PUBLIC MANAGEMENT ENTITY

Because of the need for alternative and innovative type septic systems in the Albemarle Regional Health Services area, the Public Management Entity was formed in 1991 to provide inspections of these systems at required frequencies.

Septic systems that are required to be under this program are: Sand-Backfill Trench (SBT) systems, SBT systems with artificial drainage, Low-Pressure Pipe (LPP) systems, systems with pretreatment, and large flow systems. Often, a certified subsurface wastewater system operator is also required.

Currently, there are more than 5000 sites under this program. The site evaluation and information from the application are used to determine whether a system will have to be under the Public Management Entity. During the inspection, the system is observed to see if it is functioning properly. If the system is failing (most often indicated by the surfacing of effluent), the local environmental health office is notified so a repair can be done. The inspector may also make recommendations on how to improve performance of the system.

A report is sent to the system owner after the inspection is completed. Because of department overhead, a fee is charged for the inspection and renewal of the operations permit. The inspection, however, does not have to be done at the billing time, but within the 12-month period of the contract.

PRIVATE WATER SUPPLY WELLS

North Carolina rules, as of July 1, 2008, require that the local health department must permit all installation and repair of wells for private water supplies.

The local health department will have to make multiple visits to the site in order to determine placement options, inspect the installation and grouting of the well, and also collect water samples for testing as to ensure the quality of the drinking water.

ITEMS TO CONSIDER WHEN INSTALLING A PRIVATE WELL

- Contact the local health department for required permits
- Check the well contractor's certification card and expiration date
- Be aware of separation requirements from wells such as (this is not a complete list):

  - Septic tank and drainfield: 100 ft
  - Building foundations: 25 ft
  - Surface waters such as ponds and lakes: 50 ft
  - Surface waters such as creeks and streams: 25 ft
  - Animal barns: 50 ft

**For more information on private wells and well contractors refer to:*
www.ncwelldriller.org

For more information, please contact your county Environmental Health office at the following telephone numbers Monday thru Friday between 8:00 am and 5:00 pm, except holidays:

Gates……	**(252) 357-1380**
Bertie……..……	**(252) 794-5303**
Chowan……..	**(252) 482-1199**
Perquimans…….…..	**(252) 426-2100**
Pasquotank……..	**(252) 338-4490**
Camden……..…	**(252) 338-4460**
Currituck……..…..…	**(252) 232-6603**

Services Offered:

- **Site Evaluations**
- **Existing System Inspections**
- **Repair Permits**
- **Improvement Permits**
- **Operations Permits**
- **Private Well Permits**

MISSION STATEMENT

"The mission of the Albemarle Regional Health Services Environmental Health Program is to protect the public from environmental hazards through service delivery and education to prevent the spread of communicable diseases, thus enhancing the safety, health, and well being of the communities."

ALBEMARLE REGIONAL HEALTH SERVICES
Partners in Public Health

P.O. Box 189
Elizabeth City, NC 27907

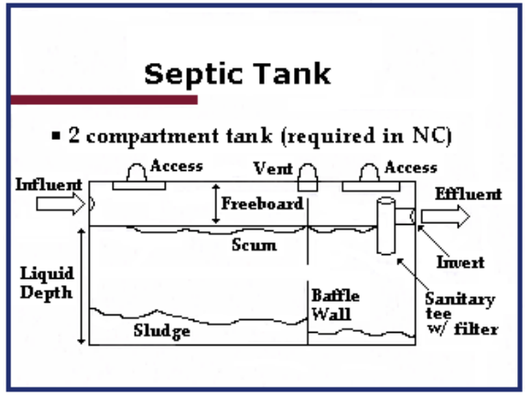
ON-SITE WASTEWATER

PUBLIC MANAGEMENT ENTITY

PRIVATE WATER SUPPLY WELLS

ON-SITE WASTEWATER

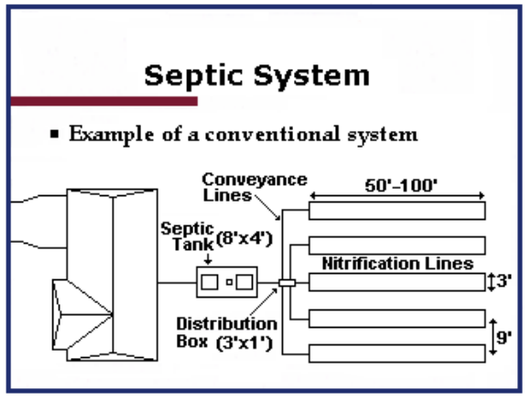
Ground absorption wastewater systems (commonly referred to as **septic systems**) are used for wastewater treatment and disposal on sites where municipal sewer is not practical. **Wastewater** is any sewage discharged from residences, businesses, or other places. Wastewater often contains disease-causing germs and harmful pollutants, and it must be treated so it will not adversely affect public health and the environment through contamination of land, or ground, and surface waters.



A **conventional** septic system consists of a **septic tank** (above), a **distribution box**, and **nitrification lines** all connected by pipes called **conveyance lines**. All of these components are designed to be resistant to corrosion. The wastewater first flows into the septic tank where heavy solids and lighter scum separate in a process known as **primary treatment**. Some of the scum and solids are eventually decomposed by **anaerobic** (absence of oxygen) bacteria.

The wastewater (now called **effluent**) then flows into the distribution box that evenly divides the flow of the effluent into the nitrification lines. The nitrification lines most often consist of perforated pipe in a gravel bed and allow the effluent to move slowly into the **soil**.

If the soil conditions are suitable, the effluent is purified as it flows through the soil by a process known as **aerobic** (presence of oxygen) treatment. Aerobic soil is where most of the germs and pollutants are removed, so the type of soil in which the septic system is located is important.



Suitable soils are deep, well-drained soils that often have a uniform yellow, orange, or red color. **Marginal** soils often have some gray color (defined as a chroma 2 or less on a Munsell color chart) that may indicate anaerobic conditions. This is sometimes seen in very clayey soils where effluent would flow too slowly, or in very wet soils.

If the site is marginal, sometimes the site may be able to have a modified or an **alternative** septic system. These systems can overcome some unsuitable site characteristics, and they include Shallow Systems, Fill Systems, Low-Pressure Pipe (LPP) systems, and Sand-Backfill Trench (SBT) Systems, with or without artificial drainage. Approved pre-treatment devices may also be used to further purify the effluent.

To determine if a site is suitable or marginal, an authorized agent, most often an **Environmental Health Specialist** from the local Health Department, must perform a **site evaluation**. The site evaluation procedure is governed by state and local rules and ordinances. A septic system must be installed on a site before electrical service can be permanently connected.

**Refer to On-site Water Protection at:*
www.deh.enr.state.nc.us

In order for the site to be properly evaluated for the use of a septic system please do the following:

1. **Apply at the local health department and pay the evaluation fee**
2. **Submit a plat or site plan of the site**
3. **Clearly mark the site boundaries**
4. **Remove excess vegetative growth and other obstacles so the Environmental Health Specialist will have adequate access to the site**
5. **Place a sign at the road front identifying the site**

MAINTENANCE TIPS

- Know the location of the system
- Do **NOT** drive or build over the system
- Grade the site to remove excess rainwater away from the system
- Do **NOT** flush solid waste materials into the system (including disposable diapers, cigarette butts, sanitary napkins, tampons, paper towels, condoms, and other materials that do not easily decompose)
- Do **NOT** put grease into the system
- Do **NOT** pour oil, solvents, or poisons into the system
- Plant trees and shrubs away from the system
- Restrict the use of a garbage disposal
- Maintain a grass vegetative cover over the nitrification field
- Conserve water! Use low-flow (1.6 gallon) commodes and check for leaking fixtures
- Pump the septic tank by a permitted pumper to remove solids (use table below)

	Number of People Using The System				
	1	2	4	6	8
Tank Size (gallons)	Average Number of Years Between Pumping				
1,000	12	6	3	2	1
1,250	16	8	3	2	1
1,500	19	9	4	3	2

*1,000 gallons is the average size for 3 and 4 bedroom homes.