



Pipeline

Small Community Wastewater Issues Explained to the Public

INSPECTIONS EQUAL PREVENTATIVE CARE FOR ONSITE SYSTEMS

Most people know that it is important to visit the doctor from time to time if they want to live a long healthy life.

Regular checkups can uncover physical problems or unhealthy habits before they lead to serious illnesses, yet many people put off going to the doctor precisely because they are afraid of what they might find out.

Perhaps it's only human nature, therefore, that explains why many homeowners tend to put off having their onsite wastewater treatment systems inspected. Homeowners often don't even know what type of system they have or when it was last serviced. After all, onsite systems usually are buried out of sight, which makes them easy to ignore, especially when they seem to be working.

But ignorance about the condition of onsite systems can be costly for homeowners.

Careful examination by a trained professional usually is required to determine whether a system is truly functioning properly and to troubleshoot and accurately diagnose any potential

problems in their early stages before they lead to expensive emergencies.

In fact, regular inspections are as important to onsite system health as medical checkups are to human health. Inspections help homeowners determine when and how often systems need maintenance, which is essential for keeping them in good working order. Inspection results also can suggest simple lifestyle changes, such as conserving water, to help homeowners protect and extend the life of their systems.

Protect Your Home and Family

Inspections not only protect systems but also the health of family, neighbors, and entire communities. Malfunctioning onsite systems can contaminate nearby wells and public drinking water sources, and they can pollute local rivers, lakes, and coastal waters, contaminating and killing aquatic life. Homeowners can be held liable for problems and nuisances associated with failing systems. Regular inspections are needed to uncover problems before they threaten public health and the environment.

Thorough onsite system inspections also help homeowners protect their property investments. Imagine the nightmare of moving to a new home only to find that the wastewater system is failing or that it is too small. Some local regulations and lending institutions require that systems be inspected prior to property transfers, just as termite and structural inspections are often required, to help homebuyers avoid costly surprises.

Types of Inspections


Although newly constructed onsite systems also need to be inspected before they are approved

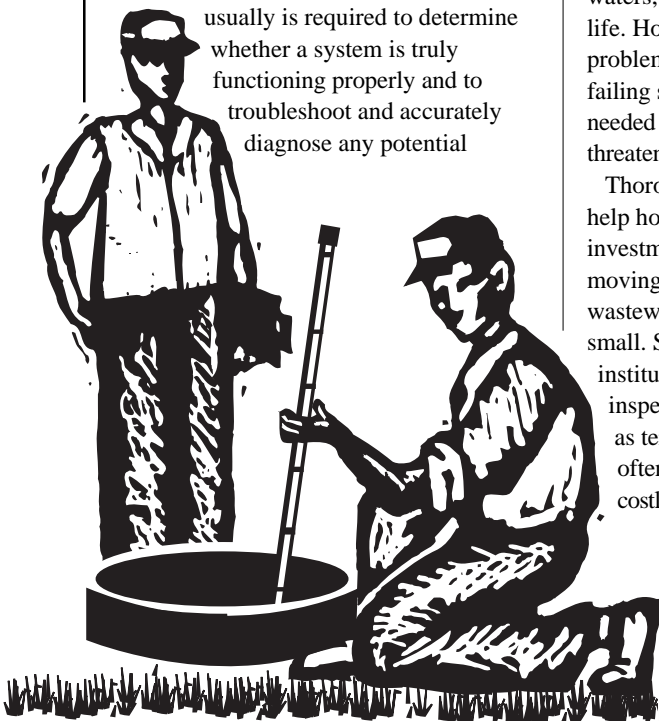
Why Have Your System Inspected?

- to make sure it is functioning properly,
- to protect the health of your family and neighbors,
- to extend the life of the system,
- to catch and troubleshoot problems in their early stages before they become serious and expensive to correct,
- to protect wells and other local drinking water sources from contamination,
- to protect life in local rivers, lakes, and coastal waters and prevent the need for costly rehabilitation efforts,
- to comply with environmental and health regulations,
- to protect your investment in your home and property, and
- to fulfill legal or lending institution requirements for property transfers.

for operation, this issue of *Pipeline* focuses specifically on inspections of existing onsite systems already in operation. These inspections sometimes occur independently or as part of a maintenance visit, depending on local regulations, the type of system, the reason for the inspection, and the degree of observation and monitoring necessary.

This issue of *Pipeline* provides an overview for homeowners of what occurs during an inspection visit. Readers are encouraged to reprint the articles in local newspapers or include them in flyers, handouts, newsletters, and educational presentations. Please include the name and phone number of the National Small Flows Clearinghouse (NSFC) on the reprinted information and send us a copy for our files.

If you have any questions about reprinting articles or about any of the topics in this newsletter, please contact the NSFC at (800) 624-8301 or (304) 293-4191. 



When should onsite systems be inspected?

Exactly when and how often systems should be inspected depends on local onsite system regulations, the type of system, how it is used, and whether it is located in an environmentally sensitive site or area. Contact your local health department for information concerning requirements for your system. *Refer to the contacts list on page 7 for information on how to reach your local health department.*

Septic Systems

Conventional septic tank/soil absorption systems are the most common type of onsite system serving individual homes in the U.S. It is in homeowners' best interests to have their septic systems inspected regularly, even when local regulations don't require it. Septic systems serving restaurants or other businesses or institutions must be inspected more frequently than residential systems because they usually treat wastewater that is higher in strength and volume.

It is especially important for homeowners to schedule annual inspections for new septic systems and systems that are new to them as users to monitor how quickly the layers of sludge and scum accumulate in the septic tank with normal use. If sludge and scum layers are allowed to become too thick, solid materials may flow from the septic tank into the soil absorption field, clogging the pipes and soil and causing the system to fail. Annual inspections help homeowners estimate more precisely how often they need to have their septic tank pumped out to avoid this problem.

Inspections also can uncover any cracks, flaws, or other problems with systems, and they can help homeowners find out if they are using their systems wisely. For example, inspections can reveal if food scraps or other inappropriate items are being washed down the drain regularly or if too much water is being used, which can overburden systems.

For more information about how septic systems work and proper septic system operation and maintenance, refer to the Summer and Fall 1995 issues of Pipeline (Items #SFPLNL02 and #SFPLNL03). The price for Pipeline back issues is 20 cents each plus shipping and handling. See page 8 for ordering information.



Other Onsite Systems

Home aerobic treatment units, sand filters, mounds, chlorination units, lagoons, and other alternative or innovative onsite system technologies have different inspection requirements. Some systems must be inspected more frequently or require regular monitoring by specially qualified professionals. (*See "Who inspects onsite systems" on page 3.*) In addition, systems with electrical or mechanical components, such as pumps, timers, control panels, and alarms, need to be inspected and serviced according to manufacturer recommendations.

Regulations may require that some alternative onsite systems be inspected more frequently than conventional septic systems because of their more complex designs and because many alternative systems are located at difficult sites or in environmentally sensitive areas. Some communities have onsite system management programs in place to ensure that systems are regularly monitored, or communities may issue operating permits requiring inspections as a condition for renewal. Home aerobic treatment units usually come with maintenance service contracts that include regular inspections by a local manufacturer representative. Homeowners are sometimes required to renew these contracts after the initial two-year period, but should consider renewing them even if not required to do so.

To learn more about community programs for managing onsite system operation and maintenance, refer to the Spring 1996 issue of Pipeline (Item #SFPLNL05). For more about home aerobic treatment units and service contracts, refer to the Winter 1996 issue of Pipeline (Item #SFPLNL04).

The National Small Flows Clearinghouse (NSFC) also offers a variety of information about other alternative and innovative onsite wastewater systems. Refer to pages 7 and 8 for information.

Property Transfers

It is not unusual for regulations or lending institutions to require that onsite system inspections be performed within a given time of the sale or transfer of property. This requirement sometimes can be waived if the owner has kept detailed records of past system inspections and maintenance. For their own protection, consumers should insist on a thorough system inspection before purchasing a home, whether or not it is required by local regulations, and once the home is purchased, they should maintain detailed and up-to-date records of all system inspection and service visits.

Major Changes and Repairs

Homeowners often need to have their onsite systems inspected to obtain building permits for constructing home additions or adding new buildings to their property. An inspection determines whether the system will be affected by the new construction and if it will be able to handle any potential changes in the amount or strength of the wastewater from the extra rooms or additional occupants.

Inspections also may be required before making system repairs and other changes to property that can affect the system. Changes in the use of a property, for example, from seasonal to year-round occupancy or from residential to commercial use, also affect onsite systems and inspections often are required before such changes are approved.

Who initiates inspections?

If your community has some type of program in place for managing onsite systems, you may be contacted by a health official or management program employee to schedule an inspection of your system. Otherwise, it usually is up to homeowners to initiate system inspections. Contact your local health department for information about inspections in your area. 💧

Who inspects onsite systems?

Onsite system inspections may be performed by health officials, sanitarians, independent contractors (septic system pumpers and haulers, for example), or people employed by communities, developers, or homeowner associations. Manufacturer representatives are responsible for inspecting and servicing certain systems and components covered by service contracts or warranties. Exactly who should inspect your system depends on the type of system you have, the reason for the inspection, and local onsite system regulations.

Choose the Right Professional

The first step to finding the right person to inspect your system is to contact your local health department. (*Refer to the contact information on page 7.*) Health department officials know about local onsite system regulations, and they may know whether your community schedules regular system inspections. They also will be aware of any special requirements for your particular type of system or property and whether certain licenses, certification, education, or training are required for onsite professionals in your state.

For example, a few states, such as Massachusetts and Pennsylvania, and counties in some states sponsor training programs for onsite system inspectors and maintain lists of the people who have completed these programs. Regulations concerning qualifications for onsite system professionals vary considerably from state to state, and some states have no requirements at all. Local health officials often can help you find qualified people in your area.

It is important to be aware, however, that simply finding a professional with the required qualifications does not guarantee that he or she is the best person for the job. Homeowners should compare estimates, check references, and hire someone who has appropriate experience. It also is a good idea to hire someone who carries adequate insurance and to be alert to any potential conflicts of interest. For example, it is very common for onsite system professionals working in the private sector to perform a variety of different services, so the person who inspects your system also may repair, maintain, and install systems.

Homeowners should simply be aware of the potential for a conflict and take the time to check references.

Should you do it yourself?

Do you know what a baffle looks like and how to tell if it is working? Do you know what you should find inside a properly functioning septic tank, or how to test pump switches? If not, you should hire a professional to inspect your system.

Because some state and local regulations do not specify who should inspect systems and how often they should be inspected, some homeowners may be tempted to inspect their systems themselves. Even when this is an option, there are many advantages to hiring a professional to do the job.

Experienced onsite system professionals can identify structural problems with tanks and other components and are able to inspect entire systems, including all plumbing, components, and the soil absorption field. If a system is difficult to locate, professional inspectors will have the know-how and equipment to find the system more easily. After the inspection, they can provide the homeowner with a written report detailing the results, the location of the system, and any maintenance that needs to be performed. These reports are official documents valuable for showing to banks, insurance companies, and prospective homebuyers.

Another reason homeowners should hire professionals are the dangers inherent in performing inspections and maintenance for some systems. Septic tanks, for example, contain gases that can be poisonous, explosive, and potentially fatal, so tanks should not be entered or inspected alone. Systems with electrical components pose a shock hazard and even probing in the backyard with a metal rod (a common method for locating systems) can be dangerous if there are utility lines buried there. Also, the wastewater in the tank may contain disease-causing pathogens.

Professional system inspectors are aware of proper safety practices. They also have specialized equipment that enables them to perform the inspection more safely and cost-effectively than would be possible for most homeowners. 💧



Help Is Available!

If your local health department is unable to help you find a qualified professional onsite system inspector in your area, there are additional resources available:

NSFC's Manufacturers and Consultants Database

Homeowners can call the National Small Flows Clearinghouse (NSFC) and request a customized search of the Manufacturers and Consultants Database to obtain a list of consultants in their area who work with onsite and small community wastewater systems. The search can be narrowed to include only those consultants who have notified the NSFC that they perform onsite system inspections. Homeowners then can contact local consultants to compare prices, check references, and inquire about insurance coverage, certification, and licenses.

Contact the NSFC at (800) 624-8301 or (304) 293-4191 and ask to speak with a technical assistance specialist for more information about the database or to request a search. Please be sure to specify the topic and Item #WWPCCM15 when requesting a search. The price is 15 cents per page.

National Association of Waste Transporters, Inc. (NAWT)

As a professional organization serving onsite system pumpers and haulers, part of NAWT's mission is to advance and increase the professionalism and public image of its industry. NAWT has developed its own training and certification programs for onsite system inspectors and offers the curriculum to states and others. The organization also offers group insurance for independent contractors.

Homeowners who would like information about NAWT members who perform inspections in their area can contact the organization's headquarters in Scandia, Minnesota, at (800) 236-6298. 💧

The Homeowner's Role in the Inspection Process

Suppose you contacted your local health department, found the right people to inspect your system, and scheduled an appointment—now is your role in the inspection over? Not if you're smart. Your continued involvement will help ensure that everything goes smoothly and that you benefit as much as possible from the process.

Gather Information

One way homeowners can aid the inspection process and save considerable time and money is to provide the professionals performing the inspection with as much information about the system as possible. An "as-built" drawing of the system or reports from previous inspection or maintenance visits, for example, will help the inspector locate the system and inspect it thoroughly. Other helpful documents include operating manuals or manufacturer information for system components. Gathering this information in

advance and having it on-hand at the inspection will help homeowners save time answering the inspectors' questions (*refer to the article below, "Questions Inspectors May Ask"*), and it may save the expense of someone else having to do the research.

These records sometimes can be found with the deed and other documents from the purchase of your home, or there may be some information at your local health department. (*Refer to page 8 for information about the National Small Flows Clearinghouse's new "Homeowner Onsite System Recordkeeping Folder."*)

Be Present

It is important for someone living in the home to be present during the inspection to answer any questions the inspectors have about the habits and lifestyle of the system users and to let the inspectors in the house to examine pipes and flush toilets.

Another good reason for homeowners to be present is to oversee the inspection as an added precaution to ensure that everything is done thoroughly and correctly—for example, that any soil or sod that is removed is replaced neatly (*see the article on page 5 for more information*).

Ask Questions

Inspections are an excellent opportunity for homeowners to learn about their system and how to best care for it. It is a good idea to follow the inspector to observe and ask questions. Some health officials and other onsite system professionals are very good about taking the time to interact with homeowners to educate them about proper system operation and maintenance. However, like any group of people, different inspectors have different personalities and priorities, and it sometimes will be up to the homeowner to ask for this information. 💧

Questions Inspectors May Ask

A thorough onsite system inspection usually includes a detailed interview of the homeowner or resident concerning the system and household practices that may affect the system. The answers help the inspectors assess the quantity and quality of wastewater flowing into the system at various times of the day and week and other burdens to the system. The interview information also helps inspectors recommend ways residents can change their household habits to protect their systems.

The following are examples of the types of questions homeowners should be prepared to answer:

User Information

- How many people currently live in the home?
- How many bedrooms are there in the home?
- Is the home occupied year-round or seasonally?
- Is anyone in the home using medications or antibiotics long-term?
- How many loads of laundry do you do per day and per week?
- Do you do consecutive loads?

- Do you use powdered or liquid detergent?
- Do you have a garbage disposal?
- Do you have a dishwasher?
- Do you use a water softener?
- How many rolls of toilet paper do you use per week?

System Information

- Do you know what type of system you have?
- When was the system installed?
- Has the tank ever been pumped? If so, when was it last pumped?
- Has the system ever been repaired?
- Do you know where the septic tank and drainfield are located?
- Have pumps ever been serviced?
- Has the alarm system ever been repaired?
- Has the alarm light ever been on, or has the alarm ever sounded?
- Where are the separate circuits for the alarm and pump?
- Has sewage ever backed up into the house?
- Has sewage ever surfaced on the ground?
- Are there any soggy areas in the yard even in dry weather? Any odors?

Sometimes the inspectors will have additional questions after examining the system. They may suspect that too much



wastewater is flowing into the system at once from excess water use, leaky faucets, or running toilets, or that food scraps or harsh chemicals are being washed down the drain. Or, there may be evidence that inappropriate items, such as diapers, cigarette butts, tampons, or condoms are being disposed of in the system.

Although some of the inspectors' questions may seem intrusive and even a little embarrassing, it is in your best interest to answer them all as openly and as honestly as possible. The inspectors' only motivation is to get an accurate picture of what happens in the system so they can identify and help you avoid any potential problems. Again, think of your inspection visit as if it were a medical checkup—your cooperation can help protect your system's health. 💧

The Inspection Visit

After the inspectors obtain the information that they need from you, they will begin to examine different parts of your system and record what they find. Homeowners should be aware that the goal of an inspection simply is to assess the condition of a system at a particular point in time. It is impractical for inspectors to make any predictions or guarantees about the future performance of the system because it can be affected by too many unforeseeable factors, including the actions of homeowners.

Inspecting the Site

Before examining the system itself, the inspectors may check your property for obvious signs of trouble or system failure. They will look to see that downspouts and drains are pointed away from the system, and they will observe the topography of the site and note any property features, such as pavement, trees, or wells, that may affect the system or be of concern.

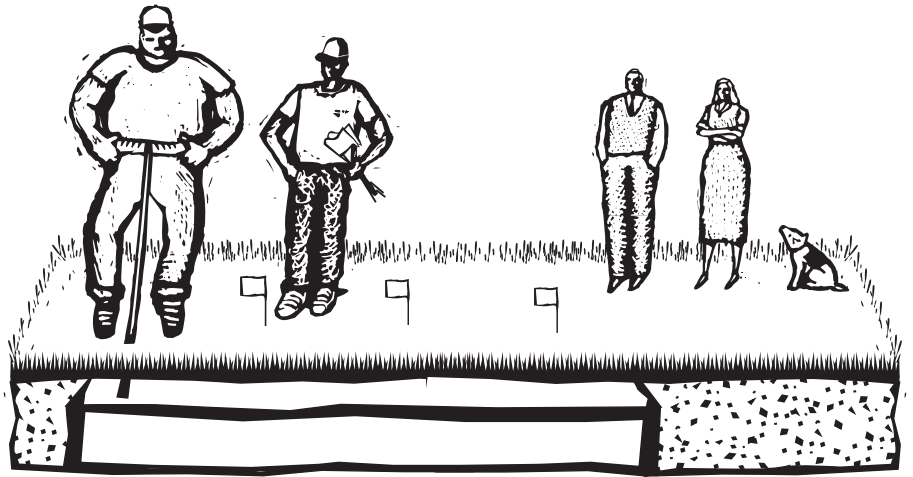
Some warning signs of possible system failure that warrant further investigation include odors and areas of the yard where the ground is wet or mushy or where the vegetation is different or growing more rapidly.

Checking Inside the House

Inspectors also will ask to go inside the house. They will flush the toilets and run a small amount of water down the drains to see if wastewater is backing up or draining slowly, which is a possible sign that the system is clogged. They also may add dye to the system (*see page 6 for more information*), and they may locate and check the condition of pipes and verify the number of bedrooms and the number and size of water-using appliances and fixtures.

Locating the System

If a map or drawing of the system is not available, the inspector will need to find your system some other way, which often takes considerable time and energy and, in some cases, even adds to the inspection cost. Once the system is located, make sure the inspector sketches a map of its layout and location for future inspections.



Common methods for finding system tanks include estimating their position from the direction of the sewer pipe that leaves the house, probing the ground outside with an insulated metal rod, using a metal detector, or flushing an electronic transmitter/locator device down the toilet. Once the tank is found, the inspectors will search for the rest of the system using the metal rod or metal detector, and they will temporarily place flags in the yard as they locate various features to facilitate sketching a map of the system. The whole process of locating and flagging different parts of the system may take several hours.

The NSFC's "Homeowner Onsite System Recordkeeping Folder" contains more detailed information about locating systems. See page 8 for more details and ordering information.

Uncovering Tank Access Ports

Systems, such as septic systems, that have tanks buried underground should have risers (elevated access covers) that make finding, inspecting, and maintaining them more convenient. If not, inspectors will have to unearth the tank's inspection ports and manhole. Ideally, the digging should be done with care so the inspectors can replace the sod neatly before they leave.

Homeowners should consider installing lockable risers for tanks that are difficult to locate or access to save time and money for future inspection and maintenance visits. If risers are not practical, there are flags and other devices available for marking the location of the tank and other system components.

Inspecting the Tank

After the tank accesses are opened and the covers are set aside, the inspectors will determine the size of the tank and whether it is constructed of concrete, metal, fiberglass, or plastic. They also will note the odor and appearance of the wastewater inside. There should be a layer of scum on top and the wastewater should smell musty, not sour.

Next, the inspectors will check the baffles or tees inside the tank to make sure they are correctly positioned and that there is no damage or plugging. (Adequate baffles and tees can prevent scum and sludge from leaving the septic tank and clogging the drainfield.) If the tank is equipped with effluent filters to help prevent solids from leaving the tank, these filters will be examined as well and may be cleaned if necessary.

The inspectors also will try to determine if the tank is watertight or if it has any cracks or leaks by measuring the level of liquid above or below the inlet and outlet. If the water is too high or if it is constantly flowing out of the tank even when no water is being used in the house, it could mean high groundwater or storm runoff is entering the tank. Low levels in the tank can be a sign that wastewater is leaking out. The tank may need to be pumped and cleaned for leaks to be located. The inspectors also may check the integrity of the pipes and connections to the tank.

If the inspector finds water stains in the tank that show that the level of wastewater has been high in the past, again the cause

Continued on page 6

The Inspection Visit

continued from page 5

may be high groundwater or stormwater, or it may be the result of excess household water use. Leaky faucets, running toilets, and doing loads of laundry consecutively, for example, can discharge large volumes of water into the system, causing hydraulic overloading. Inspectors may need to work with homeowners to discover the root of the problem.

Measuring Scum and Sludge

If an onsite system is working correctly, the wastewater in the tank will separate into three layers—grease and other light materials will float to the top to form a layer of scum, heavier solids will settle to the bottom to form a layer of sludge, and the partially clarified liquid that is left in the middle of the tank flows out for further treatment. However if the layers of scum and sludge in the tank become too thick, solids can be flushed out of the tank along with the liquid and can clog the system. Therefore, one of the most important tasks the inspector will perform is to measure the depth of scum and sludge in the tank.

There are a few common methods that inspectors use to measure the layers in the tank. They sometimes use a hollow clear plastic tube device that when lowered to the bottom of the tank through a hole in the scum layer and brought back up retains a cross-section of the liquid and sludge layers that can be measured. Or, the sludge layer can be measured by wrapping a long stick with a towel or cloth and then lowering it to the bottom of the tank through the baffle, tee, or a hole in the scum layer. The length of the sludge material sticking to the cloth indicates the depth of the sludge layer.

To measure the scum layer, the inspectors may use a long stick with a short piece of wood attached to the bottom to form an “L” or a “foot.” When this stick is pushed through the scum and brought back up, the “foot” meets resistance at the bottom of the layer, and the inspectors can then mark the stick at the top of the layer to give them depth of the scum layer.

When the scum and sludge layers in the tank become too thick or get too close to

the bottom of the outlet baffle or tee, the tank should be pumped. Exactly how much scum and sludge is too much and how often a tank needs to be pumped depends on several factors, including local health agency regulations or guidelines, the type of system and the biological processes at work, the size of the tank, the number of people in the house and their habits, the type of appliances and fixtures in the home, and the temperature in the tank. Your local health department should be able to give you information concerning what levels in the tank indicate the need for pumping.

How often the tank should be pumped can then be determined from observing the rate of accumulation with regular inspections. Although general pumping frequency guidelines and schedules are available for different types of systems, the best way to protect your individual system is to have it inspected regularly so the most accurate pumping frequency can be determined.

The NSFC offers a variety of information on the maintenance requirements of different onsite systems. Refer to pages 7 and 8 for contacts and product information.

Examining the Distribution Box

If the system includes a distribution box or drop box where all the effluent from the tank flows to be distributed to the different lines in the drainfield, this box also may be located and uncovered for inspection.

Inspectors will check to make sure that the box is level to ensure that the different sections of the drainfield are receiving the intended amount of effluent. They also will note the depth of the wastewater in the box and if there are any solids in it. If the depth of effluent in the box is above the outlets, this may indicate that the drainfield is clogged. Solids in the box may indicate a broken baffle or tee in the tank or that the tank needs to be pumped.

Inspecting Pumps and Siphons

Some onsite systems are designed to use pumps or siphons, which also need to be checked. Pumps are located in tanks, called pump wells, chambers, or vaults, located either outside separate from the treatment tank or in a compartment inside the treatment tank. Pump tanks need to be inspected for damage, corrosion, and watertightness, and are considered enclosed

spaces, which makes certain safety precautions necessary. Inspectors also must protect themselves from electric shock when inspecting pumps, as well as from the other hazards inherent with inspecting onsite wastewater systems.

Inspectors will look to see if any grease or solids from the tank are in the pump chamber, and they will manually check the operation of the pump or siphon, testing all level controls, switches, and alarms. They also may take readings from counters and meters on the pump or siphon.

Checking Alarms and Controls

Onsite systems that have mechanical components sometimes have electrical control panels and alarm systems that need to be regularly inspected, tested, and serviced. Complex electrical systems may be checked and serviced by a manufacturer representative as part of the terms of a service contract or warranty.

Inspecting the Drainfield

Once the drainfield is located, the inspectors will examine the site for signs of failure and for certain types of cover, such as trees and shrubs that can clog the drainfield pipes. As they probe the area to determine the layout of the drainfield, they will note the number, length, and width of the trenches, and whether they are lined with sand, gravel, or some other material.

Probing in the drainfield area also gives inspectors clues as to whether the soil underneath is clogged. The texture and color of the adjacent soil is significant—thick black sticky soil may indicate a problem.

Using Dyes and Tracers

Another common method for testing onsite systems is to flush tracers or dyes down the toilet and into the system. Dyes and tracers are often used to locate leaks and to determine whether the drainfield is clogged and if the system is contaminating nearby wells, other drinking water sources, or surface waters.

One drawback to this method is that some dyes are thought to be carcinogenic and may themselves contaminate nearby water sources. Also, dyes sometimes don't become visible for hours or days or may not appear at all, even in systems that are malfunctioning. 💧

Delaware Inspector Shares His Experience

If there is a problem with an onsite wastewater system, Hollis Warren has probably seen it. His family's onsite system business has been serving Kent County, Delaware, since 1960. About five years ago they also began inspecting systems.

"I like doing inspections because you sometimes catch the start of a failing system and save the homeowner money," explains Warren. "Some of the problems we have been finding are baffles missing in the tanks, which can let sludge out into the drainfield, and things that don't belong in the system, such as plastic products and undigested food. We've also found holes in the tanks or around the pipes going into the tank, which can let excess water in, and when we question customers about their water use, we find that most people do all of their wash at one time, thus overloading the system."

Sometimes, Warren explains, the problem is improper maintenance or shoddy work by untrained people in the field.

"We recently inspected an LPP [low pressure pipe] system for a customer and discovered that the pump was installed without a check valve, which was causing problems," explains Warren.

According to Warren, this last example illustrates why homeowners should learn about their systems and be careful to hire trained professionals and not only look at cost when deciding to have work done to their systems.

"There are still people out there who just flush the toilet three times, and if it goes down, pass the system," Warren says. "We in the industry must maintain a high standard and have a good understanding of the systems through education." 💧



What if there is a problem with my system?

Inspections may uncover relatively minor system issues, such as tanks that need to be pumped and baffles that need to be repositioned or replaced, or they may bring attention to plumbing problems, such as leaky fixtures.

However, in the event that an inspection reveals a more serious problem that requires repairing or replacing part of your system, it is important to contact your local health department (or, in some cases, your onsite system management program or homeowners' association) for information and advice. Although inspectors may offer suggestions concerning repairs or different technologies to help your system, you will need to confirm which options are appropriate and allowed in your area.

For example, local health officials can confirm which options are most practical and cost-effective and which alternative treatment technologies are allowed by local regulations. You also need to know if your system must be repaired within a certain time, if you need a permit, and if your water supply needs to be checked for contaminants.

Usually, the most serious problem is a failed system. The exact criteria for system failure varies from place to place depending on local regulations, but it usually indicates that operating the system in its current condition poses a threat to public health or the environment. Depending on the problem and conditions at the site, you may be advised to replace part of your system or to provide additional or alternative treatment. Again, local health officials can help you sort out the most practical solutions for your situation.

Even if an inspection does reveal a problem that needs to be addressed, homeowners should feel reassured that because of the inspection, they know more about their system and how to operate and maintain it properly to avoid more problems in the future. After all, the cost of periodic inspections and pumping is just a fraction of the cost of replacing all or part of a system. Routine inspections and maintenance along with proper operating habits significantly increases the potential that a system will function well for many years. 💧



CONTACTS

Local Health Departments

Homeowners and residents of small communities who want information about onsite system inspections should contact their local health departments for local regulations concerning inspections, how often certain types of systems should be inspected, and who is qualified to perform inspections locally. Health officials also may have records showing the exact location of systems, the frequency of system maintenance, and the results of past inspections. Local health agencies usually are listed in the government section or blue pages of local phone directories.

National Small Flows Clearinghouse (NSFC)

The NSFC offers technical assistance and free and low-cost information and materials on a variety of onsite and small community wastewater issues. Only a few of the NSFC's many resources and services are mentioned in this newsletter. Call the NSFC at (800) 624-8301 or (304) 293-4191 for more information or to request a free catalog.

Extension Service Offices

Many universities have U.S. Department of Agriculture Extension Service offices on campus and in other locations that provide a variety of services and assistance to individuals and small communities. For the phone number of the extension office in your area, check the government pages of your local phone directory, call the NSFC, or call the U.S. Department of Agriculture directly at (202) 720-3377. 💧

RESOURCES AVAILABLE FROM NSFC

To order any of the following products, call the National Small Flows Clearinghouse (NSFC) at (800) 624-8301 or (304) 293-4191, fax (304) 293-3161, e-mail nsfc_orders@estd.wvu.edu, or write NSFC, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064. Be sure to request each item by number and title. A shipping and handling charge will apply.

Site Evaluation and Inspections

A new NSFC publication, *Site Evaluations and Inspections from the State Regulations*, will be available beginning July 16, 1998. It is a compilation of onsite regulations from different states including information about who may conduct onsite system inspections and when and how often they are required. Contact the NSFC in July for price information. Item #WWBKRG27.

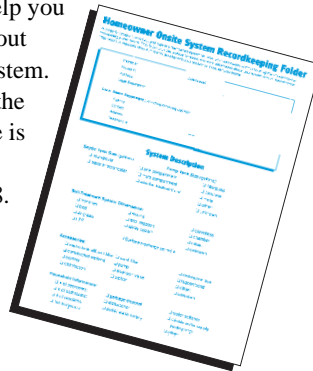
Onsite Wastewater System Operation and Maintenance

This training curriculum offered by the National Environmental Training Center for Small Communities can be used to educate onsite professionals and includes information about inspecting and maintaining systems. The complete package (Item TRTPCD09), which includes a *Trainer's Resource Pack*, *Operator's Manual*, and *Trainer's Guide* is \$273. Ordered separately, the *Operator's Manual* (Item #TRPMCD11) is \$36, and the *Operator's Manual and Trainer's Guide* together (Item #TRTGCD10) are \$43.

New Homeowner Recordkeeping Folder and Information Package

The NSFC has developed new products to help homeowners to record and store information about their onsite systems and to learn more about them. The "Homeowner Onsite System Recordkeeping Folder" includes sections for recording permit and local health department information, a checklist for information about different system components and accessories, a place to record household information, a grid for sketching the layout and position of the system, as well as tips for locating the system. The price for the folder is 40 cents. Item #WWBLPE37.

The NSFC's new "Homeowner Septic Tank Information Package" includes the recordkeeping folder described above packed with materials, such as back issues of *Pipeline*, brochures, and fact sheets, designed to help you learn more about your septic system. The price for the entire package is \$2. Item #WWPKPE28.



Free NSFC Catalog

The 1997 *Guide to Products and Services* lists and describes the many products and services the NSFC offers. The catalog can be downloaded from the NSFC's Web site at www.nsfc.wvu.edu or is available free upon request. Item #WWCAT.

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