Prolonging the life of your system

The wastewater stream should contain only the products of normal activates of a home, if other substances enter the wastewater stream they may disrupt the systems performance.

The system's ability to treat the wastewater is affected by several factors, including the system's capacity, the amount and strength of the wastewater, the timing of the water entering the system and the types of materials it receives.

Everyone realizes that the Quality of sewage from a restaurant is more to treat than that from a residence, because of the presence of FOG – fats, oils and greases. But not enough attention is given to the fact that Home Sewage can also include high FOG contents from cosmetics, bath oils, suntan lotion, etc. in addition the cooking greases and food scraps.

Medications taken by persons living in the home, bleaches and non-eaten plastics and paper can also play havoc with the septic system.

Home sewage should have no higher than 60 mg/l in total suspended solids, 20 mg/l in FOG and 300 mg/l in BOD. Exceeding any of these limits can cause serious damage and malfunction to the septic system, in addition to that causes may be from more volume of sewage than for which the system was designed for.

Aerobic Treatment units (ATU's) must be approved by TCEQ and installed, managed, monitored and maintained in accordance with manufacturer's recommendations. All wiring and piping must be in accordance with Ch. 285, septic system regulations, as a minimum and are inspected and approved by the county to ensure those regulations are being met by the installers.

Aerobic system Process

▸ **Removal of gross solids (trash):** After the wastewater leaves the house through a pipe, it enters a trash or septic tank, where the solids in the wastewater settle to the bottom or float to the surface.

▸ **Aeration:** Air is pumped into the aeration chamber of the unit, and the wastewater remains in the chamber long enough to allow the microbes to convert the waste. Aerobic systems **must** have a continuous supply of oxygen to keep the microbes healthy.

▸ **Clarification:** The clarifier removes the microbial cells, cell waste, and dead cells from the wastewater. The solids that settle in the clarifier are returned to the previous compartment for further treatment.

▸ **Disinfection:** Systems using spray distribution of effluent include a disinfection device as part of the treatment system. In the disinfection process, disease-causing organisms are brought down to an acceptable level or inactivated. However, the wastewater is only disinfected, not sterilized. Chlorination is the most common form of disinfection for aerobic systems. In this process, chlorine is added to the wastewater to reduce the number of pathogens in it. The chlorine oxidizes and destroys the cell enzymes of the pathogens. There are two types of chlorinators—tablet chlorinators and liquid chlorinators.

Spray fields:

Although a spray field is like a lawn sprinkler, it should be viewed very differently. The water being distributed is treated wastewater—**not drinking water**. Residents, pets, and plants should avoid contact with it. Texas regulations specifically prohibit effluent from being applied to vegetable gardens because some pathogens are resistant to disinfection.

treatment interferences:

▸ **Whirlpool or jacuzzi tubs:** Typically use large amounts of water. Their use will affect the wastewater treatment system by exceeding the hourly flow limit of the treatment unit

The amount of laundry done each day is also important. Spread out the loads over time to help the system perform as designed.

▸ **In-home businesses:** Can directly affect the system. Use for daycare increases the overall flow and can increase the use of antibacterial soaps. The system can also be affected by other small businesses that use chemicals, such as antique refinishing services, beauty shops, lawn care services, photo labs, dog grooming services, taxidermy shops, etc. Barbershops typically discharge large amounts of hair and can clog your pump and or sprinkler heads.

▸ **Prescription antibiotics and drugs: Are** extremely hard on the microbes in the system. Flushing them into the wastewater system increases the maintenance. If anyone in the home is ill on any kind of antibiotic treatment it can harm the aerobic chamber causing the system to smell and sludge up.

▸ Heavy use of bath and body oils can raise the fats, oils, and grease (FOG) values in the system. Removal or reduction of these can improve the performance of the system.

▸ G**arbage disposal:** Adds to the overall loading of the system in four ways: - More waste enters the treatment system. - Because the organic matter has not been digested, it takes longer to break down. - More water is used to rinse out the sink. - Smaller particles take longer to settle. Therefore, people who use garbage disposals at home need a larger system to treat the wastewater and more maintenance activities are required.

Killing your aerobic system:

▸ **Toxic drain cleaners**: kill the bacteria, resulting in a limited microbial activity in the tank and poor separating characteristics.

▸ Antibacterial soap also affects the biology of the tank.

▸ **Automatic cleaners:** continually send chemicals into the system, which can cause long-term problems.

Foreign objects/Backup

▸ Excessive amounts of toilet paper cause sludge to build up faster and potentially cause the system to back up.

▸ Treated toilet paper, such as the type that contains lotions, do not settle well and can form a thick layer of scum at the top of the tank.

▸ Other paper products, such as wet wipes, paper towels, etc. should not enter the system.

▸ **Flushable cleaning products:** Many wipes and toilet cleaning materials are labeled as “septic safe.” This statement typically refers to their ability to flow through the piping. These items will collect in the treatment system and increase the need for maintenance.

▸ **Trash and no digestible material:** increase the amount of maintenance required and may even shorten the life of the components. Examples are rags, toys, diapers, condoms, cat litter, plastic bags, coffee grounds, cigarette filters, and feminine hygiene products. Many of these items have neutral buoyancy and will pass through the treatment components. Cat litter and coffee grounds add to the

sludge that must be pumped out during maintenance. Diapers must be removed individually. Make a list of the cleaning and antibacterial products used in your home. When using these products, keep in mind that they can have a cumulative effect on the treatment system. If something will harm the microbes in the system, do not send it down the drain.

Returning after vacation

A vacation or extended absence develops a condition of limited food supply in the wastewater treatment system. The microbial population is reduced, which also reduces treatment once the vacationer returns and wastewater addition resumes. Therefore, the wastewater loading should be increased gradually for the first couple of days, which allows the microbial population to grow. Avoid greater than average water usage such as excessive laundry, which can result in lower quality water passing through the system.

Homeowner Responsibilities:

Adding Bleach (Spray Distribution)

1. Remove 4” PVC Cap located on the septic system
2. If empty pour 3-4 Gallons until blech level is up to the clear or red hose inside the bleach reservoir
3. Secure chlorine cap back onto reservoir
4. Add bleach once a month or as needed. This is a syphon system it will only use bleach based on your water usage. The more water you use the more bleach you will use. Do not add water to dilute the bleach and do not use the “no splash” bleach it is a gel and will not go through the syphon.

Silencing alarms:

Yellow light by pushing the COMP toggle switch down to the mute position located on the front of the control panel.

Red light- Push down the HWA toggle switch down to the mute position located on the right hand side of the control panel

Troubleshooting:

Yellow Light- (Compressor, Air switch, or Air tube)

1. Check if the compressor under the housing is still humming and producing air by unplugging the air tube from the bottom of the control panel and putting your finger over the tube to feel if any air is being released.
2. Verify that the clear tube running from the compressor to the control box is still connected and not broken or letting air escape, if air is escaping and the air tube is disconnected then reconnect the tubbing back to the compressor or the control box and the yellow light will turn off. If the air tube is broken or cut you can tape it and call us during regular business hours this will not affect the operation of your system.
   Make sure the “dog house” is not sitting on the clear tube and blocking air flow.

Red Light- (High water alarm)

1. Look out to the spray field for your sprinklers spraying, if they are spraying the red light will turn off once the water level in the tank goes down below the alarm level.
2. Check the 20amp breaker inside the control panel to ensure it is not tripped/off. Reset the breaker by switching it down and back up.
3. Try to test sprinklers by pushing the test switch below the one labeled HWA
4. Call Service company.

Back up:

If the system is backing up into the home verify that no alarms are sounding or lit up and there is power to the septic system, you can check for power by testing your alarms.

Alarms can be tested (COMP and HWA) by pushing down the toggle switches in the test position. If the alarms sound there is power to the septic system and indicates there is a blockage either in the home or in between the house and the septic.

Is your septic smelling in the home?

If you are getting an odor in the home it is going to be an issue with the ventilation (wax ring under the toilet, drains, or pea trap) if it is in a guest bathroom that is not regularly used try running some

water through the drains as the pea trap may be dry due to lack of use. A smoke test can also be done by your plumber to indicate where the smell is coming from.

Are your sprinklers spraying all the time?

Sprinklers are spraying all the time it could be caused by excess water usage, rain water penetrating the system or a leaky fixture in your home.

If it is raining please allow for the sprinklers to stop spraying on its own.

If the sprinklers have been running and you are doing laundry, family is over, you are holding a party ETC… it is due to the water level in the tank and will have to spray so the water level can drop back down to its normal level

If none of the above is happening check all the fixtures in the home, you could have a hung up toilet causing water to continuously run into the septic system making the system spray.

How often should I pump my tank: The manufacture recommends the system be pumped anywhere from 3-5 years, (depending on the usage) sludge readings will be taken at each inspection. When the sludge in the pump tank "tank 3" reaches 8 inches, or the scum (top layer) in the pretreatment reaches 18 inches we will recommend pumping.

How often do I need to have my system serviced: Service Company will inspect the septic every 4 months (3 times a year) and will take sludge readings, compressor readings, clean the compressor filter, check sprinkler heads or drip field, check chlorine residual, reset the timer, test alarms, and clean drip filter if applicable.