# HOMEOWNER'S GUIDE
## TO SEPTIC SYSTEM MAINTENANCE

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It is the responsibility of the homeowner to maintain, repair, or replace all components of the septic system so that it will protect the environment and public health. Keep all information about your septic system and its maintenance within this folder. This record will be important should problems develop with your system or if you sell your home. Keep this folder with your house records as a reference for any questions that may arise.

Home address: _____

Subdivision: _____ Lot/Block: _____

Septic permit #: _____ Date issued: _____

## Household and Septic System Information

All additions and/or improvements to your home must be approved by Environmental Health so as not to adversely affect the system.

Number of bedrooms: _____

- ❑ Garbage disposal
- ❑ Public water supply
- ❑ Private water supply
- ❑ Hot tub/Jacuzzi

Average Water Consumption (per month)

- ❑ 3-Bedroom: 6 – 8 thousand gallons
- ❑ 4-Bedroom: 8 – 10 thousand gallons
- ❑ 5-Bedroom: 10 – 12 thousand gallons
- ❑ Other: _____

**Septic Tank:** Number of tanks: _____ Capacity (gallons): _____ Manufacturer: _____

- ❑ Rectangle ❑ One compartment ❑ Concrete
- ❑ Round/Oval ❑ Multi-compartment ❑ Fiberglass

**Pump Tank Capacity** (gallons): _____ Pump horsepower: _____ Grease trap size: _____

Aerobic Pretreatment Unit Size: _____ Manufacturer: _____

**Absorption Field:**

❑ Pipe and gravel (conventional) ❑ High-capacity chamber ❑ Drip irrigation ❑ Beds

❑ Other: _____

**Accessories:**

❑ Septic effluent filter ❑ Siphon/Pump ❑ Distribution box ❑ Other: _____

**Additional Treatment Components:**

❑ Biofilter ❑ Disinfection ❑ Constructed wetland ❑ Other: _____

Georgia Department of Public Health

*"We Protect Lives"*

# Important Numbers

**Find Your County Board of Health Office:**
https://dph.georgia.gov/environmental-health

**Installer**

Firm/Company: _____

Address: _____

Telephone: _____ Certification/Permit #: _____

**Pumper**

Firm/Company: _____

Address: _____

Telephone: _____ Certification/Permit #: _____

**Operation and Maintenance Provider**

Firm/Company: _____

Address: _____

Telephone: _____ Certification/Permit #: _____

# Maintenance Record

| Date | *Service Performed | Service Performed By | Cost |
|---|---|---|---|
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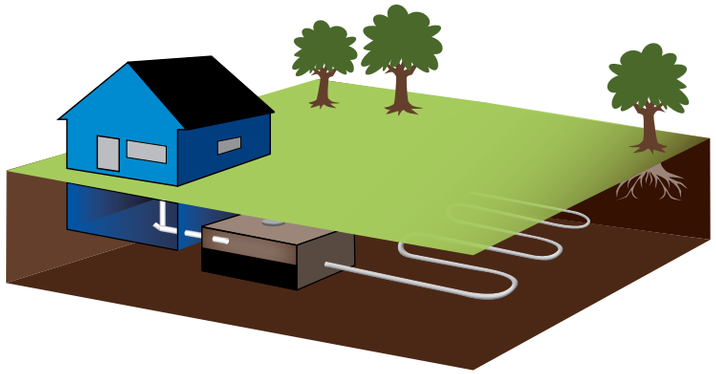
* *Service must be performed by certified septic contractors only.*

# How to Locate Your Septic System

## Step 1

- Check plans of onsite system if available.
- Locate sewer pipe from inside the dwelling.
  - If your home is on a slab, skip ahead to Step 2.
- Inside the dwelling: Measure the distance from the sewer pipe to the corner of the exterior wall.

  * *CAUTION: There is some danger in locating an onsite system. It is recommended that you contact a professional to assist you in locating your onsite system.*



## Step 2

- Outside the dwelling: Sewer pipe will be the same distance measured in Step 1 from the corner of the same exterior wall.
  - If your home is on a slab, look for a vertical, white, PVC pipe near the home. This is likely connected to your sewer pipe.
- Locate septic tank (should be at least 10 feet from the dwelling and generally 1-2 feet below the ground surface) by probing area with an insulated metal rod and feeling for resistance. Flag septic tank location.

  * *NOTE: Some manufacturers offer electronic transmitters to assist with locating the septic tank. Metal detectors are another possibility.*

## Step 3

- Begin searching downslope of the septic tank to locate the drainfield (Note: If system has a pump, drainfield can be upgradient of the tank).
- Probe the ground every couple of feet with an insulated rod until you hear the metal rod contact gravel, you feel resistance (such as a plastic chamber system), or the probe becomes wet. Then flag that point.
- Repeat to locate additional drainfield lines (usually 7 -8 feet apart and 50 - 100 feet in length).

  * *CAUTION: When using metal probe, be careful of buried and overhead utility lines.*

## Tips to Avoid Trouble

✓ Have your tank pumped and the system inspected every three to five years by a licensed septic tank contractor.

✓ Conserve water to avoid overloading the septic tank system. Be sure to repair any leaky faucets or toilets. Use low-flow fixtures.

✓ Learn the location of your septic tank and absorption field. Keep a sketch of it handy for service visits.

✓ Don't allow anyone to drive or park over any part of the system or put any foundational structures on the septic tank or field. The area over the absorption field and tank should be left undisturbed with only mowed grass cover. Roots from nearby shrubs or trees may clog and damage your drain line.

✓ Check with your County Environmental Health Office if you have a garbage disposal to make sure that your septic system can accommodate additional waste.

✓ Your septic tank is not a trashcan. Do not put disposable diapers, tampons, condoms, paper towels, plastics, etc. down the drain or toilet. Also, do not use the septic system to dispose of fats, greases, and harmful chemicals.

✓ Divert roof drains and surface water flow away from the septic system.

✓ Do not make or allow repairs to your septic system without obtaining the required health department permits. Use certified septic contractors only.

✓ Assure the appropriate maintenance agreement and/or extend the service policy for ATU Units (Aerobic Pretreatment Tanks), if installed. Contact the manufacturer of the unit or your County Environmental Health Office for more information.

## Safety Checklist

❑ Never enter the septic tank. Toxic gases are produced by the natural treatment process in septic tanks and can kill in minutes. Extreme care should be taken when inspecting a septic tank. Never smoke around or near septic tank openings.

❑ Manholes serve the purpose for inspections and cleaning, and should be locked or heavy enough to prevent children from opening the system. Keep children and other spectators away from the system.

❑ Pathogens present in wastewater are also present in the contents of the septic tank. These organisms are capable of spreading infectious disease. Use eye protection and gloves and always wash hands thoroughly with antibacterial soap before eating, drinking, or smoking. Change clothes before coming into contact with food and others after being around an onsite system.

❑ When attempting to locate your system, be careful of overhead and underground utility lines.

Many home and business addresses use septic systems for domestic waste disposal. More than 25 million homes, encompassing almost 25 percent of the U.S. population, dispose of domestic wastewater though septic systems.

It's important for all of us to know what a septic system is, how it works, and what our responsibility is in making sure it works effectively. In areas where sanitary sewer is not available, wastewater must be disposed of on the property. Every drop of water that goes down the drain or toilet carries with it contaminants, chemicals, and bacteria or viruses that we want to remove. The water from washing machines, baths, toilets, and other uses must go somewhere. That is where your septic system comes into play. It is your personal wastewater treatment system.

## What is an Onsite Sewage Management (Septic) System?

A typical septic system contains two major components: a septic tank that collects solids and the absorption field or drainfield that disposes of the liquid waste. The tank and lines are buried under the ground and help disperse the wastewater we create into the soil. If designed, installed, and maintained properly, a septic system can be a cost-effective, efficient way of disposing of wastewater on your property (Figure 1).

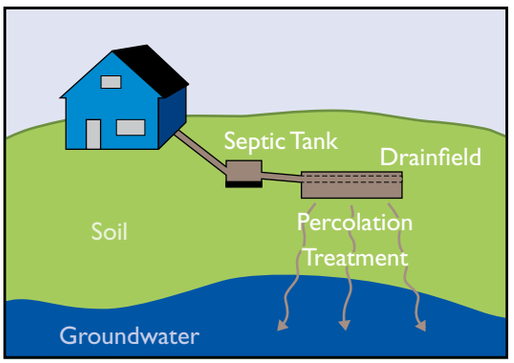



*Figure 1: Typical household system for wastewater generation, collection, treatment, and disposal*

## The Septic Tank

The septic tank is an underground watertight container built to receive sewage and retain the liquid portion for approximately 24 hours before sending it to the absorption field. The tank typically is made of concrete, but fiberglass and plastic are also used. Baffles (or tees) are placed on the inlet and outlet to insure proper flow of waste. Current requirements call for a two-compartment tank (Figure 2), but older tanks still may have a single compartment. While typically designed to hold a minimum of 1,000 gallons of sewage, the size of the tank may vary depending upon the number of bedrooms and the use of a garbage disposal.

The primary purpose of the septic tank is to separate the solids from the liquids and to promote partial breakdown of contaminants by microorganisms naturally present in the wastewater. The solids, known as sludge, collect on the bottom of the tank, while the scum floats on top of the liquid. An effluent filter can be used to help prevent small particles from entering the drainfield. The sludge and scum remain in the tank and should be pumped out every three to five years.

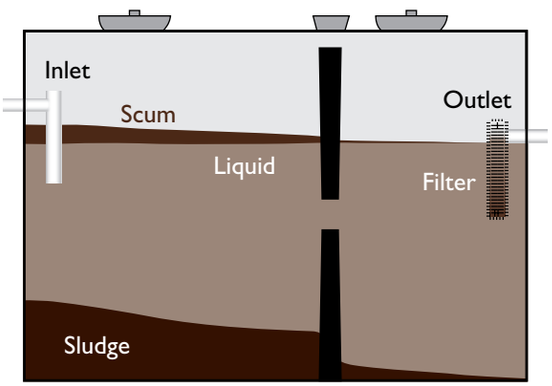



*Figure 2: Cross-section of a two-compartment septic tank*

## The Absorption Field

The wastewater that exits the septic tank may contain many potentially disease-causing microorganisms and pollutants. The absorption field is the most critical part of the septic system for reducing these contaminants and dispersing the effluent (outflow) from the tank.

A conventional absorption field consists of trenches where perforated pipe is laid over a bed of aggregate. This aggregate may consist of stone, tire chips, Styrofoam chips, or other approved material (Figure 3). Other alternative systems and high-capacity chambers are available for installation. The effluent is distributed through the perforated pipe and exits the holes along the bottom. The liquid then trickles through the aggregate where it is stored until absorbed by the soil. The absorption field uses nature's physical, chemical, and biological processes to clean the wastewater.

The soil acts as a natural buffer to filter out many of the harmful bacteria, viruses, and excessive nutrients that are still present in the wastewater. Then, the water continues down and eventually enters the water table. The soil can only drain or percolate a limited amount of water at a time and not all soils are suitable for septic absorption fields (refer to the soil section). Using excessive amounts of water can flood the system and cause effluent to surface on top of the ground. The number of bedrooms in the home determines the length of the absorption line. They can only hold enough water to accommodate the average water consumption. Excessive water use can cause system failure.

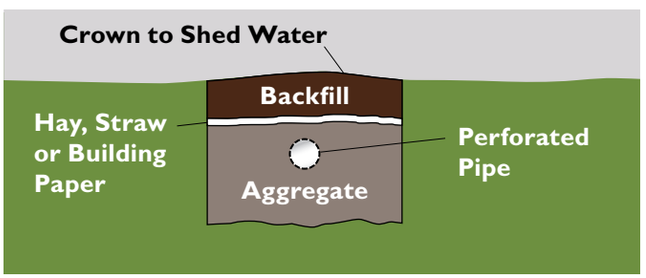



*Figure 3: Cross-sectional view through trench*

## When Should I Pump the Tank and Will Additives Help Breakdown the Solids?

Pump the tank every three to five years and do not use septic tank additives, commercial septic tank cleaners, yeast, sugar, etc. These products are not necessary and some may be harmful to your system. Only pumping and routine cleaning can ensure a happy septic tank (refer to additives section). Solids that build up in the tank and are allowed to pass from the septic tank may clog the absorption field, and cause permanent damage and premature failure. Keeping solids out of the field not only prevents clogging, but also reduces potential expensive repairs or replacement costs and helps ensure the ability of the soil to effectively treat the wastewater.

## How Do I Know My System is Failing?

Even the best designed and maintained system will eventually fail. They cannot be made to last forever. Soil type, water conservation, and quality of maintenance will determine the life expectancy of any septic tank system. Follow your nose. The most obvious evidence is wet areas on your property having a sewage odor that are located above the absorption field. This will occur for many reasons and indicates that the system needs replacement. Other premature indicators are water backing up in the house or slow flushing toilets. If you have concerns that your septic system is failing, contact a certified septic tank contractor.

## Who is Responsible for Maintenance and Repairs of My System?

It is the responsibility of the homeowner to maintain, repair, or replace all components of the septic system so that it protects the environment and public health. Just like all major systems in your home including the air conditioner, electric wiring and dishwasher, if you own the home, you own those items, also. The same is true with your septic system. This major component of your home should be of highest priority. Once failure is identified, repairs must be made in a timely manner. Failure to do so can result in upset neighbors, endangering public health and the environment, and legal action being taken against you. Treatment and disposal of wastewater should be one of the primary concerns for a homeowner. It's important, so don't ignore it.

## Improvements/Additions to My Home or Property: Will My Septic System Be Affected?

As a matter of fact, yes. Your septic system was designed to fit your property and the particular house you bought. Before you consider adding an extra bedroom or office, swimming pool, or other addition, consult your septic inspection report and your county board of health. Any foundational structure, including decks, pools, and garages, must not cover or interfere with the septic system. The tank and lines must be accessible for maintenance and repairs. There is an area on your property reserved for future repair. Both the area where the system is now and the future repair area must not be disturbed nor have any structure put upon them. If you are considering any improvements or additions to your home, please contact your county board of health for consultation and permitting.

## Why is Soil So Important to a Septic System?

Soil is the most important factor in determining whether a septic system will work properly and protect the environment. As in Figure 1, the soil acts as a filter, which cleans all the wastewater you generate before it enters the ground water. Physical, biological, and chemical processes occur in the soil to treat the waste. Not all soils are good for septic system absorption fields and only a soil report will determine suitability. A certified soil classifier performs a soil report. When a soil classifier takes core samples of the ground, he/she can give a good assessment of what the soil characteristics are down to six feet. Is there bedrock or a water table that will interfere with a septic system? Will the ground properly drain (percolate) at 3 – 4 feet? Is this type of soil adequate for installing a septic absorption field? These questions must be answered before any construction can take place on a non-sewered property.

All newly developed, non-sewered lots must have a soil analysis performed before permitting. This requirement has drastically reduced the amount of systems that fail prematurely. Because soil is the major factor in determining whether a system works properly, a soil report can detect any problems that may arise. A soil report is required for all new construction on properties served by a septic system, when a septic system has failed within five years of installation, when the footprints of existing buildings and structures are changed, or when soil issues are discovered during a septic system repair. If you intend to repair a septic system, a soil report is strongly recommended and may be required by you county board of health. Soil characteristics can change from one location or depth to another.

***Buyer beware!*** Not all lots can be developed for septic system use. They may already have information on this property, but if not, an evaluation can be made and the owner may have to arrange for soil tests to be completed by a soil classifier before a decision can be determined regarding its suitability.

# Additives and Your Onsite Sewage Management System

## Background

With hundreds of products currently on the market and some environmental engineering companies promoting their use, many homeowners have questions about septic tank additives. Additives are not beneficial to onsite sewage management systems and, in fact, can be detrimental.

## So, What is an Additive?

You might have heard them referred to as septic tank treatments, cleaner, restorers, rejuvenators, or enhancers. They are all additives and they fall into two categories:

1. *Chemical* additives are marketed to unclog drains and break up oil and grease. They may contain acids, solvents, hydrogen peroxide, or strong caustic agents. Some types of chemical additives are prohibited in Georgia.
2. *Biological* additives are made from bacteria, yeast, or enzymes. They are marketed as starter agents or as aids in routine maintenance.

## Frequently Asked Questions About Additives:

Q: **Is it true that some additives are necessary to give bacteria a head start when the system is new or recently pumped?**

A: No, by design, an onsite sewage management system (commonly referred to as a septic system) does not need any help doing its job. The natural, biological processes by which the system works require only the bacteria that it receives from wastewater.

Q: **Is it true that natural additives, like those containing enzymes, bacteria, or yeast, can reduce or eliminate the need to pump the tank?**

A: No, some manufacturers claim that biological additives enhance treatment within the tank or can eliminate pumping by liquefying solids and grease. In fact, the additives can cause solids to break down into smaller particles that remain in suspension in the liquid within the tank. That combination of liquid containing small solids can flow into the drainfield and may lead to clogging. A clogged drainfield can be a nuisance and very expensive to correct.

Q: **How can a product that says it will keep my septic tank unclogged be harmful?**

A: Acids and other chemical solvents can upset or destroy the basic physical and biological functions of the septic tank, to separate the solids from the liquid, trap the solids and cause those solids to break down. Chemical types of additives can cause solids to break into smaller pieces that stay suspended in the liquid within the tank. When those solids move out of the tank and into the drainfield, they can lead to clogging. In addition, the acids in some additives can actually corrode concrete septic tanks and distribution boxes, causing them to leak, become weak, and fall apart. **A whole new septic system can cost $8,000 to $20,000 to replace.**

Q: **But I've used additives before; there seem to be initial improvements with my system.**

A: What seems like initial improvements are short-lived gains with a big trade-off. If you don't address the underlying problem, it will return and the repair could be a lot more costly the longer you wait.

**So, save your money! Additives can cost hundreds of dollars, but they will never eliminate the need for regular septic system inspections and pumping, which will do far more toward extending the life of your system and preventing unnecessary repairs or replacement.**

## My Sewage Just Backed Up Into My House…What Do I Do Now?

- First, don't panic! Turn off any faucets, dishwashers, washing machines, etc. to stop any more water from entering the plumbing system. Any cleaner labeled "disinfectant" (Lysol, Pine Sol, etc.) or a 10 percent bleach solution (one part bleach to nine parts water) should be used to clean up after a plumbing backup. Any affected carpets should be steam cleaned. If the drain backing up is not at a lower elevation relative to the other house drains (i.e., the bathroom on the second floor is backing up, but all the drains on the first floor seem fine), chances are it is due to a clog in the internal plumbing of the house. Contact a plumber to evaluate your situation.

- If the backup is at a lower elevation or is the closest drain to the septic tank, then the issue may be with the septic system. The lid of the septic tank should be uncovered and the inspection ports opened. **The normal level of liquids in the tank is about 1 foot below the lid.** If the level is lower or equal to this, then the problem may be a clog in the pipes leading to the septic tank. A plumber should be called if this is suspected. If the level is higher than this, then wastes are getting to the tank, but the liquids are not being passed to the absorption field. If there is a filter on the outlet end of the tank (typical in tanks installed after 1997), then check to see if the filter is clogged. If you remove the filter, replace it after cleaning to prevent large items from entering your absorption field. If the filter is clogged, it can be easily pulled out and hosed off to unclog it. If the filter is not clogged, contact a licensed septic pumper to have the tank pumped out and/or check the pipe from the septic tank to the absorption field for clogs or damage. Contractors should not jet the line between the tank and the drain field.

- Should the system back up again within a couple weeks of having the tank pumped, then the problem is likely with the absorption field . Contact your county board of health, anda county inspector will be happy to advise you in how to obtain a repair permit.

## Need Help Finding A Septic System Contractor?

- A good place to start is with the list of certified lists of septic tank installers nd septic tank pumpers.

- You can find these lists at https://dph.georgia.gov/environmental-health. While licensing is a step in the right direction, it does not ensure that each contractor's work will be of equal quality. When searching for a contractor, be sure to check for other reliable criteria.

- Do your homework when looking for a contractor:
  - Ask friends and family for personal recommendations.
  - Check with the Better Business Bureau at www.atlanta.bbb.org or by phone at 404.766.0875.
  - Contact the Georgia Department of Public Health Environmental Health Section and ask if any complaints have been filed against a contractor.
  - Get a firm estimate before any work begins on your property.
  - Most importantly, don't make a bad situation worse with a hasty decision. Even in an emergency, remember to be consumer savvy and take the time to get several estimates. In the end, the time you spend will save money and peace of mind.

## Questions To Ask Septic Pumpers

Our office recommends contacting at least three certified pumpers. A certified pumpers list is located on the Georgia Environmental Health Department's website: http://dph.georgia.gov/environmental-health. We suggest locating your septic tank and becoming familiarized with septic systems functions, before contacting a septic pumper.

### Estimated Septic Tank Pumping Frequencies (In Years) For Year-Round Residences

*(Source: Source: Estimating Septic Tank Pumping Frequency by Mancl,K.aren)*

| Tank Size (gal) | Household Size (no. of people) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1,000 | 12 | 5.9 | 3.7 | 2.6 | 2 | 1.5 | 1.2 | 1 | 0.8 | 0.7 |
| 1,500 | 19 | 9.1 | 5.9 | 4.2 | 3.3 | 2.6 | 2.1 | 1.8 | 1.5 | 1.3 |
| 2,000 | 25 | 12 | 8 | 5.9 | 4.5 | 3.7 | 3.1 | 2.6 | 2.2 | 2 |

*NOTES: The frequencies estimated are based on a minimum 24-hour wastewater retention time and 50 percent digestion of the solids entering the tank. More frequent pumping would be needed if garbage disposals were utilized.*

*From Georgia Department of Public Health Manual for Onsite Sewage Management Systems*

If you have any questions, please contact **your county board of health.**

| | Company 1 | Company 2 | Company 3 |
|---|---|---|---|
| Contact Person | | | |
| Phone | | | |
| **Questions** | | | |
| • What is the cost for pump-out? | $ | $ | $ |
| – If it is a two-compartment tank, does this include both components? | Y or N | Y or N | Y or N |
| • Does the cost include a dumping fee? | Y or N | Y or N | Y or N |
| • Is there an additional fee for extra hose? | Y or N | Y or N | Y or N |
| • Is there a fee for uncovering tank lids? | Y or N | Y or N | Y or N |
| – If so, do you charge by the foot? | Y or N | Y or N | Y or N |
| – If so, do you charge separate fees for each lid? | Y or N | Y or N | Y or N |
| • Does the fee include inspection of the inlet and outlet tees or baffles? | Y or N | Y or N | Y or N |
| • Does the fee include cleaning of filter if one exists? | Y or N | Y or N | Y or N |
| • Is there an additional fee for a tank that has not been maintained (contains additional sludge)? | Y or N | Y or N | Y or N |
| • Cost of replacement: | | | |
| – Tee or Baffle | $ | $ | $ |
| – Lid | $ | $ | $ |
| – Filter | $ | $ | $ |
| • Cost of jetting line between house and tank: | $ | $ | $ |

## Questions To Ask Septic Installers

Homeowners should contact at least three certified septic tank installers. A certified septic tank installers list is located on the Georgia Environmental Health Department website http://dph.georgia.gov/environmental-health. We suggest obtaining a copy of your septic tank system inspection and becoming familiarized with septic system functions before contacting a septic installer. We also recommend pumping the septic tank every three to five years.

| | Company 1 | Company 2 | Company 3 |
|---|---|---|---|
| Contact Person | | | |
| Phone | | | |
| **Questions** | | | |
| • Are all system components functioning? | | | |
| – Are all step downs intact? | Y or N | Y or N | Y or N |
| – Is the pump functioning? | Y or N | Y or N | Y or N |
| – Are the siphons functioning? | Y or N | Y or N | Y or N |
| – Is the distribution box in proper working order? | Y or N | Y or N | Y or N |
| • Can we use an alternative valve and preserve the existing system? | Y or N | Y or N | Y or N |
| • Will you put the yard back together? | Y or N | Y or N | Y or N |
| • Do I have an access lid on tank? *Contractors are not authorized to punch hole in lid, but lid may be replaced.* | | | |
| • What type of drain field product do you recommend? *Chamber, Stone and Pipe, Drip Emitter, or Other* | | | |

**Keep your Important Septic Tank Documents in this folder**

# Water Supply and Wastewater Contact Information Directory

| If you have questions regarding: | Please Contact: |
|---|---|
| • Existing septic system function and maintenance<br>• Development of properties using septic systems<br>• Complaints regarding failing septic systems<br>• Permitting and inspection of septic systems<br>• Evaluation of existing septic systems<br>• Location of existing septic system | **Your County Board of Health**<br>Go to http://dph.georgia.gov/environmental-health to find a county office. |
| • Obtaining county building permits | **Your County Planning and Development Office** |
| • Lists of septic or pumper contractors certified to conduct work in Georgia<br>• Lists of soil classifiers certified to work in Georgia<br>• Helpful educational information concerning septic systems | **Georgia Department of Public Health, Environmental Health**<br>dph.georgia.gov/environmental-health |
| • Converting an existing property from using a septic system to a sanitary sewer | **Your Water Utility**<br>Look on a recent water bill for your utility contact information. |
| • Public water supply questions<br>• Grease trap questions<br>• Stormwater quality issues<br>• Illegal dumping to storm drains | **Your Water Utility**<br>Look on a recent water bill for your utility contact information. |
| • Installation of larger (>10,000 gallons per day flow) commercial septic systems<br>• Use of onsite disposal systems for non-domestic wastes | **Georgia Department of Natural Resources Environmental Protection Division**<br>1.888.373.5947 (toll-free in Georgia)<br>404.657.5947 (in the Atlanta area)<br>epd.georgia.gov |
| • For well water testing | **UGA – Agricultural Services**<br>Feed and Environmental Water Lab<br>2300 College Station Road, Athens, GA 30602<br>706.542.7690<br>ael.ces.uga.edu |
| • Water quality and pollution prevention information | **Clean Water Campaign**<br>www.cleanwatercampaign.com |

**Content and images courtesy of Gwinnett County Department of Water Resources, Lawrenceville, Georgia. Created in cooperation with Georgia Department of Public Health.**