

PREVENTATIVE MAINTENANCE TIPS AND WARNING SIGNS OF SEPTIC ISSUES FOR HOMEOWNERS

Maintenance is key to the efficient performance of any sewage system. By emphasizing proper maintenance and the knowledge to recognize when issues may arise, you can reduce the risk of public health hazards and environmental contamination. To do this, homeowners should understand how the septic configuration operates and where problems can occur in the process. A conventional septic system consists of a septic tank and a soil absorption field. This system will receive both “gray water” and “black water” from residential houses to treat. Gray water is typically associated with bathing, showers, bathroom sinks, washing machines and dishwashers and has lower levels of contamination. Black water comes from toilets and kitchen sinks where higher loads of organic material (human or domestic food waste) are produced. The black water contains harmful bacteria, nutrients, waste solids and other pathogens that are treated by anaerobic bacteria in the septic tank before discharge. The effluent then travels to a secondary treatment method, such as absorption trenches, to be dispersed through the soil profile to convert organic material to minerals. Some systems use gravity flow or pump stations to move effluent from primary to secondary treatment. Louisiana has many different secondary treatment methods including oxidation ponds and sand filtration. The most common units are aerobic treatment units that promote aerobic bacteria to break down effluent using dissolved oxygen bubbles. No matter the configuration of your system, the process relies on a few factors including microbial activity, total volume of effluent and concentration of contaminants. Making sure your home has the right size system is imperative to the proper treatment of the generated effluent. The following presents best practices for septic systems and prevalent issues that occur in different septic system configurations.

Tips for Homeowners to Maintain Efficient Systems

- Septic tanks should be inspected every six years and pumped at least every eight years by a licensed sewage hauler. This will help reduce the risk of clogs and water quality issues.
- Keep detailed records of your systems including the date of installation, the capacity of the unit, records of service, contract agreements and pictures of model names. If financially feasible, it's a good practice to have a replacement blower or sump pump specific to your manufactured unit in case of emergency failure.
- Ensure all runoff or flood water is directed away from the septic system to decrease the saturation around the unit. This includes gutters, downspouts and paved surfaces which can add more water volume to the discharge areas causing effluent to not disperse efficiently.
- Make notes of how your unit operates when it's running efficiently. This can include the sounds from the pumps or dispersion method, the smell from the discharge areas, the color of the effluent at different stages in the process or another characteristic that you notice about your unit. Louisiana Department of Health has a [visual inspection checklist](#) to help identify the source of issues based on operating parameters.
- Practice water conservation to reduce the overall volume of water entering the unit. This can include turning off faucets when not in use, switching to more efficient appliances or taking quicker showers. A large source of undesired water volume is leaky fixtures and pipes. For a guide to water conservation, see [Better Water Practices](#) for tips. These will solidify habits to reduce the average flow of your unit to ensure proper treatment.

Tips for Homeowners to Reduce Risk of Contamination

- **Do not** allow compaction around the unit from heavy equipment parking or driving over the area. Additionally, do not build permanent structures near septic systems. The compaction from these events could cause damage or clogging to units.
- **Protect** your system from tree roots or shrubs which may lead to clogs, breaks or blockage. This type of vegetation can interfere with the unit design and distribution of effluent to the discharge point.
- **Do not** overuse chemical cleaners, especially antimicrobial or disinfecting products. This could have adverse effects on the microbial content in the septic system used to treat the waste. Low concentrations should not have major impacts, but higher concentrations can cause issues in your system. Consider alternative disposal of cleaning water in areas other than the drain.
- **Do not** overload your system with domestic food scraps from garbage disposal. This can increase the overall sludge content leading to clogs, backups and the need for more pump-outs during the lifespan of the septic unit. It is best to scrape all residual food into the trash can prior to washing.
- **Do not** flush other solid materials besides human waste. This includes wrappers, feminine hygiene products, condoms, hair, paper towels, facial tissues, rags and dental flosses, to name a few. Additionally, do not wash items like cat litter, grease, oils, fats, cigarette butts, coffee grounds or other nondigestible materials down the drain. All of these items will increase sludge content or floating scum in your unit which leads to clogs and backups. Nondigestible and nonbiodegradable material should be disposed of in the trash can.
- **Do not** dispose of other harsh chemicals down the drain including pesticides, acids, petroleum products or other chlorine products. These compounds can result in death of microbes in the septic system and reduce processing of effluent.

Warning Signs That Indicate Issues With Septic Systems

During everyday activities, if you notice any of the following, there may be an issue with your septic unit.

- Sewage odor in the house or yard
- Wet spots or standing water around the unit or discharge area
- Plumbing backups
- Audible alarms from the unit
- Visible lights from the unit
- Unfamiliar operating noises
- Grayish-brown water in aeration chamber of aerobic treatment units. This should be chocolate-brown colored effluent.
- Excess solids or floating material in chambers
- Odd growth patterns in the unit or discharge area

References

- ◆ https://btnep.org/wp-content/uploads/2019/06/BTNEP_wastewater.pdf
- ◆ <https://ldh.la.gov/assets/oph/Center-EH/sanitarian/onsitewastewater/VISUALCHECKLIST.pdf>
- ◆ <https://ldh.la.gov/assets/oph/Center-EH/sanitarian/onsitewastewater/TROUBLESHOOTINGGUIDFOMECHANICALPLANTS.pdf>
- ◆ <https://ldh.la.gov/assets/oph/Center-EH/sanitarian/onsitewastewater/HomeATUBrochure.pdf>

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