

March/April 2004

Environmental Update



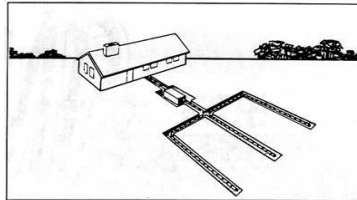
NCCE - Onslow County Center
Onslow County Multipurpose Complex
4024 Richlands Hwy.
Jacksonville, NC 28540
(910) 455-5873
Fax (910) 455-0977
<http://www.ces.ncsu.edu/onslow>



Clean Water Starts at Home

Clean Water Starts at Home is not just a slogan. It is also the name of a program; specifically, the EPA Guidelines for Management of Onsite and Decentralized Wastewater Treatment Systems. "What", you may ask, "are onsite and decentralized wastewater treatment systems?" Simply put, they are septic systems. Today, however, septic systems include cluster systems, sand filters, and other alternative technologies.

Septic systems suffer from "out of site, out of mind". People who have them tend not to think about the system until something goes wrong. And boy, can things go wrong!



During the past several years, EPA has repeatedly stated that septic systems are here to stay. They are viable, long-term alternatives to centralized wastewater facilities (sewer), particularly in small and rural communities..... **if properly managed.** Certain types of systems in North Carolina are required to have a certified subsurface system operator. These systems include newly permitted or repaired low pressure pipe (LPP), drip irrigation, pressure-dosed sand filter, and peat biofilter systems.

Conventional, gravity fed systems and several alternatives do not require an operator. Once installed, they may be (and frequently are) ignored for years. This neglect and unintentional abuse can lead to early system failure.

EPA's guidelines for management of onsite and decentralized wastewater systems are a set of recommended practices targeted at improving

system performance and reducing risk to human health and water resources. Five separate model programs were developed, so that localities can choose the one best suited to their needs. The five programs, from simple to complex, are:

- Inventory and maintenance reminders,
- Management through maintenance contracts,
- Management through operating permits,
- Responsible Management Entity operation and maintenance, and
- Responsible Management Entity ownership

These are voluntary programs. The goal is to implement local management programs, so that septic systems won't be forgotten until they are failing. EPA has a website that leads to both the guidelines and a management handbook developed to assist communities in guideline implementation:

<http://www.epa.gov/owm/mtb/decent/index.htm>

These are practices that can also be put into effect at the homeowners association level. Such practices could include reminder notices to have the tank pumped, new homeowner packets that tell about the type of septic system at that home and how best to treat it (what NOT to put down the drains... it isn't a trash can!), and even have an annual fee that is used to cover inspections and tank pumpings. Many people in North Carolina pay an annual termite inspection fee, this would be similar.

Besides helping people to find problems while they are small and "fixable", a homeowners' association program could also make the homes in that area more salable in the future. Why? Because potential buyers would be able to

obtain a maintenance record for each system. There wouldn't be the often encountered concerns that the system had been mistreated and ignored for years.

If you are a homeowner with a septic system, you don't have to wait for someone to initiate a management program. You can start your own. It can be as simple as having your tank pumped every 3-5 years and keeping a record of each occurrence. What else can you do? Well.....

- If you have ditches, make sure they aren't clogged with sediment and debris. The ditches drain water away, which lowers the watertable and helps keep the drainfield working.
- If the ditches are clogged in your subdivision or neighborhood, organize a ditch cleanup event. Make it a group effort. Basic septic system information can be given out during the cleanup, so your neighbors will also know how to better maintain their system. Various publications are available from your local Cooperative Extension office, such as *Septic Systems and Their Maintenance*.
- Go to your local Health Department and get a copy of your permit. **Read it!** Where is your drainfield? Do you also have a designated repair area? Where is that? Have you kept that area safe from soil compaction? Have you built something on it? Do you park on either the drainfield or the repair area? If yes, STOP! You are compacting the soil!
- Hold a *Septic Social*. "What's that?", you ask. Well, that's when you schedule a pumper to come pump your tank... and you invite the neighbors to watch. Let the pumper know what you plan to do. That way, they'll know that there will be people present asking questions and trying to see what is going on. Some pumpers will even charge a reduced rate, because they will be getting new customers as a result of the event. It doesn't hurt to ask.
- If your system was put into service before 1999, ask a pumping service or septic system installer about having an effluent filter installed on your tank. Effluent filters are required on new system installations. The intent of the filter is to trap small particles leaving the tank, so they don't reach the

drainfield. If they reach the drainfield, they can contribute to clogging and system failure.

Rental Property & Septic Systems

Both those who manage rental property and their renters have responsibilities (moral, if not legal) when it comes to septic systems. Septic systems don't require much attention, but they do require some commonsense care. For instance:

- Hydraulic overloading is a common cause of failure. Simply put, "hydraulic overloading" is too much water going through the system. Septic system drainfields are sized based on the number of bedrooms (2 people per bedroom, 60 gallons of water per person per day). A three bedroom home should not be rented out to 12 people! Conversely, renters shouldn't wash several loads of laundry on the same day. Running the clothes washer drain line on the ground surface (or below surface to a ditch!) is not a legal option. Dripping faucets and toilet flappers that don't seal properly can also cause hydraulic overloading. The renter needs to notify the landlord of any observed leaks and drips. Water conservation measures, whether physical (low-flow devices) or behavioral (shorter showers) are also helpful.
- Grease, coffee grounds, cigarette butts, kitty litter and other such materials should not go down the drains. These items collect in the tank and can require it to be pumped more frequently. If they exit the tank and go to the drainfield, they can cause soil clogging and drainfield failure.
- Be sure the location of the drainfield lines is known! They do not get flagged when utility lines are marked prior to cable or telephone line installation. The plastic lines are readily cut, which leads to the lines having to be repaired or replaced. The fact that the drainlines were cut is usually discovered when sewage starts coming to the surface.
- Who is responsible for any extra pumping or drainfield repairs? That could depend on past system history, what was written in the rental agreement, and whether or not the renter was duly informed about septic systems.

NPDES Stormwater Program

NPDES stands for “National Pollutant Discharge Elimination System”, and was first established in 1972. The Stormwater Program came later and has two parts: Phase I and Phase II. The Phase I NPDES Stormwater Program was enacted in 1990. It applied to industrial sites, construction sites larger than 5 acres, and cities with over 100,000 people.

Phase II of the NPDES Stormwater Program was enacted in 1999. In North Carolina, it applies to 17 “Urbanized Areas”. Two such areas are:

Jacksonville Urban Area: Jacksonville and Onslow County

Wilmington Urban Area: Belville, Carolina Beach, Kure Beach, Leland, Navassa, Wilmington, Wrightsville Beach, Brunswick County, and New Hanover County

These areas were required to submit a NPDES stormwater permit request to the DENR Division of Water Quality by March 10, 2003. The permits were required to address six areas:

- Public education & outreach
- Public involvement & participation
- Illicit discharge detection & elimination
- Construction site stormwater runoff control
- Post-construction stormwater management for new development & redevelopment, and
- Pollution prevention/good housekeeping for municipal operations.

Public Education & Outreach

Informational items, such as this newsletter, count for the “public education & outreach” component. Why? Because the public is a key source of the various pollutants that the Phase II permit addresses! What you do on your property **DOES** affect local water quality. For example:

- If you have gutters, divert the downspouts away from paved areas and onto grass or garden areas. You can also use a rain barrel to collect runoff from your roof and use it to water your landscape.

- Grease poured into kitchen sinks can block sewer lines, which then results in raw sewage spills. Instead, put cooking grease and oil in a lidded container and dispose of it in the trash.
- Pet waste is often the source of fecal coliform contamination detected in waterways. Pick up after your pet by using a bag, sealing it, and putting it in the trash. You can also bury pet waste 5 inches underground or install a pet waste digester. **DO NOT** add pet wastes to your compost pile, especially if you use the compost around food plants.
- Fertilizers and pesticides can be carried into storm drains by runoff from over-irrigation or rain events. Have your soil tested to determine the proper amounts of fertilizer to use. It's a free service! (Call your local Cooperative Extension office for details.) When possible, use organic or non-toxic pesticides and fertilizers. Try not to use these products near ditches, storm drains, or other waterways. Store them in a covered area and off the ground to prevent contact with water. Don't buy more than you need or use more than the recommended amounts.
- When possible, plant native tree, shrub, and plant species in your yard. Native species are more drought tolerant and require less fertilizer and water. Lists of such plants are available from your local Cooperative Extension and Soil & Water Conservation offices.
- Do not blow, rake, dump or hose any yard waste into the street or storm drains. Decaying leaves and yard debris take oxygen out of the water, thereby killing fish and other aquatic life. Instead, prepare the material for pickup by your trash collector according to their preferred method. Better yet, start a compost pile and use the finished product in your yard.
- Do not hose off driveways or parking lots. The runoff will pick up contaminants (oil, metals, grease, etc.) from the surfaces and transport them to waterways. Instead, sweep the surfaces and dispose of the collected material in the trash. Kitty litter, sawdust, or cornmeal can be used to clean up spills from changing the oil or other car fluids.

Further information about stormwater is available at:

<http://www.ci.wilmington.nc.us/pubservices/stormwater/OutreachHomeSWRunoff.htm>

<http://www.ci.wilmington.nc.us/pubservices/stormwater/PublicationsandReports.htm>

Upcoming Events

Ocean Education Leadership Institute

The SouthEast Center for Ocean Sciences Education Excellence (SouthEast COSEE) is offering the Ocean Education Leadership Institute for school educators **June 25-July 1** at the University of Georgia Marine Education Center and Aquarium in Savannah, Ga. Middle and high school science teachers from NC, SC and Georgia are invited to apply for selection. The institute will consist of 30 teachers--10 teachers with two alternates selected from each state. The focus of this Institute is to build a greater understanding of the South Atlantic Bight for the education community.

For information or an application, visit the SouthEast COSEE website at:

<http://www.scseagrant.org/se-cosee/education.htm>

or contact Margaret Olsen (olsen@uga.edu)

Don't forget: Earth Day is April 22nd and Arbor Day is April 26th.

Snakes of Southeastern NC

This NC Wildlife Resources Commission program will discuss the various snakes that live in eastern North Carolina, including identification techniques and interactions with humans.

Date & time: **March 23, 7 - 9 pm**

Location: Wilmington, Cape Fear River Watch

Contact: Andrea Talley, Wilmington Parks and Recreation (Andrea.Talley@ci.wilmington.nc.us) (910) 343-4750.

An Encore for Oysters

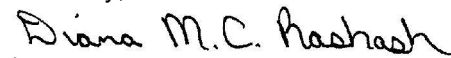
This public conference is for anyone who wants to lend a hand in the restoration of our coast or who simply wants to learn more about shell-recycling programs, reef building, restoring wetlands, oyster gardening and other ways to help restore oyster habitat and water quality in our estuaries.

Date & time: **March 16 and 17, 8 am - 5 pm**

Location: Crystal Coast Civic Center, Morehead City, NC

Contact:: www.nccoast.org or call Lauren Kolodij at NC Coastal Federation (252) 393-8185 for complete brochure and registration information

Sincerely,



Diana M.C. Rashash, PhD
Extension Area Specialized Agent
Natural Resources-Environmental Education

North Carolina Cooperative Extension Service
North Carolina State University
Onslow County Center
4024 Richlands Hwy.
Jacksonville, NC 28540