

Septic 101 – Aerobic Septic System

Many homeowners are new to the whole “septic system” experience. Your builder probably handled getting the septic designed, the permits, picking your system, having the system installed and maintained– “out of sight, out of mind”, right? Did your builder explain the State laws and regulations for your septic system? Did your maintenance provider schedule a meeting with you after closing to go over the system and explain how your system works and your responsibility as the property owner? Just in case, here is a refresher course– Septic 101:

Local County Health Services’ Environmental divisions are responsible to the state, as the permitting authority for legal installation and maintenance of septic systems. Before you can build, you must have a professional engineer or Registered Sanitarian do a soil analysis and design your septic system based on the square footage of the home, number of bedrooms (if it has a closet, it’s a bedroom) and the number of people in some cases, the design along with the soil analysis and site evaluation must be submitted to the county for approval, once the paper work is approved you receive your building and septic permit. You will not be able to get your building permit without your septic permit. State law requires the installer to be licensed with the state as well as be a certified maintenance provider, or work with a maintenance company that is state certified, to include a two year maintenance agreement with the installation, after that it is up to the property owner to obtain a yearly maintenance contract. All counties, by law, require your septic maintenance company to inspect and maintain your “Aerobic” system on a regular basis. (Click here for your County’s requirements.). A copy of the results from all inspections is given to the homeowner and a copy is sent to the County to keep on file. After two years, it is the homeowner’s responsibility to contract a company to maintain their septic system. Be sure that your maintenance company is a state certified maintenance provider and is certified by the manufacturer of your system.

If you do renovations to your home that increases your water usage or changes the footprint of your structure, or if you add a swimming pool, or storage building, you may need to get a new septic design and an “add on permit” from the county. For instance, the diameter of the outside spray area of your system must be 25 feet from your swimming pool. So you may need to move your existing spray heads. If you have a landscaping company installs a sprinkler system you need to make sure it does not interfere with the septic system. Under no circumstances can a landscaping company replace septic spray heads with theirs. Septic sprinklers are by state law, required to be purple so that it is obvious that they are used for sewage.

So, what happens if you don’t have a maintenance contract? Or what if you had a contractor but the company never performed the State inspections? You could receive a citation from the County and be fined as much as \$500 dollars a day. How would the County find out that you haven’t maintained your system? Well, it wouldn’t take long for everyone to know. The smell would give you away. Or your neighbor may notice that your spray heads are spraying the day and your alarm will be going off and annoying your neighbors. Many things could happen that would alert you and your neighbors that there is a problem. When the County is contacted with a complaint, they will look up your reports and contact your maintenance provider to go out and check your system. If the county discovers that you don’t have a maintenance provider, then the homeowner is given ten days to sign a maintenance contract and fix the problem. If not, the homeowner is given a citation and fined \$500 per day until the problem is resolved.

The County also does random maintenance checks. They will randomly pick an area and send out agents to check each home in that area. The agent will check your system to be sure that the maintenance tag

is up-to-date. If they suspect a problem with your system, they may turn the system on to make sure it operates properly. Maintenance companies are required to bring repair issues, such as a broken sprinkler head or pump, to the attention of the homeowner. The law requires that homeowners pay for the repair. If the homeowner refuses, the maintenance company must alert the County, who in turn sends out a 30 day notice to the homeowner to make the repair. A Citation will be written if the problem is not corrected.

Last but not least, Chlorine tablets are required to be routinely administered to your septic system. Based on the usage of your system, you may need to add tablets monthly. Chlorine tablets are the responsibility of the homeowner. Chlorine tablets for sewage and liquid chlorinators which use household bleach are the only approved methods for the treatment of the bacteria in sewage. Many of you may not realize that an Aerobic Wastewater Treatment Plant is a "living" machine that houses a micro-organism "bug colony" that consumes organic waste. These micro-organisms require oxygen and appropriate "food" (organic waste devoid of toxins) to survive.

The following "do's" and "don't" should be practiced to insure your system performs properly.

- Medicines: If anyone in your household is ingesting strong medicines; antibiotics, chemotherapy or other, the health of your "bug colony" may be jeopardized.
 - Do not dispose of grease, fats, and oils.
 - Do not dispose of pesticides, herbicides and other toxins.
 - The garbage disposal should be used sparingly. Food waste, grease, etc. should be disposed of in the solid waste bin. Food waste represents additional loading the Aerobic Treatment Unit would have to digest increasing pump out intervals.
 - Do not dispose of paints, household chemicals, automobile fluids, or discard mop water into the system.
 - Do not dispose of no-biodegradable items such as cigarette butts, disposable diapers, feminine hygiene products, condoms, hair, coffee grounds, paper towels, bandages, etc.
 - Wash loads must be spread out over the week. More than one wash load a day is not recommended. Never use laundry detergents with "built-on" bleach.
 - Do not dispose of citrus products.
 - Do not use drain cleaners or additives for septic systems like Rid-X or similar products.
 - Do not connect other water sources to the system.
 - Water softener discharge kills the micro-organisms in your wastewater treatment system.
 - Do not dispose of alcoholic beverages or home brewery waste.
 - Do not dispose of strong disinfectants or bleaches, such as "Clorox", "Lysol" or "Pine-sol". Anti-bacterial soaps should be avoided.
 - Never use automatic toilet bowl cleaning dispensers.
 - Recommended detergents should be low sudsing, low in phosphates, and biodegradable, with washing soda ingredients. Fabric softener dryer sheets are recommended.
 - Recommended cleaning products are non-chlorine, bio-degradable, non-toxic, and non-corrosive.
- If you have any questions, need additional information, would like to file a complaint, or need a list of certified maintenance companies, you can contact the local County Health and Environment Departments.

Fire Ants On The March

(SAM HOUSTON ELECTRIC COOPERATIVE-LOOKING FOR A HOME: FIRE ANTS ON THE MARCH)

FIRE ANTS. The name alone is enough to make you cringe and remember the last time you accidentally stepped in an ant bed and were left fighting the urge to scratch the bites they left behind for days. There is no doubt they are pests to humans and animals-but they are also pests to our electric utilities.

Since being introduced in the 1930's by way of a Brazilian cargo ship docked at an Alabama port, fire ants have gradually made their way across the South.

In Texas, fire ants cause more than \$146 million per year in damages to electrical and communications equipment. This type of damage makes fire ants a costly nuisance for electric providers across the state.

Sam Houston Electric Cooperative incorporates fire ant control into the on-going maintenance program. Yet, despite these efforts, fire ants are impossible to completely eradicate and still make a nuisance of themselves across the Cooperative's territory.

"You can open just about any of our pad mounted transformers and find fire ants in them," Larry Horn, Sam Houston EC Livingston operations supervisor, said.

There are many different theories as to why fire ants have such a strong attraction to electrical equipment. Some studies have shown that ants stop in the presence of electrical fields surrounding wires and relay switches, which could be because of an attraction to vibrations emitted from the electric utilities.

Others studies revealed that when ants are shocked by an open switching mechanism, they wave their abdomen and release pheromones, a communication chemical that attracts other ants; eventually, so many dead ants accumulate around the mechanism that it malfunctions.

Their attraction to electrical equipment could also be the simple reasons that pad mounted transformers are warm in the winter, cool in the summer and rarely disturbed-making an ideal nesting site.

Despite the reason behind their attraction, fire ants can cause major damage when they begin to take residence in electrical equipment. Most commonly, damage is caused to the metal cabinets surrounding transformers.

"When they build beds in a transformer, the soil causes moisture to build up, which eventually causes the cabinets to rust and deteriorate," Horn said.

At times, ants can remove so much soil from underneath a transformer's concrete slab that it begins to tilt, causing damage and oil leakage from the equipment.

In the worst case scenario, ants will remove enough soil from beneath the slab that transformers actually cave in. Ants can also chew through the wire coatings, causing short circuits.

Luckily, this maintenance program has so far prevented damage bad enough to cause major power outage.

"It's a constant battle." Horn said. "The situation has grown over the years and is showing no sign of slowing down."

Inspections

What is included on a Maintenance Inspection

Mandatory Inspection Includes:

Clean Intake Filter on Air Compressor

Clean Bio Filter

Clean Effluent filter (Drip Systems Only)

Check pH Level in Pump Tank

Check Chlorine Residual

Check Sludge level in pump tank

Inspection of control Box

Inspect Water Pump and distribution system

Inspection on alarm systems

Inspection of timer

Secure all inspection lids

Water proof tag on system marked so you know we have been there

Door hangers left after each inspection

All Reports Submitted to Your County for You

What are the major dos and dont's of maintaining a trouble-free system?

DO THIS

- Conserve water to reduce the amount of wastewater that must be treated and disposed.
- Repair any leaking faucets and toilets.
- Only discharge biodegradable wastes into your system.
- Restrict garbage disposal use.
- Divert down spouts and other surface water away from your drainfield.
- Keep your septic tank cover accessible for tank inspections and pumping.
- Have your septic tank pumped regularly and checked for leaks and cracks.
- Call a professional when you have problems.
- Compost your garbage or put it in the trash.

DON'T DO THIS

- Flush sanitary napkins, tampons, disposable diapers, condoms, wipes, and such products into your system.
- Dump solvents, oils, paints, thinners, disinfectants, pesticides, or poisons down the drain. They can disrupt the treatment process and contaminate groundwater.
- Dig in your drainfield or build anything over it.
- Plant anything over your drainfield except grass.
- Drive over your drainfield or compact the soil in any way.

FAQs

Am I required to have a maintenance contract?

Yes, all counties require you to keep valid maintenance contract at all times. If the County finds that you are not under contract, it could result in a court date and fines up to \$500.

What should I do if I'm buying a house with a septic system?

When buying a home with a septic system you should request to have the system cleaned out and inspected. You want to start fresh in your new home by having the system cleaned out, and having an inspection done will ensure that the septic system is in good condition. If the system is not up to code or there are problems with it, the inspection will give you a chance to negotiate the proper repairs before closing on the property.

What can I do to prepare for large gatherings during the holidays?

Having a large number of people over for gatherings can be hard on your septic system. An aerobic system is designed for the size of the house and the number of people who live there. Large parties can easily overload the system and cause problems if your system is already getting full. To avoid any embarrassing situations, have your system checked and possibly cleaned out before the holidays.

Should my septic system be making a noise?

Your aerator will make a constant humming noise. But, if you hear a loud buzzing sound that means your septic alarm is on. First you should check your breakers to make sure power is getting to your system. If the breakers have not been tripped, call your service provider immediately. If the alarm is on, there is something wrong that should be checked out.

Is my Aerobic system supposed to run all the time?

Yes, your aerobic septic system is intended to run constantly. If your aerator or spray pump is not running, contact a service provider..

Do I have to add chlorine to my aerobic system?

Yes, it is the law. You must maintain a chlorine residual in your system at all times. Violating this law can result in a fine of up to \$80 per day. The only way that the wastewater can be treated is for chlorine to be in the system. So, if you are not adding chlorine, it is spraying out untreated water.

Where can I get chlorine tablets?

Most larger home improvement stores carry septic chlorine tablets. You can also purchase a 10 lb bucket from YOUR SERVICE PROVIDER. A 10 lb bucket typically lasts close to a year. If you buy a larger bucket, the moisture will begin to break down the remaining tablets in the bucket and they will go bad before you can use the whole bucket. Also, make sure you ONLY buy SEPTIC chlorine. DO NOT use Pool chlorine tablets. These tablets are made differently and can react with gas and byproducts in your septic system and have been known to explode.

Why does my aerobic system smell bad?

Some people are more sensitive to septic smells than others. If you are experiencing a sewage smell, that does not mean you need to add more chlorine to your system. This is typically a sign that your aerator is out or there is an aeration problem.

Should the alarm and sprayers keep coming on during and after rain?

Septic systems typically take in ground water when it rains. This can cause the water level to rise and trigger the high water alarm and sprayers. After the rain stops and water soaks in or runs off, most systems will correct themselves. If you still have a problem, call YOUR SERVICE PROVIDER.

Should my sprayers keep coming on during an ordinary day when there is no rain?

If there is no rain water to raise the water level in your tanks, and your sprayers are going off frequently during the day, this is a sign of overloading or a plumbing problem. If you use too much water for the system to handle, it will spray. Also, if your sprayers are going off frequently and you are not using water in the house, check for leaking faucets or leaky/running toilets. This will add to the water level. SEPTIC SYSTEMS DO NOT MAKE WATER. If the sprayers are spraying, something is adding water to the system.

Since my septic system runs continually, will my electric bill go Increase?

No, an aerobic septic system uses about the same amount of electricity as a 100 watt light bulb.

If there is a bad odor inside my house, that is a septic problem, right?

No, septic odors inside the house are typically from a plumbing problem. A plumber is responsible for the area under the house, we are responsible for the area from the cleanout to the system.

How do I mute the alarm?

There is a button marked on your control panel box to mute the alarm. Anytime you mute the alarm, you should call your septic maintenance company. The alarm comes on for a reason and it should be addressed sooner than later.

What can I do if my neighbor's septic system stinks?

If your neighbor has a smelly septic system and doesn't appear to care or try to fix the problem, you can make an anonymous complaint to the Environmental Health Services division at the local Health Department.

What to do if my electricity is out?

If your septic system is a conventional system and no pumps are used everything should be normal. However, if you depend on a pump to move your treated water to another tank, disposal area, or if you have an aerobic septic system with surface spray disposal you should minimize water usage during the interruption in electrical service. Once electric service has been restored you may encounter a period of an alarm indicating there is too much water in a tank and after some period of time, which will vary from system to system and usually an hour or less, the alarm should clear itself and everything should return to normal.

What can I do if my drains and toilet flushes are slow?

Unfortunately during bad weather conditions there is not much anyone can do but if there is no electricity for a long period of time or the rains have caused some degree of flooding things could get backed up. The best thing to do is minimize water usage. If this does not help the last resort would be to locate your sewer clean-out. Advise caution when doing this, and remove the cap. Weather conditions may prove to prohibit this procedure and also there could be pressure on the cap which could spray you with raw sewage. Taking the cap off will help relieve the possibility of a sewer backup in the house and let it go outside instead. Once the weather subsides and electric service restored and everything has returned to normal be sure to have your sewer clean-out cap replaced. Your septic service provider should assist you if needed.

How often will I need to have my tank pumped?

Not very often. An average family of four living in a three-bedroom house will need their tank pumped every three to five years. If your installer is a licensed septic contractor in the area, he should know exact guidelines for your home, usage, and locality. Or you can check with your county health department. If there are no major changes in your household and your usage is stable, you may want to consider a regular pumping schedule for best results with the least worry.

Can I build over my septic tank?

This is never advisable and is against most municipal codes. Do not build any additions, pools, or driveways over a tank. Also, do not build or plant on top of your drainfield.