

The Oklahoma Cooperative Extension Service WE ARE OKLAHOMA

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and research-based information.
- It provides practical, problem-oriented education

for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.

- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.



Basic Septic System Rules for Oklahoma

October 2017

Sergio M. Abit Jr., PhD

State Specialist for On-site Wastewater Treatment Systems

Emily Hollarn

Environmental Specialist
Oklahoma Department of Environmental Quality

Oklahoma Cooperative Extension Fact Sheets
are also available on our website at:
<http://facts.okstate.edu>

Many of us want to build or buy houses in the country, for a variety of reasons. Living outside of city limits allows for the opportunity to be closer to nature, the ability to grow vegetables and raise farm animals and the chance to live a simple and relaxed life in a rural setting. One thing to bear in mind is, that while living in the country has tremendous benefits, access to the conveniences that towns provide are not always available. For instance, a country home would most likely be outside the service area of the city water and sewer system – meaning the need for your own safe and reliable source of water and the need to treat household wastewater within the property. For the latter, an on-site wastewater treatment system, most commonly known as a septic system, is needed.

There are three key things to remember with septic systems: 1) they are expensive to install, 2) they need care and maintenance and 3) there are rules that govern their installation and maintenance. This fact sheet articulates the rules you need to know regarding securing an installation permit, site and soil restrictions, and installation and maintenance of septic systems. For additional details about maintenance of septic systems and the various types of systems permitted in Oklahoma, refer to Extension fact sheets PSS-2914, *Keep Your Septic System in Working Order* and PSS-2913, *On-site Wastewater Treatment Systems Permitted in Oklahoma*.

In Oklahoma, rules that pertain to septic systems are conveyed in Title 252 of the Oklahoma Administrative Code Chapter 641, "Individual and Small Public On-Site Treatment Systems." This Code was used as reference in preparing this fact sheet. While much of this fact sheet is written in a simplified question-and-answer format, there are parts that are lifted almost verbatim from the Code.

Site Requirements and Restrictions

Is there a minimum home lot size requirement?

If public water (water from city or rural water district) is used, the minimum lot size requirement for a house needing a septic system is ½ acre for most systems. If an individual drinking water well is used, then a minimum lot size of ¾ acre is required for most systems.

What is a "repair area" requirement?

Aside from the area allocated for septic system installation, enough area should be designated as repair area. This is the area where dispersal lines of the septic system will be installed in case the first system installed fails.

When buying a house, ask where the designated repair area is located. Make sure the repair area is big enough for system installation and no permanent structures are built on the area.

Where can the septic system be installed?

All components of the septic system, including tanks, pumps, dispersal fields and collection line(s) need to be installed within the property of the owner of the system and/or in a dedicated recorded easement for the installation and operation of the septic system. Keep in mind there are separation distances from objects such as water wells, property lines, buildings as well as other rules.

What is a 'Water Body Protection Area' and is the property in it?

Water Body Protection Areas (WBPA) are those areas located within at least 1,320 feet from water bodies (e.g. rivers and lakes) designated by the State to be specially protected from pollution. Areas in the WBPA, specifically those within 660 feet from a listed water body or scenic river corridor require advanced systems with a nitrate-reduction component. This means the septic system for that area will cost more. To determine whether the property is within the WBPA, check with the local DEQ office or go to <http://gis.deq.ok.gov/flexviewer/>. It should be noted that the requirement for a nitrate-reduction component applies only to new houses or modification on a septic system of an existing house.

How much land area is required for the septic system?

While not stipulated as a rule, it is suggested that at least 10,000 square feet be allocated for the septic system in the area where it will be installed. In addition, the area should be accessible to the installer and the equipment needed in earth-working activities related to the installation.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: eeo@okstate.edu has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President for Agricultural Programs and has been prepared and distributed at a cost of 20 cents per copy. 1017 GH.

The actual size of the area required for the septic system will initially depend on soil and site properties in the area. Soil properties and site location (relative to protected water bodies) will dictate what type of septic systems may be permitted for the site. Once the appropriate septic system is determined, the number of bedrooms in the house is then taken into consideration to determine the actual size of the area that must be allocated for the septic system. The same determines the size of the designated repair area.

As a rule of thumb, the finer the soil texture in the area (more clay in the soil), and the more bedrooms in the house, the wider the area needed for the septic system.

Required Soil Evaluation

As mentioned earlier, soil and site properties determine the type of septic system permitted for installation, as well as size of the land area that is needed. Tests must be performed to determine soil properties.

What soil test needs to be performed?

There are two soil tests: 1) Soil Profile Description and 2) Percolation Test. Results of a percolation test serve as an indicator of the rate of subsurface water flow at depths where household wastewater is normally applied. The soil profile description mainly involves the determination of soil texture (how fine or coarse is the soil) and soil color at 6-inch depth intervals from the surface down to 48 inches or until a flow-restricting layer is found.

Either test could serve as basis in making septic system-related decisions. But in sites located within the WBPA, a soil profile description is mandatory. It should also be noted that the land area required for the septic system is generally smaller if the test performed is a soil profile description. It is always best to start any septic system decision-related process with a soil test. However, if the decision has already been made to install a lagoon system or an aerobic treatment system with spray irrigation, then a soil test is no longer required.

Who can perform soil tests?

Only State-certified soil profilers can perform soil profile descriptions. A list of soil profilers can be found at <http://www.deq.state.ok.us/eclsnew/OnSite/soilprofilers.htm>. Environment Specialists at the Department of Environmental Quality (DEQ) can also perform soil profile descriptions. Percolation tests can be performed by professional engineers, licensed sanitarians, environmental specialists or soil scientists. Results from these tests are used by installers to design the septic system that would be submitted to the DEQ for approval. Note: There are municipalities in Oklahoma requiring a soil test report before issuing a building permit.

Permits

What needs a permit?

All new installations of septic systems in a property, including the installation of an additional system, need to have a permit before it can proceed. Modifications of an existing system also need a permit. Septic system modifications may be needed as a result of the following: a) malfunctioning septic systems, b) home renovation leading to an increase in the number of bedrooms, c) increase in water use due to

change in use of a house or building and d) relocation of any component of a septic system. A permit must be secured before work can start.

Where and how to get an installation or modification permit?

The DEQ is the permitting and regulatory agency for requests and issues related to on-site septic systems. To apply for a permit, simply go online at <https://applications.deq.ok.gov/sewagepermit/> or contact your local DEQ office for assistance. Contact information and locations of your nearest local DEQ office could be found at <http://www.deq.state.ok.us/eclsnew/localOffices.htm>. Often, the installer will process the installation or modification permit application for you.

Inspections

Who conducts inspections and when are they necessary?

There are two cases where an inspection by a DEQ personnel is necessary. They are: 1) repairs and system modifications performed by a non-certified installer and 2) installation of new systems by a non-certified installer. The inspection must be performed before the installation, modification or repairs are backfilled and/or before the system is placed into operation.

It should be noted that if the installation, modification or repair is performed by a state-certified installer, there is no need for a DEQ personnel to perform an inspection because certified installers are allowed to perform self-inspection.

Who is responsible for arranging a DEQ inspection?

The installer shall be responsible for requesting any required DEQ inspection related to an installation, modification or repair. Inspections related to complaints will be managed by the DEQ personnel.

Installation

Who can install a septic system?

It is recommended that you utilize the services of a state-certified septic system installer. A list of state-certified installers can be found at <http://www.deq.state.ok.us/ECLSNNew/CertInstallers/certInstallers.htm> or from the local DEQ office.

The State of Oklahoma allows non-certified installers to install a limited number of systems. However, these installations must be inspected and approved by DEQ personnel before they are backfilled and/or made operational.

Are new installations covered by a mandatory warranty/maintenance period?

Installers are free to offer their own version of a warranty/maintenance package to their clients for a fee. However, if the system installed is an aerobic treatment system/unit (ATU), Oklahoma rules require a two-year warranty. This rule mandates the installer of an ATU to maintain the system at no additional cost to the homeowner for two years following the date of installation. Within this period, the installer is required

to inform the owner of the operational status and any repairs or replacements performed with the system.

If you buy a house and the ATU in the house is still within the warranty period, you are eligible for the warranty until the two-year period expires.

Responsibilities of the Owner

Properly working septic systems will treat harmful pollutants in household water. Improperly-functioning systems pose as hazards to the owners, their neighbors and the environment.

The rule clearly stipulates that the owner of a system shall ensure that the system is maintained and operated properly

so that: 1) sewage or effluent from the system is properly treated and does not surface, pool, flow across the ground or worse, discharge to surface waters, 2) all components of the system including lagoons are maintained and do not leak or overflow and 3) the required security measures are intact (e.g. required fences are intact, septic tank lids are intact and properly secured).

The rules also state that if a septic system malfunctions, the person owning or otherwise responsible for the system needs to take prompt action to repair the malfunctioning system, prevent further violations and remediate the site. Violations and negligence are subject to enforcement actions and possible penalties.