Clay County Health Department
Environmental Services

On-Site Sewage Treatment
Rules and Regulations Handbook

Clay County Health Department
Environmental Services
300 West 4th Street Suite 6
Spencer, IA 51301
712-262-8165 or 712-240-8165

PRIVATE SEWAGE DISPOSAL RULES & REGULATIONS

Purpose

The purpose of on-site sewage systems is to dispose of the waste and provide adequate treatment so that water wells and recreational waters of the state are protected from sewage contamination. Also, to prevent nuisance conditions, such as ponding, odors, etc.

Permit

A permit is required to install a new system or reconstruct an existing system. Permits cost $100.00 and are valid for six months after application.

Reconstruction

Whenever reconstruction of an existing on-site system is necessary, the total system shall be evaluated for effluent quality, maintenance, and compliance with current state code. Secondary treatment shall be required on all systems issued a reconstruction permit.

Septic Tank

The size of the septic tank and sewage treatment system is based on the number of bedrooms in the home. An adequate volume is important since this reduces the frequency of pumping to remove scum and sludge.

The septic tank shall be a minimum of 50 feet from a non-public water supply, 10 feet from a public water supply line and 10 feet from any building.

Access must be provided to all parts of the septic tanks necessary to enable adequate inspection, operation and maintenance.

Any septic tank 24 inches or more below ground surface must be provided with risers to within six inches of ground surface.

Purpose

The primary purpose of the septic tank is to provide an area for solid materials to digest and settle in order to protect the secondary treatment. Septic tanks do not provide complete sewage treatment. To achieve adequate treatment, septic tank effluent must pass through secondary treatment.

Maintenance

The most important tank associated with on-site wastewater treatment systems is the periodic removal of sludge and scum from the septic tank. The frequency of solid removal depends on the storage capacity of the tank and the daily load of materials discharged into the tank. It is recommended that the tank be pumped at lease every 2 – 3 years under normal use. However, when a garbage disposal is utilized, more frequent pumping may be needed. An annual inspection of the tank will indicate sludge accumulations to determine when pumping is necessary. Never enter or allow someone to enter a septic tank. Lack of oxygen of the presence of hydrogen sulfide gas can overcome a person and continued exposure can be fatal.

Operating Tips

Remember – septic tanks are designated to trap, store and break down solid materials. Do not flush anything into the septic tank that is not biodegradable, such as diaper linings, high strength paper towels, etc.

Clear water sources such as water softeners, heating-cooling, footing drains, down spouts, etc. must NOT discharge through the sewage system.

Prevent physical damage to the tank by installing areas away from traffic flow and future construction sites.

Laterals

The subsurface absorption systems or "laterals" is a closed system and commonly used in sandy soil. This system requires a site evaluation to determine absorption capabilities of the soil.

Sizing and Layout

The required amount of soil surface area depends on the capacity of the soil to accept wastewater and the daily discharge of wastewater from the household. An area equal to the absorption field installed shall be reserved for future replacement or expansions, if necessary.

Layout of absorption trenches is influenced by the slope of the site. The trench bottom shall be level to provide even distribution. Distribution lines on sloping sites shall be level to provide even distribution. Distribution lines on sloping sites shall be laid along the contours of the land to maintain a level trench bottom. All distribution trenches shall be separated 7 ½ feet from center to center, of equal length and no longer than 100 feet each. The depth should not exceed 36 inches in a conventional absorption system.

Distribution Box

The distribution box of formation of pipes must be installed on undisturbed earth in a manner which maintains an equal distribution of wastewater. A level distribution header composed of a series of equally spaced tees and elbows may also be used to divide the flow. The use of sanitary tees for this purpose is prohibited.

Distribution Piping

The distribution piping shall consist of 4 inch perforated PVC. Perforations shall be from ½ inch to ¾ inch in diameter. The distribution lines shall be laid on a minimum of six inches of ¾ to 2 ½ inch river gravel or clean washed concrete stone (Class II). Distribution lines shall be level. Ends of distributors must be capped or interconnected with solid 4 inch PVC pipe. Cover pipe with approved river rock or washed concrete stone, and then a layer of untreated building paper, straw or approved drainage fabric. To increase the longevity of the properly installed lateral absorption system, we suggest the following measures be taken:

1. Keep all unnecessary traffic off of the absorption area.
2. Direct all surface water away from the absorption area.
3. Provide ventilation to the system by a common vent or vents connected to each lateral.

Gravelless/Chamber Systems

Approve gravelless/chamber subsurface absorption systems may be used as an alternative to conventional 4 inch pipe placed in gravel-filled trenches; however, they cannot be used in areas where conventional systems would not be allowed due to poor permeability, high ground water, or insufficient depth to bedrock.