Septic System

General Use and Maintenance Guidelines

Septic Systems and Septic Alarms

All Hickory Woods homes have a septic system connected to a leach field.

What is a Septic System?

A septic system is a system that collects, treats, and disperses sewage. The septic system consists of piping, a septic tank, a leach field, and sometimes an effluent pump. The piping exits the house and enters the septic tank. The septic tank collects the sediment and settles out the solids. Bacteria grow within the tank and feed on the sewage which breaks it down and provides some treatment. The septic tank holds the effluent providing time for a large percentage of the solids to settle out. Once the effluent leaves the septic tank it flows to the leach field.

A septic system is a biological ecosystem for the bacteria. As such, the introduction of harsh chemicals or an extreme amount of sewage can kill the bacteria and clog the leach field, resulting in expensive repair and replacement. Heavy solids settle to the bottom where bacterial action digests the waste creating sludge and gasses. Lighter solids that float such as grease, oils and fats, rise to the top and form an undesirable scum layer that may also clog the leach field.

The leach fields in Hickory Woods are manufactured by Presby Environmental and called Enviro-Septic. They consist of a 12” HDPE (Plastic) pipe, wrapped in filter fabric and plastic media. This filter fabric and media provides a place for additional bacteria to grow that consume much of the remaining pollutants within the effluent. After flowing through the fabric the effluent then flows through a 6” sand layer and into the natural aquifer. The 6” sand and natural soil beneath provides the remaining treatment so the effluent is fully treated by the time it reaches the natural aquifer.

The Hickory Woods Homeowners Association (HOA) is NO LONGER responsible for the leach field portion of the system.

Not properly using or maintaining your septic system may result in damage to the leach field.

Septic Tank System

The septic tank is a large buried rectangular concrete tank with either two or three chambers. The residents who have a pump as part of their septic system will have three chamber tanks.

Most residents have a 1500-gallon tank with two compartments and no pump.

23 units (and the clubhouse) have a 2700-gallon tank with pumps and three compartments.

> These are identified by a red alarm light outside the house and an alarm box located in the basement.

Maintaining Your System

You as a homeowner in Hickory Woods are responsible for maintaining your septic tank and for properly using and maintaining the system so that damage to the components will not occur.

Proper maintenance of the system will provide a lifetime of use with few or no problems. Improper use or lack of maintenance may lead to complete failure of the system, particularly the leach fields.

To avoid damage to the system you must limit what is put into your drains.

- Don't pour chemicals, such as bleach, harsh cleaners, etc. down your drains. These can destroy the bacteria that decomposes your waste.
- Don't drive over the septic drain field in your vehicles or with heavy machinery.
- Dispose of oil or grease in proper containers and recycle them or put them out with the trash. Do not pour oil or grease down the drain. These can clog the pipes and if you have one, damage the pump.
- Don't flush anything down the toilet except bodily waste and white toilet paper. Other materials, such as sanitary products, paper towels, non-biodegradable plastics, cigarettes, cat litter, etc. will damage pumps and clog drains.
- Do not install or use a garbage disposal unless it is rated for septic system use. Be sure to use the disposal according to the directions to avoid damage to the septic system.
- Water softeners should not be used unless the drainage during the cleaning cycle is not routed to the septic tank.

Septic Tank Maintenance

The unit owners are responsible for the pumping of the septic tanks.

The CLD engineer who consulted with us on transition had the following advice for pumping.

> **Pumping**
>
> It is recommended that septic tanks be pumped every 2-3 years. The cost of this can vary, $300+ *(shop around)* for each tank, but may be less if multiple tanks are pumped simultaneously. … With this being a 55+ community, the solids generated may be less than a family would generate, so the pumping time may be extended, however it is recommended to stick with the 2-3 year window and ask the pumper to provide recommendations if the pumping schedule can be extended."

Based on what we expect normal usage to be, the septic task force is recommending that the tank should be pumped out every 2-3 years. There are a number of service providers available and charges may vary which can include digging down to the tank cover.

Regular pumping of the system is necessary to avoid damage to the leach fields. The opening and pumping of the system is also a good time to have the pump checked if you have one.

Shared Leach Fields and Septic Tank Pumps

Twenty-three homes here in Hickory Woods share leach fields with homes around them. These homes are equipped with a pump tank which pumps waste water from their septic tanks to the shared leach field.

This 2700-gallon pump tank contains a sewage effluent pump, control floats, and a high-water alarm.

The control floats are set so that a specific volume of effluent is sent to the leach field. When the effluent in the pump tank rises to the "on" set level, the pump is activated until the level reaches the pump "off" float setting.

If you are one of the 23 unit owners with a pump system the following information is important to understand. If you do not have a pump, this information does not apply to your home.

Pump Alarms

Should the "on" float fail to activate the pump or should the pump itself fail the level of effluent in the pump tank will continue to rise in the pump chamber. When this level reaches the alarm float an audible and visual signal will be activated. (Here in Hickory Woods, homes that are serviced by pumps have a red light attached to the outside of the house and an audible alarm in the basement.)

Why septic tank alarms go off?

An alarm system gives you a warning when the water level in the pump tank is rising more than it should be. All septic systems with pumps should have some sort of timer installed. The timer controls when the pump is allowed to pump waste water into the drainfield. This prevents the leach field from being overdosed during periods of increased water usage.

What creates alarms:

The alarm may be temporary, due to excess water entering the septic system, or it may be due to a failure of the system.

One of the temporary causes is, too much water is being used. Several loads of laundry, increased amount of dish washing, and a lot of long showers are all reasons that can cause too much water usage.

Something may be wrong with one of the septic system's components. The pump, floats, alarm, timer, etc. may have something wrong that is not allowing them to work together properly.

Also, a failure may have resulted due to foreign material clogging the pump or floats.

What to do if your alarm goes off:

Push the silence button on the alarm box. The box may be located near the circuit breaker panel or on another wall.

This will turn off the audio alarm. There will be a red light and a green light located on the alarm box. The green light should always be on. The green light means the system has power. The red

light means the alarm is getting a signal from the pump tank that the water level is getting higher than it should be.

Next, check the septic breaker to make sure the septic system has power. If the breaker is on, then check to see if there is any water puddling around the septic tanks. If you have been using large amounts of water, reduce your water usage and give the septic system a couple of pump cycles (12-16 hours) to see if the alarms red light goes out on its own. If the red light goes out, the system is working properly. It just needed to catch up with the additional water that was introduced into the system.

If the red light is still on after 12-16 hours, contact your septic system contractor to set up a service call. An alarm signal does not mean sewage is about to back up into the house. Alarms are installed to give you 24-48 hours of normal usage until sewage will start to back up. If the alarm is going off, reduce your water usage to a minimum. This will allow the pump to catch up quicker. If something is wrong, reduced water flow will ensure there is plenty of time before sewage backs up into the house.

Service Responsibility of pumps

The unit owners are responsible for the maintenance and service of the pumps. In the event of an alarm, you should call the property manager or a septic system contractor and request service.

The septic tanks are large enough and the pumps are set up so that you should have at least a couple of days between an alarm and a serious overflow that backs the water up into your home. However, minimizing water usage during an alarm situation is strongly recommended.

If you have any questions about your septic systems please feel free to contact one of the Board of Directors and we will be happy to assist you.

Engineer's Recommendations

As part of transition the CLD engineer provided Hickory Woods with the following recommendations. Some of these may be a little different from what we have recommended in the foregoing materials. The emphasis (underlining) has been added.

> "Below are some recommendations on how to protect the leach fields
>
> - Pump the tank every 2-3 years
> - If an effluent pump is included, it should be <u>inspected yearly</u> by a septic pump service
> - <u>Do not use garbage disposals</u>. The grinder chops solids too fine and they can clog the leach field as they pass through the septic system.
> - <u>Correct plumbing leaks as soon as possible</u>. A leaky toilet or sink can flush large amounts of water through the tank, potentially causing failure.
> - <u>Use chemicals sparingly</u>. Bleach, cleaning products, and excess beauty products can kill the helpful bacteria in the leach field.
> - Do not dump chemicals, including but not limited to paint, gasoline, bleach, etc. down the drain.

- Do not dump fats, oils, and grease down the drain. Instead collect them and place them in the trash. The bacteria cannot consume the high fat content and it could clog the leach field.
- If an outlet filter is installed, be sure to inspect and maintain it regularly. An outlet filter will clog over time if not maintained.
- If a large usage is anticipated such as a party, it is recommended to pump the tank in advance or rent a port-o-potty. A large amount of sewage being flushed can flush the solids directly to the leach field.
- Water softeners should not outlet to the leach field. If provided, the softener system should outlet to a drywell instead. The salts will kill the bacteria."

Additional Resources

A fact sheet is provided from the

New Hampshire Department of Environmental Services (NHDES), and also available:

https://www.des.nh.gov/land/septic-systems