Please be advised: A septic system is a large filter. All filtering mechanisms require routine maintenance. Systems that are not maintained eventually fail. The replacement cost of a failed system can run as high as $15,000.00 . The average replacement cost is around $6,000.00. Routine cleaning costs are less then the average city sewer bill.

MAINTENANCE SCHEDULE

Date	Work Completed
12/5/05	EXAMPLE Pumped tank - 2 bottles CCLS

Regular maintenance is the key to the longevity and of your septic system

Clean your septic tank every 3 to 5 years

*The main rule of Thumb is "**With the exception of toilet paper, if you didn't eat it or drink it, don't flush it!**"*

Dear Homeowner:

Imagine this: You discover one day that your yard is unusually wet in certain areas and you've noticed a septic odor in the house for a few days. You call your local septic company to have the issue addressed, and the septic professionals come to your home to investigate the problem. Since you weren't certain exactly where your septic tank was located, the septic technician attempts to locate it only to realize the horrific truth—your septic tank is buried beneath the gorgeous new patio/deck you recently had constructed. To make matters worse, the problem that was originally lurking beneath the ground is now backing up into your home. Your septic concern has now turned into a septic nightmare.

After tearing apart some of the deck and digging up your yard, the tank is located, repaired, cleaned out and restored to working condition. But the worst is not yet over, when it comes time to pay, you discover that your homeowner's insurance does not cover any of the cost.

Sure, this is a worse case scenario, but an all too common one. We in the septic profession respond to these types of calls often. You may be asking yourself how you can prepare for such a costly and untimely event. We at Crowe, Inc. have put this booklet together not only to help you *prepare* but to help you **prevent** these types of incidents all together.

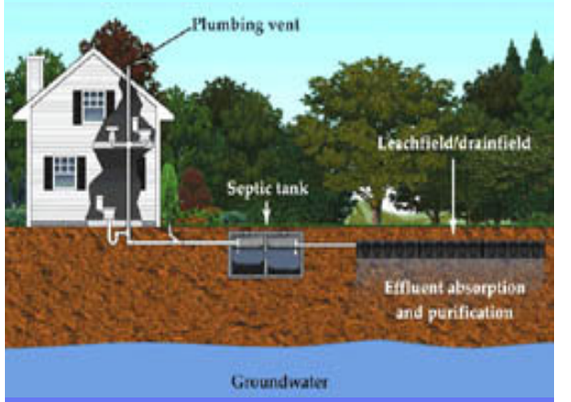
CROWE, INC.
1124 RIVER AVE.
ROANOKE, VA 24013
WWW.CROWEINC.COM
540-427-3314

SALEM 387-3319
BOTETOURT 977-3310

CROWE Septic . . . . Working to keep our Environment Safe

Drop of water goes here

HOMEOWNER SEPTIC MANUAL



Crowe, Inc. proudly presents this informative guide for homeowners, designed to help you understand the process of owning and maintaining a healthy

CROWE INC.

Any time **427-3314**

For more information:
www.septic101.com

FREQUENTLY ASKED QUESTIONS:

Why Do You Recommend CCLS?

Our years of experience in the business has allowed us to see which products actually do the job. We recommend a liquid that contains a high bacteria count of ***50 Billion*** *per quart is a good percentage. Liquids are preferred because of the multi-purpose function of removing build up in drain lines and restoring the level of bacteria and enzymes in the septic system. Dry products (to flush down the toilet) have great advertising behind them, however laboratory testing has shown the bacteria level to be far lower than the liquids. Some dry products are found floating on top of the tank and is vacuumed out when the septic tank is serviced. There are dry products formulated specifically (to mix with water) to reverse a failing system, but for regular use. Be sure to read all product labels carefully and steer clear of acid based products.*

Is It Necessary To Dig The Tank To Clean It?

Yes, except for systems that have a riser or manhole installed over top the septic tank access port. (see * below)

Can A Tank Be Cleaned Through A Clean-Out?

No, A clean-out is used to unstop a line from outside of the house, within a couple feet from the foundation.

Is the port over the tank for cleaning ?

No, The 4" to 6" pipe installed over the tank lid is an Inspection Port to regularly check the levels of sludge and crust. This pipe is for inspection only and is not to be used for cleaning. An attempt to clean your tank through this will not remove all the waste material and with pump back systems it is very important that all solid waste be removed. Manholes (riser) are a more practical cost efficient solution.

How Do I Know If I Need A Manhole?

The regulation code for a manhole (riser) varies from County to County. As per the VDH, if the top of the septic tank is 30" or deeper from the surface of the ground, a manhole is required. Some owners prefer to have the manhole access to avoid disturbing the ground making it is easy to check the systems condition. This also provides easy access should the input line need unstopped. The cost of installing a manhole VS the cost to dig the septic tank for each cleaning will more than pay for its self.

* **Before digging, call Miss Utility**;
A free service to mark underground utilities.
Dial: 811 **It's the law.**

SEPTIC 101

Step 1: Know Where Your Septic System is Located.

Knowing the exact location of your septic tank is very important. Know the location so you do not build decks, patios, pools, driveways, additions or any other buildings over your system. Keep the absorption area cleared. Be careful the type of trees planted close to the system. Tree roots invade septic systems, and can cause severe damage. Contact The Virginia Health Department to obtain a copy of your septic plat.

Step 2: Maintain Your System Regularly

The Virginia Health Department recommends that your tank be pumped once every 3 to 5 years depending on usage. This is pertinent in preventing the system from failing or backing-up into the home.

Step 3: Add Septic Insurance to Your Policy.

Standard homeowner's insurance does not cover your home's septic system, but there is a rider for the policy that is available at a minimal cost.

Step 4: Know the Warning Signs of System Failure

If you own an older home or if you have just moved into a home but aren't sure if the previous owners cared for the system regularly, pay attention for these warning signs before it's too late: wet or soggy areas in your yard, slow-draining toilet, gurgling sounds from drain lines, septic odor or rinse water from the washing machine over flowing onto the floor.

Step 5: Prolong The Life of Your System.

Keep drain lines flowing freely by restoring bacteria and enzymes to your system. Bacteria breaks down the build-up on the walls of the pipes, therefore preventing clogs. Some drain cleaners have a harmful acid base. Regularly use an environmentally safe and biodegradable brand such as CCLS that comes highly recommended by the septic industry to aid in the maintenance of your system.

The Department of Health Recommends You Pump Your System Every 3 to 5 Years.

nvtech.com

Understanding the Components of Your Septic System

In-Put Line: The in-put line is the pipe that carries waste from the house to the septic tank.

In-Put Tee: "T' shaped pipe that fits on the end of the in-put line. Its function is to direct the waste into the tank and keeps the waste from stirring up material preventing the release of unpleasant gases and hard materials from entering the distribution area.

Septic Tank: Designed to hold the waste and operates at nearly full capacity. The hard materials drop to the bottom, the liquids are in the center and a film on the top. The fluid in the center is what flows to the distribution area. The hard waste materials that are stored in the bottom of the septic tank should be cleaned/vacuumed out on a routine basis to prevent spreading to the distribution area.

Out-Put Tee: A"T" shaped pipe that extends to the center of the tank, allowing liquid waste to drain to the distribution box. Without the out-put tee, hard materials may enter and damage the distribution area of the septic system.

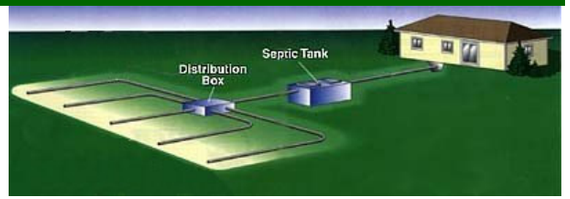
Out-Put Line: This line carries the liquid waste from the septic tank to the distribution box.

Distribution Box: A 1' x 3' box (on average) with port holes that the header lines attach to. The distribution box allows the liquid waste to drain evenly into the field lines.

Header Lines: The pipes that connect the distribution box to the field lines.

Field Lines: The absorption part of the septic disposal system. The number and length of the lines will vary from system to system. Field lines, perforated pipes, are the filter of the system. The liquid waste is evenly distributed, filtered by the soil and purified by natural processes.

Heath Department codes for septic tank size:
(calculated for 2 people per bedroom)
3 Bedroom house - - - - 1,000 gallon
4 Bedroom house - - - - 1,500 gallon
6 Bedroom house - - - - 2,000 gallon



Pump Tank: This is a liquid waste holding tank (generally 1,000 gallons) for pump back systems. Liquid waste flows from the septic tank to the pump tank. When the liquid reaches a certain level it raises a float that turns on a pump to force the liquids up to the distribution box.

Manhole: A port that provides easy access to the back pump. It is wise to install a manhole over the septic tank to avoid unnecessary digging in addition to allowing for emergency access should a back up problem occur.

Back or Lift Pump: A pump used to distribute liquid waste from the pump tank to the distribution box. The horsepower ranges from 1/2 to 1 1/2 hp, depending on the size of the septic system and the distance the fluid must travel.

*** Important:** *In the event your alarm for the back pump system activates, turn off the pump at the electrical breaker box immediately. Then call a professional back pump specialist. You do not have time to drag your feet, a system back-up is eminent.*

In the past, materials used to install septic systems were not as durable as those used today. The **terracotta** and **cast iron** pipes blister from the inside out and become very brittle. **Orangeburg** pipe is made of pressed cardboard and breaks easily. Tree roots along with the freeze and thaw of the ground take their toll on these materials. Pipes become weak, clog and eventually collapse, causing a system failure.

Garbage disposals: Homes that have and regularly use a garbage disposal need to have their septic tanks cleaned more frequently. Every 3 years is recommended. *

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