

# TAKING THE MYSTERY OUT OF YOUR SOIL/SITE EVALUATION

## **So, what is a soil/site evaluation, you ask?**

To begin with, it is a time to gather information for issuing an improvement permit and an authorization for sewage system construction to build a home where public sewers are not available. Environmental health specialists are the people with the health department who issue these permits. They use the facts they collect at the site evaluation to help determine a specific lot's ability to support a sewage treatment system.

## **What's in it for you?**

Clean water and property protection are what's in it for you. People often ask why the health department looks at each building site it permits. What's all the fuss about? All the fuss is about purifying wastewater before reusing it. That's right! Your wastewater will be used again. Others may consume it using nearby well or it may move to a nearby stream or river. You may even reuse it yourself. Our mission is to provide you with a safe and sanitary sewage treatment system.

## **You've turned in your application, now what?**

Once the health department has the application, the first step is to review it for completeness. If the application has been incorrectly completed, it may be returned to you for correction, additional information. Completed applications are assigned to a specialist for a field evaluation.

## **How do environmental health specialists do what they do?**

Your local specialist is trained in natural science and public health. He or she evaluates how well the soil on your site can treat and dispose of sewage. You can learn a lot about your land by meeting and talking with the specialist. You may discover learning about your local soils and geology is fascinating.

## **First come first served?**

Specialists schedule applications for maximum time efficiency. We handle applications as quickly as possible. Our turn around time can range from two to eight weeks depending on demand.

## **Yes, some seasons are busier than others.**

Spring and Fall are our busy times. Sometimes it can take us an additional three to four weeks to complete the review during these seasons. This is usually because of an unexpected building boom or staff turnover. We don't like backlogs any more than you do, so we'll do all we can to keep it moving!

## **HERE WE ARE AT THE SITE EVALUATION**

### **What a view!**

The specialist will want to know where you plan to put your house, driveway, garage and any other planned additions. He or she will also find out the locations of neighboring wells and sewage systems, and, determine if they will conflict with your plans.

In addition, the specialist will look at the landscape features of your property. Ridges, slopes, gullies and rock outcrops are critical issues in safe sewage disposal and treatment. A slope that sheds water instead of collecting it is an ideal location for most sewage systems,

### **It's hole digging time!**

After looking at the landscape, neighboring land uses, and your plans, the soil evaluation process can begin. The specialist will look at soil collected from at least three to five holes on your property. These samples help the specialist describe the site. Samples show key soil colors and textures. They also show the distance between the ground surface and underlying rock layers, as well as the groundwater table.

A hand auger or backhoe is most often used to dig up the soils for evaluation. The hand auger is a tool used to bore holes about 3" in diameter and up to 5 feet deep. The auger lets the user pull soil samples for examination. Backhoes dig pits large enough for the specialist to enter to determine soil characteristics and depths.

**When the site is just too hard to get soil samples...**

When rock or stoniness stops the use of an auger, when the specialist cannot make a good identification with the auger, or when more than three lots are to be evaluated, the specialist will ask you to contract a backhoe. Arranging and paying for the backhoe is the applicant's responsibility.

**What kind of soil is needed to install a sewage treatment system?**

The specialist looks for well drained soils. These soils treat wastewater and make it safe to use again. The soil color indicates to the specialist if the soil is well drained. Well-drained soils usually have bright brown and red colors. Soils containing a seasonal groundwater table are not well drained. Usually these soils have gray, yellow or pale brown colors. Most research shows two to four feet of well drained soil is necessary to cleanse wastewater.

**We're also looking for how it "percs" ...and we don't mean coffee.**

The movement of water through the soil is called percolation. Specialists' estimate how fast water will move or "perc" by determining the type of soil texture. Soils that perc too quickly can contaminate groundwater. Those that perc too slowly can cause sluggish plumbing flow. This can produce sewage overflows both inside and outside your home. After estimating the perc rate, the specialist chooses a system sized to meet your needs.

**Traveling down under...**

The specialist also checks to see how deep the soil is on your land. Rock and compacted soils, called pans, are the most common limitations to soil depth. There must be two to four feet of well drained soil to remove most bacteria and viruses from wastewater. In North Carolina there must be at least one foot of well drained soil above rock or restrictive layers. If more is available, we will use it. Some geologic formations, such as limestone, are especially subject to transporting contaminated water. In limestone formations, contamination can easily travel miles. The physical and chemical nature of the earth's formation determines the degree of hazard. Even a single ridge of rock can cause serious health threats if a sewage system is installed too close to it.

**How long does an evaluation take?**

The soil/site evaluations are usually finished in one to two hours. If the first site is not satisfactory we try to look at a second site.

**What if we don't find a workable site?**

When the environmental health specialist cannot find a good site for a conventional septic tank system, they must provide further review to determine if alternative or modified systems might work. If an alternative or modified system will work on the site, an Improvement Permit will be issued. If you are ready to start building an Authorization for Wastewater System Construction will also be issued. If the site is found to be unsuitable, no permits will be issued.

**Let's talk permits!**

To receive an Improvement Permit and an Authorization for Wastewater System Construction, a site must meet the standards found in the North Carolina "Laws & Rules for Sewage Treatment and Disposal Systems. After locating a suitable site, the specialist drafts an Improvement Permit. Once the Improvement Permit is complete, the applicant is notified and must come to the health department to sign for it. If the applicant intends on building soon, the Authorization for Wastewater System Construction will also be issued. An Improvement Permit is valid indefinitely as long as the site is not changed. An Authorization for Wastewater System Construction will be valid for a certain time frame specified by the rules.

**When will you get your permit?**

An applicant usually receives notification within a week after the specialist has finished their evaluation. The applicant may then set up an appointment with the specialist to come into the office and sign for the permits.

**That about wraps it up!**

The need for effective sewage treatment and disposal treatment meets each of us where we live-at home. Soil/site evaluations and issuing permits for sewage systems are the first steps in insuring that Forsyth County's homes have safe sewage treatment and disposal systems. Using our land wisely will protect our groundwater and ensure clean drinking water for us today and for future generations.

## **SITE EVALUATION CHECK LIST**

- Stake off all property corners. If lot lines are greater than 150', or you cannot view other stakes when standing on a corner, it will be necessary to place extra stakes along the property lines.
- Clearly stake and flag all proposed structure corners.
- Remove heavy brush or plant undergrowth that hinders easy access and a good view *of* the topographical features of the property.
- Include a plat map of the property with the application.
- Post the yellow sign in a visible location on the property. This will allow the environmental health specialist to better locate the property.
- Follow directions carefully for making payment for the soil/site evaluation.
- Remember, we cannot date and perform your soil/site evaluation until payment has been received.