STA)

Mound/At-Grade area (width x length): 43 ft x 72 ft

Rock bed size (width x length): 10 ft x 37.5 ft

Location of additional STA: _____

Type of distribution media: 6" Rock below pipe

- ☑ Inspection ports ☑ Cleanouts
- ☑ Surface water diversions
- ☐ Additional STA not available

Homeowner Management Tasks

These op*eration and maintenance ac*tivities 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.

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	• Uses additional water. • Adds solids to the tank. • Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.	• Use of a garbage disposal is not recommended. • Minimize garbage disposal use. Compost instead. • To prevent solids from exiting the tank, have your tank pumped more frequently. • Add an effluent screen to your tank.
Washing machine	• Washing several loads on one day uses a lot of water and may overload your system. • Overloading your system may prevent solids from settling out in the tank. Unsettled solids can exit the tank and enter the soil treatment area.	• Choose a front-loader or water-saving top-loader, these units use less water than older models. • 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. • Install a lint filter after the washer and an effluent screen to your tank • Wash only full loads and think even – spread your laundry loads throughout the week.
Dishwasher	• Powdered and/or high-phosphorus detergents can negatively impact the performance of your tank and soil treatment area. • New models promote "no scraping". They have a garbage disposal inside.	• Use gel detergents. Powdered detergents may add solids to the tank. • Use detergents that are low or no-phosphorus. • Wash only full loads. • Scrape your dishes anyways to keep undigested solids out of your septic system.
Grinder pump (in home)	• Finely-ground solids may not settle. Unsettled solids can exit the tank and enter the soil treatment area.	• Expand septic tank capacity by a factor of 1.5. • Include pump monitoring in your maintenance schedule to ensure that it is working properly. • Add an effluent screen.
Large bathtub (whirlpool)	• Large volume of water may overload your system. • Heavy use of bath oils and soaps can impact biological activity in your tank and soil treatment area.	• Avoid using other water-use appliances at the same time. For example, don't wash clothes and take a bath at the same time. • Use oils, soaps, and cleaners in the bath or shower sparingly.
Clean Water Uses	**Impacts on System**	**Management Tips**
High-efficiency furnace	• Drip may result in frozen pipes during cold weather.	• Re-route water directly out of the house. Do not route furnace discharge to your septic system.
Water softener Iron filter Reverse osmosis	• Salt in recharge water may affect system performance. • Recharge water may hydraulically overload the system.	• These sources produce water that is not sewage and should not go into your septic system. • Reroute water from these sources to another outlet, such as a dry well, draintile or old drainfield. • When replacing, consider using a demand-based recharge vs. a time-based recharge. • Check valves to ensure proper operation; have unit serviced per manufacturer directions
Surface drainage Footing drains	• Water from these sources will overload the system and is prohibited from entering septic system.	

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Homeowner Maintenance Log

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

Activity	Date accomplished									
Check frequently:										
Leaks: check for plumbing leaks*										
Soil treatment area check for surfacing**										
Lint filter: check, clean if needed*										
Effluent screen (if owner-maintained)***										
Alarm**										
Check annually:										
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: Trang Kuefler Trang Kuefler (Aug 3, 2023 08:29 CDT) Monte Kuefler Monte Kuefler (Aug 3, 2023 08:40 CDT) Date

Management Plan Prepared By: Ashley Krause Certification # 9575

Permitting Authority: Aitkin County

Howard Homes, Inc - Kuefler Septic Management Plan

Final Audit Report 2023-08-03

Created:	2023-08-03
By:	Lynn Schlagel (lynn@howardhomesinc.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAqai2MwgxUqOuM1H_JnolRvemccvhimTR

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