



Pipeline

Small Community Wastewater Issues Explained to the Public

A HOMEOWNER'S GUIDE TO ONSITE SYSTEM REGULATIONS

If you, like a growing number of Americans, are about to realize your dream of owning a home, you are probably becoming an expert on topics such as mortgage rates, taxes, local schools, and zoning laws. When confronted by what may be the single largest investment of their lives, most people recognize the importance of being educated consumers.

But one property issue that is often overlooked, and which is especially important for homeowners in small communities, is wastewater treatment. In rural areas, sewer hookups and centralized wastewater treatment often are unavailable or impractical, so many homes rely on onsite wastewater systems, such as septic systems. Whether you plan to buy, build, sell, add to a home, or in some way alter the use of a home or property, it is important to be aware of how onsite system regulations may affect your options.

Buyer Beware

Ignorance of the law may be no excuse, but imagine how it would feel to buy land only to find out that no wastewater system can be approved for that site. Unfortunately, this problem is not uncommon and is only one reason homeowners and developers should work with local health officials *before* making a commitment or investment regarding the use of property. It is important to contact local health officials first to find out in advance:

- whether an onsite treatment system can be approved for a particular site,
- what lot sizes and other site conditions are required for onsite systems,
- how to apply for an onsite system permit,
- the types of onsite systems allowed in your area,
- who may design, install, and inspect onsite systems,
- who is responsible for maintaining onsite systems, and
- what must be done if a system malfunctions.

In this issue, find out . . .

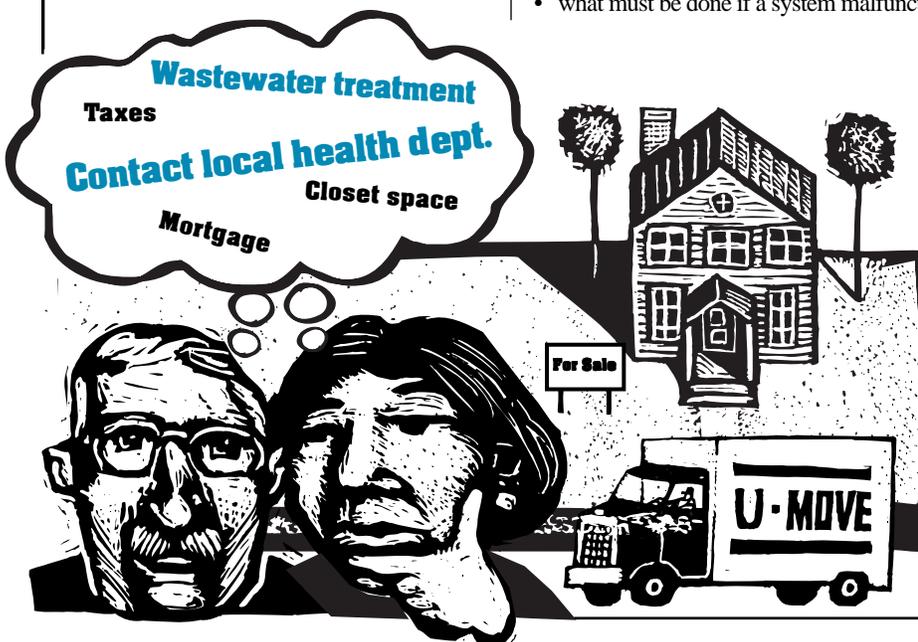
- ☑ why onsite regulations are important (see page 3),
- ☑ some common onsite regulations (see page 4),
- ☑ the role of local health officials and how to contact them (see page 3),
- ☑ how to apply for a new system permit (see page 5),
- ☑ the difference between state and local regulations (see page 3), and
- ☑ where to find more information and assistance regarding onsite regulations (see pages 7 and 8).

Also read about the results of the 1997 *Pipeline* readership survey on page 2.

This issue of *Pipeline* examines some common onsite wastewater system regulations, why they are important, and steps that homeowners and others typically must take to have systems approved. The different roles and responsibilities of health officials also are discussed.

Readers are encouraged to reprint *Pipeline* articles in local newspapers or include them in flyers, 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. 



Letter from the Editor

Free Guides to NSFC Products and Services Available

The National Small Flows Clearinghouse (NSFC) is pleased to announce three new guides to NSFC resources.

The 1997 *Guide to Products and Services* (Item #WWCAT) is free upon request from the NSFC, or can be downloaded from our Web site at www.nsfc.wvu.edu. This catalog includes descriptions of hundreds of resources available from the NSFC, such as design manuals, technology packages, booklets, case studies, computer searches, videotapes, newsletters, and fact sheets. The back of the catalog includes a key word index and an order form for readers' convenience.

The newly updated *NSFC Publications Index* (Item #GNBKIN01) is another helpful resource that is available free upon request from the NSFC. The index lists articles from past issues of *Small Flows*, *Pipeline*, and *The Small Flows Journal*. Visitors to the NSFC's Web site can search this index online.

The most recent update to our Web site has made another resource available—an online version of the new poster, "*Pipeline: Small Community Options and Resources*" (Item #WWPSPE36), which was mailed with the Fall 1997 *Pipeline*. The poster summarizes several *Pipeline* back issues and describes other newsletters and services available to the public. Copies of the original poster also are available free upon request from the NSFC.

For more information or to request any of these items, contact the NSFC at (800) 624-8301 or (304) 293-4191. Please request each product by title and item number. An additional charge for shipping and handling may apply.

Orders also may be placed by fax at (304) 293-3161 or by e-mail at nsfc_orders@estd.wvu.edu. 💧

Survey Results Both Encouraging and Enlightening

One of the most gratifying things about working on a newsletter is that when it is printed, there is a finished product we can point to. The only drawback to this is if any shortcomings exist with the job, they also will be there, in black and white, for everyone to see.



NSFC's Cathleen Falvey and Yvonne Tait discuss surveys.

Therefore, we were both excited and a little anxious waiting for the results of *Pipeline's* 1997 readership survey. But as the weeks passed, and the stacks of red and white surveys on my desk grew higher, it became clear that most readers approve of *Pipeline's* current focus and format and appreciate the job we're doing.

One of the most obvious and encouraging results of the survey was the degree of reader participation. Surveys were mailed in June to all U.S. subscribers (approximately 20,000), and by October, 1,400 were returned (about seven percent). According to literature from the International Association of Business Communicators, a response rate of about two to three percent is considered standard for readership surveys. The strong response we received from the *Pipeline* survey can only indicate a high level of reader interest.

We also were encouraged by the number of people who took the time to comment and offer topic ideas. All the comments we received were compiled, organized, and distributed to our staff and will be used to help us plan future issues.

Some reader suggestions have already been incorporated in the newsletter. This issue about onsite regulations is one example, and the idea for the poster, "*Pipeline: Small Community Options and Resources*," which was mailed with the

Fall 1997 issue, was inspired by reader comments and questions. (Refer to the sidebar at left for information about the poster and other resource guides.)

One thing we learned from the survey is that we need to do a better job of letting readers know about the range of resources

and services available to them through the National Small Flows Clearinghouse and our "sister" organizations, the National Drinking Water Clearinghouse and the National Environmental Training Center for Small Communities. For example, we received many suggestions from readers that were off topic (e.g., drinking water issues) or beyond the scope of *Pipeline*, but which are addressed by *Small Flows*, *On Tap*, *E-train*, or our other publications.

Here are some more facts we learned about our readers:

- 40 percent of the readers who responded are local officials;
- 99 percent of respondents find *Pipeline* to be useful;
- 92 percent use the information to educate others;
- 93 percent either save *Pipeline* for reference, route it to others, or reproduce and distribute it; and
- 63 percent have ordered products mentioned in *Pipeline*.

In addition, we learned that 49 percent of the readers who responded to the survey have Internet access at work, and fewer (37 percent) have it at home. This information will be useful for planning how much space to devote to Internet topics in the near future.

We would like to thank all the readers who responded, and we would like to remind everyone that comments and suggestions concerning *Pipeline* are welcome any time. If you had a request or question on your survey that wasn't answered, please don't hesitate to contact us again. We couldn't follow up on some requests that were missing a name or return address. 💧

Cathleen Falvey
Editor

Why Onsite Regulations Are Important

It seems to be a common sentiment nowadays—people feel that there is too much government intrusion and control of their lives through regulation. The need for both new and existing regulations is increasingly being called into question.

Onsite system regulations certainly are no exception. They can be particularly controversial in communities that have inadequate land-use planning or zoning laws, where permits denial rates are perceived to be high, or where alternative onsite systems are not allowed.

One reason onsite regulations are so important is that they can impact everyone in a community. For example, regulations that specify minimum lot sizes for onsite systems can affect the prices of homes and building lots and the profits of landowners and developers. These regulations also may indirectly affect growth, which

impacts local businesses and the economic base of the whole community.

However, the most important way that onsite regulations affect everyone is their role in protecting public health and the environment. Failing onsite systems pose a health threat to family and neighbors and degrade the quality of lakes, streams, and groundwater sources. They also reduce property values and can be expensive to repair. But over the years, it has been learned that these problems can be prevented or corrected through adequate control and supervision of the siting, design, construction, installation, and maintenance of onsite systems.

Most of today's onsite system laws have evolved over time with input from health officials, engineers, soil scientists, businesses, legislators, and others seeking to avoid problems experienced in the past. 💧

Ask for Help First

The first step toward making certain your plans for your property or system are in compliance with all pertinent onsite regulations is to ask for help from your local health officials. But sometimes it isn't easy to know exactly who or where to call.

The organization of local health agencies and officials in charge of handling onsite wastewater issues varies from state to state and sometimes locally within states. In most small communities, onsite system permits and other onsite wastewater issues are handled by an office of the county health department. But local health agencies also may be organized by municipalities, townships, districts, boroughs, regions, or parishes.

In some states, specific duties and responsibilities, such as issuing permits or overseeing site evaluations, inspections, or maintenance, may be delegated to local boards of health, sewage enforcement officers, licensed plumbing inspectors, or building departments. Sometimes the size or type of onsite system determines who has jurisdiction.

In most cases, the correct local agency office can be located by simply browsing the government section or blue pages of your phone directory. Otherwise, it may be necessary to call another local government office, your local extension service office, or state health agency for assistance.

(The NSFC offers a free listing of state onsite regulatory contacts. Refer to pages 7 and 8 for more information.) 💧

Local Versus State Regulations

Regulations vary from state to state and sometimes locally, by county, district, township, or community. Local jurisdictions may have the option of simply adopting their state laws or developing their own, as long as they comply with minimum state requirements. Therefore, local onsite laws are sometimes more restrictive than state laws.

One reason local governments adopt stricter standards is to protect local resources, such as drinking water sources, or environmentally sensitive areas, such as shellfish beds. Some areas may have sites with poor soils or other conditions that warrant tighter controls than the minimum allowed by the state. Communities may

choose to restrict certain system types or designs allowed by the state if they require extra maintenance or expertise not locally available.

The roles of state and local health agencies concerning onsite systems are different as well. In some states, onsite systems that discharge wastewater above ground or into bodies of water and large onsite systems that serve residential developments or businesses may come under state jurisdiction. Nevertheless, residents who need information about onsite systems should begin by contacting their local health agency. *(Refer to the sidebar at right for more information.)* 💧

The Role of Local Health Officials

Whether they are sitting behind a desk reviewing permit applications or in someone's backyard inspecting a new system, the role of health officials, above all else, is to make certain that public health is protected to the greatest degree possible with the least amount of environmental impact and that local and state onsite regulations are followed.

Most health officials also try to guide residents toward practical and cost-effective onsite system designs and "proven" solutions while being as accommodating and flexible as the law permits. When evaluating proposed systems, health officials must take into account their reliability, efficiency, and

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Some Common Onsite Regulations

Although onsite system regulations vary depending on where you live, it helps to be aware of some common requirements and how they may affect you.

Property Transfers

Some regulations require mandatory inspections of existing onsite systems within a given time before property is sold or transferred. This requirement may be waived if the owner has kept detailed records of past system inspections and maintenance, or it may be delayed for a few months if frozen ground makes conducting an inspection difficult. If the inspection is delayed, it must take place within a certain time period for the seller to continue to be held liable for correcting any problems with the system.

Professional Qualifications

State or local regulations often indicate specific professional qualifications, such as education, certification, or licenses, that individuals must have to perform onsite system tasks. For example, regulations commonly require that site evaluations be performed by local health officials, registered sanitarians, engineers, or soil scientists.

Homeowners should be aware, however, that choosing someone with the appropriate legal qualifications doesn't ensure that he or she is the best person for the job. It is important to compare estimates and to find someone who has proven experience with onsite systems and who is willing to work with local health officials. Local health

agencies may be able to offer some guidance.

Refer to the Winter 1997 Pipeline, "Choose the Right Consultant for Your Wastewater Project" (Item #SFPLNL08). The price is \$0.20.

Operation and Maintenance

Proper operation and maintenance of onsite systems are essential to avoiding system failures. For certain types of onsite systems with electrical or mechanical components, maintenance is often regulated through operating permits. These permits need to be renewed periodically with maintenance as a condition of renewal. In some cases, system maintenance can be performed by homeowners, but inspections usually must be performed by health officials or other qualified professionals.

Maintenance of conventional septic systems is not specified in great detail in most regulations, and although it is in homeowners' best interests to operate and maintain systems correctly, many do not know how to maintain their systems, where their systems are located, or even what types of systems they have. Yet, homeowners can be held liable for systems that pose a threat to public health and the environment.

Health officials often have no legal authority to monitor systems or enter property unless they receive a complaint or have other evidence that there may be a problem with a system. To prevent widespread problems with failing systems, some local jurisdictions have programs to manage onsite system operation and

maintenance. These programs can be administered and regulated by special entities, such as sanitary, sewer, or water districts, by local health agencies, or by other organizations, such as town governments and homeowners' associations. Enabling legislation must be passed at the state level to give these organizations the legal authority they need to manage systems.

To learn more about management programs, refer to the Spring 1996 Pipeline, "Management Programs Can Help Small Communities" (Item #SFPLNL05).

For information about septic system operation and maintenance, the NSFC offers the Fall 1995 Pipeline (Item #SFPLNL03), and three brochures (Items #WWBRPE17, #WWBRPE18, and #WWBRPE20). Contact the NSFC for price information.

Changes and Repairs

As with new systems, homeowners usually must apply for a permit and approval before taking steps to repair or modify an existing system. Requirements for these permits often differ from those for new construction. A permit also may be required before increasing the flow to a system, for example, by adding extra rooms, extra buildings, or changing the use of a property from residential to commercial or from seasonal to year-round occupancy. A permit also may be required to abandon a system when sewers become available or when a system is no longer used. (Refer to pages 5 and 6 for information about permits.)

The Role of Local Health Officials

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maintenance requirements, and even aesthetic concerns such as possible odors and noises and how these may affect the property owners and their neighbors. Because local health officials work in the best interests of everyone in the community, it is important for homeowners, consumers, and developers to form positive working relationships with officials.

However, when the interests of individuals in the community conflict with local onsite laws, health officials often find themselves stuck in the middle and the targets of public anger. Conflicts sometimes arise when regulations don't allow enough flexibility for

practical solutions to problems, such as system design modifications or the use of alternative technologies. (See the article "Changing Onsite Regulations" on page 6.)

In some communities, conflicts between residents and health officials arise when onsite laws are used incorrectly in lieu of zoning and land-use planning to control growth. This may put health officials in the awkward position of enforcing rules for which there may be little public health or environmental justification. Citizens who come up against such restrictions may feel that officials are being unreasonable or are simply unwilling to help them find a workable solution.

Occasionally, when facing such obstacles, the most practical thing homeowners can



do is to alter their plans or just walk away from them. But this is not always an option, and more often than not, residents and local health officials work together to find a compromise or solution to onsite system problems. (See "Ask for Help First" on page 2 for information about how to contact local health officials.)

Applying for New System Approval

Most local health agencies require permits for new onsite system installations. Usually the permit must be approved before any construction can begin, and the system must be completed and inspected before anyone can live on the site.

Normally, there are several steps and requirements for getting new onsite systems approved.

Site Evaluations

Site evaluations usually are required either before or during the permit application process. Sometimes, local health agencies have the results of soil conservation district surveys or previous site evaluations or soil tests available. Health agencies may accept this information as part of the site evaluation report if they were performed within a certain time frame by qualified professionals.

Usually, the licensed contractor or consultant the homeowner hires to design and construct the system will conduct the site evaluation tests and complete the forms required by the health agency. The consultant contacts the local health agency to make an appointment so that a health official can observe the site evaluation tests.

Soil tests and evaluations are conducted to determine the suitability of the site for an onsite system. Soil evaluators commonly bore holes or excavate pits in the proposed location of the drainfield to observe the color, texture, hydraulic conductivity, and depth of soil layers and to look for features such as impermeable layers, rock, and the water table.

If the site chosen for the test has shallow or tight soil, high groundwater, shallow bedrock, or other inappropriate site conditions, another location may need to be selected for additional testing. Sometimes soil conditions can change dramatically even within short distances on the same lot. This explains why neighboring properties may have different site evaluation results. The results of all soil tests performed on the property must be reported to the local health agency.

Vertical Separation Distance

Vertical separation is often defined as the distance between the bottom of the soil absorption field and the top of the soil layer saturated by the water table or the top of

the restrictive layer, such as bedrock. Local regulations usually require this distance to be a minimum of 6 to 48 inches, depending on state regulations, the quality of area soils, and other factors. Communities may require site evaluations during seasons when the water table is highest to get an accurate minimum measure of this distance. The proposed vertical separation distance must be included in the site evaluation report.

Setback Requirements

The location of systems in relation to other natural or constructed features is also regulated. For example, onsite systems usually must be located at least 100 feet from wells used for drinking water. Other restrictions may include minimum distances from utility lines, buildings, property lines, and bodies of water.

Other Site Requirements

Onsite systems must be located away from floodplains and natural or constructed drainage pathways. Sites with steep slopes and embankments also may be restricted. Some regulations require a reserve area to be set aside on the lot in case the system fails in the future and needs to be replaced. The required size of the area may be up to 100 percent or more of the original drainfield and must meet the same site requirements.

Site Evaluation Report

All site evaluation results usually must be reported on forms provided by the health agency and, depending on regulations, may be submitted either before, with, or after the permit application. The consultant usually completes the forms, and a fee may be incurred for submitting the report (or costs may be included with the permit fee).

In addition to the soil test results, the report will include information about the property's boundaries and location, as well as distances to nearby buildings, driveways, wells, bodies of water, and other property features within about 150 feet. Also required is a detailed plot plan or map (usually submitted on graph paper) of the proposed system layout and location on the site in relation to other property features.

If local agencies require the site evaluation report to be submitted first, then the

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What If My Permit Is Denied?

Aside from incomplete applications, permits are usually denied for site-related reasons. According to a study by the National Small Flows Clearinghouse (NSFC) of local health agencies around the country, respondents reported the most common reasons for permit denials were inadequate lot sizes, poor or inadequate soils, high water table, shallow bedrock, steep slopes, inadequate drainage, or construction within a floodplain. In communities that require site evaluations prior to permit application, permits are rarely denied because unsuitable sites never make it to the application phase.

If your permit application is denied because of site conditions, your next step may be to look for a more suitable location on your property for your system. If this is not an option, an alternative system design may be the solution. (See the article on page 6 for more information on alternative and innovative systems.) Your local health officials can offer you advice about what designs may be suitable for your site.

Variances

If an onsite system design or modification is not commonly allowed in your area, it may be necessary to apply for a variance to existing regulations. Variances are usually granted only to reduce or modify a requirement, rather than to change it completely. Applicants must show that the variance will not result in any danger to public health or the environment and that special conditions exist to justify the request, such as excessive hardship for the property owner.

In some cases, a conditional permit may be granted limiting, for example, the number of bedrooms or seasonal use of a home.

A review fee may be required for a variance application. It often is the responsibility of local health agencies to review the applications, so they may be able to advise you in advance as to whether yours is likely to be accepted. If a variance is denied, there normally is a procedure in place for appealing the decision. 💧

Changing Onsite Regulations

Can you fight city hall? When it comes to onsite regulations, the answer is usually yes, but it could take a long time.

Depending on the state you live in, onsite regulations may be updated when needed, regularly every few years, or not for several years. Some state agencies have the power to change regulations themselves, while other states require action by the legislature or a period of public notice and open comment.

In any case, before changes are adopted, the proposed regulations usually are reviewed and debated by various groups and committees. The process can be time-consuming and makes it difficult for onsite system regulations to keep pace with changes in technology.

In addition, because many current onsite regulations were developed in response to problems that resulted from improper system siting, design, construction, and installation, they tend to be prescriptive—detailed “recipes” to help assure systems are built correctly. Although prescriptive regulations have some advantages, they tend to be rigid and make it difficult to adapt systems or employ innovative solutions to the challenges presented by the wide variety of individual site conditions.

Several states are changing or experimenting with their current onsite regulations to make them less prescriptive. The new regulations allow for different system designs based on their performance. It is hoped that this performance-based approach to regulations will allow more flexibility while increasing the protection to public health and the environment.

Homeowners, consumers, and developers who would like to learn more about their own state regulations should contact their state health agency or the NSFC for contact information. (Refer to page 7 for a list of contacts and information about NSFC’s state regulation repository.)



Applying for New System Approval

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permit application will be completed after the site evaluation is approved. Approval of the site evaluation is not the same as approval of the system. Construction cannot begin until after a permit is issued.

Permit Application

Usually much of the information required in the permit application form should be completed by the engineer, consultant, licensed contractor, or local health official who will be designing or installing the system. The application asks for information about the dimensions and exact design specifications of the system and the number of people it will serve.

Many aspects of onsite system design are tightly regulated, such as the septic tank size required per number of occupants or bedrooms, the width of drainfield trenches, the depth of the gravel under the drainfield pipes, the overall dimensions of the drainfield, and the materials used in construction.

Once the application forms are completed and returned to the permitting agency, they may be submitted to an engineering division for review. If the permit is granted, system construction can begin.

Permit Fees

Permit fees for onsite systems may include charges from the state, the local health agency, or a combination of both. Costs may be based on factors such as system size and the type of permit. For example, new system permit fees may be more expensive than those for repairing failing systems.



Inspections

After construction and installation of an onsite system is complete, regulations usually require an inspection of the system before it is covered by backfill. The inspection is usually performed by a health official or other qualified professional as specified in the onsite regulations.

The inspection determines whether plans approved in the permit were followed and the system was properly installed. Any changes to the system would have required prior approval from the health agency. In some states, an “as built” drawing of the finished system must be submitted for health agency records. If the system passes this inspection, it is ready for use, and an operating permit may then be issued.

Approval for Alternative System Designs

What options do you have if an evaluation reveals no suitable site on your lot for a conventional septic system? What can you do if your system is failing and there is no place to build a new one?

Some states allow homeowners to purchase or acquire easements to additional land. If this is not possible, alternative or innovative onsite system designs often can help homeowners with site restrictions. Although some lots may be truly unbuildable, and others may be restricted due to land-use planning and zoning laws, many problem sites can be served by such alternative system designs as mound systems, pressure distribution systems, and sand filters, to name just a few.

Some alternative onsite systems have been used successfully for decades and much is known about their performance,

reliability, costs, and maintenance needs. Nevertheless, homeowners and developers may have a hard time getting approval for some systems because of inflexible regulations (see the sidebar at left for further discussion) or because health officials are unaware of certain alternative system designs or have questions concerning their performance, operation, or maintenance.

Homeowners and developers can work together with local officials to learn more about alternative onsite systems, their advantages and disadvantages, and other options available for problem sites.

The NSFC offers a variety of educational materials and technical assistance regarding onsite systems. Refer to page 2 for information about free guides to NSFC products and services and page 7 for contact information.

Kentucky Officials Solve Site Dilemma

Flexibility and resourcefulness must be two of the main job qualifications for becoming a health inspector in rural Whitley County, Kentucky. In his position, Carson Payne, R.S., inspects food establishments, motels, schools, private water sources, animal bites, and nuisance complaints, as well as a variety of onsite wastewater systems.

According to Payne, the most common types of onsite systems in his jurisdiction are septic systems and slightly modified septic systems using shallow trenches and added soil. There are also several residences that use small constructed wetlands systems.

"We have several areas that present special problems for installing onsite systems," explains Payne. "These include shallow rock, excessive underground water movement, poor soil structure, and small lot sizes."

So it wasn't much of a surprise when some of the same site conditions were found in a local subdivision. What was startling was the amount of time and money that had been invested in the project before anyone thought to investigate sewage treatment options.

"The problems with the property surfaced with the first lot to be built on," says Payne. "By the time we were consulted, the development already had paved roads, underground utilities, and lots. Everything looked ideal on paper, but what was completely overlooked was the suitability of the site for wastewater treatment."

A site evaluation of the lot in question revealed that the soil was too shallow for a septic system. Working with the developer, a solution was devised to install two 1,000-gallon septic tanks to be used as holding tanks until an area set for the drainfield could be filled and allowed to settle for a year.

After overcoming this first obstacle, Payne and his colleagues worked together to evaluate the remaining lots, with technical assistance from Nancy Cooper of the Kentucky Cabinet for Human Resources Environmental Sanitation Branch. The subdivision was originally laid out in 24 lots ranging in size from approximately 0.5 to 2.6 acres.

"Several of the lots had soil that was too shallow to allow immediate placement of a septic system," Payne adds. "A few of the lots initially were too small to allow placing both a home and a septic system on the same lot, and some lots had steep slopes or obvious underground water problems."

Thanks to the resourcefulness of the health officials, so far workable and affordable solutions have been found for the site. Some of the lots in the development that were too small were combined with adjoining lots. Other lots will require filling with suitable soil, curtain drains to get rid of excess water, or a combination of different modifications.

"Now," Payne says, "we are working with each buyer to make the lots buildable at an affordable price, in as much as the regulations we work under will allow." 💧

NSFC Maintains Regulations Repository

Anyone wanting information about different state onsite wastewater regulations can contact the National Small Flows Clearinghouse (NSFC). The NSFC maintains a repository of state onsite regulations that provides a key resource for those seeking information about the regulations of a particular state or to compare the regulatory structures of different states. The NSFC works with state agencies to regularly update the repository and to ensure that agency officials are aware of this resource.

The repository contains paper copies of onsite wastewater regulations from all but two states, electronic copies of regulations

of 41 states, and additional regulatory information compiled and prepared by the NSFC and other state and national regulatory entities, such as the U.S. Environmental Protection Agency. (*Some of the NSFC publications on page 8 contain information from the repository.*)

While information from the repository is provided to callers upon request, the NSFC does not interpret regulations for callers. A list of state regulatory contacts is available from the NSFC.

Contact the NSFC at (800) 624-8301 or (304) 293-4191 for more information about the repository. 💧



CONTACTS

Local Health Departments

Homeowners and residents of small communities interested in wastewater treatment options should contact their local health departments for more information about local regulations and requirements. Health agencies usually are listed in the government section or blue pages of local phone directories. (*Refer to the article on page 2, "Ask for Help First," for more information.*)

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 small communities. Check the government pages of your local phone directory, contact the NSFC for the number of the office in your area, or call the U.S. Department of Agriculture directly at (202) 720-3377.

National Small Flows Clearinghouse (NSFC)

The NSFC offers a variety of technical assistance and free and low-cost information and materials concerning 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.

Free State Regulatory Contacts List

This document is free from the NSFC and lists the name, department, address, and phone number of a contact for each state that has onsite wastewater regulations. To order, request Item #WWBLRG34. A shipping and handling charge may apply. (*Refer to page 8 for more information about how to order NSFC products and for a partial list of NSFC's guides to state onsite regulations.*) 💧

RESOURCES AVAILABLE FROM NSFC

To order products listed as available from the National Small Flows Clearinghouse (NSFC), call (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. Please request each item by number and title. A shipping and handling charge will apply.

Guide to State Level Onsite Regulations

This newly updated NSFC publication is a guide to state onsite system regulations. It includes a glossary, citations from state regulations, state regulatory contacts, a matrix showing which states address particular onsite issues and technologies in their state regulations, and a list of additional resources. The price is \$12.50. Item #WWBKRG01.

The NSFC annually updates the following guides to state onsite regulations. Each guide includes a list of state regulatory contacts. A free copy of this contacts list also is available separately upon request. Item #WWBLRG34.

Application Rates and Sizing of Fields

This document is a compilation of state guidelines for determining wastewater application rates and drainfield sizes for onsite systems. Contact the NSFC for current price information. Item #WWBKRG19.

Site Evaluations and Inspections

The NSFC publication *Site Evaluations and Inspections from the State Regulations* provides information about who may conduct inspections of onsite systems and site evaluation tests; methods for testing, observing, and classifying soils and other site evaluation procedures; system recommendations based on site evaluation findings; the frequency of inspections; and system approvals. Contact the NSFC for current price information. Item #WWBKRG27.

Septic Tanks from State Regulations

State regulations that concern the design, construction, siting, installation, and operation and maintenance of septic tanks are compiled in this document. Contact the NSFC for current price information. Item #WWBKRG25.

Percolation Tests from State Regulations

This document includes state onsite regulations detailing how to conduct and interpret the results of percolation tests for site evaluations. Contact the NSFC for current price information. Item #WWBKRG22.

Location and Separation Guidelines

Location and Separation Guidelines from the State Regulations presents regulations from states governing the location of onsite systems on a given site. Contact the NSFC for current price information. Item #WWBKRG20.

Graywater System Regulations

Graywater Systems from the State Regulations presents sections of state onsite regulations concerning the design and construction of graywater systems. Call the NSFC for current price information. Item #WWBKRG24.

PIPELINE

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