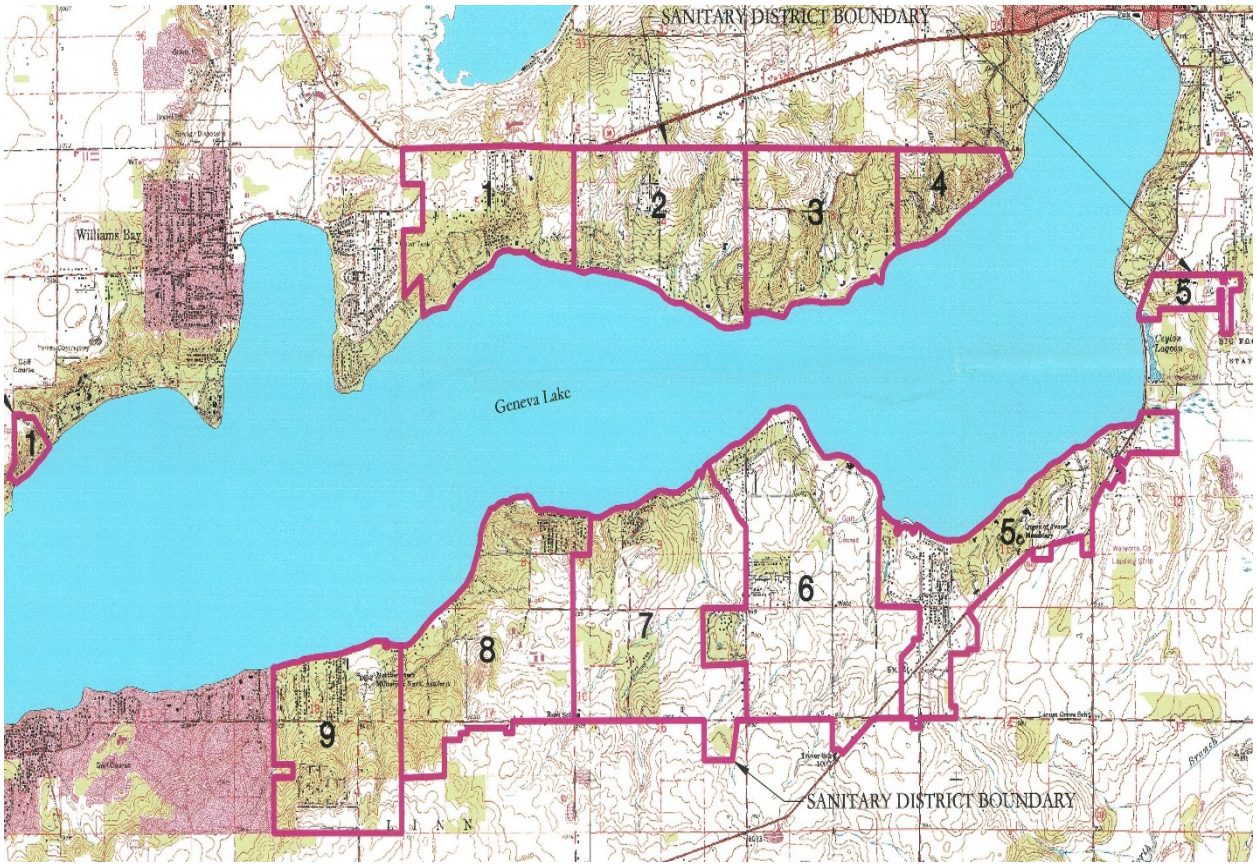
LINN SANITARY DISTRICT SUB-AREAS

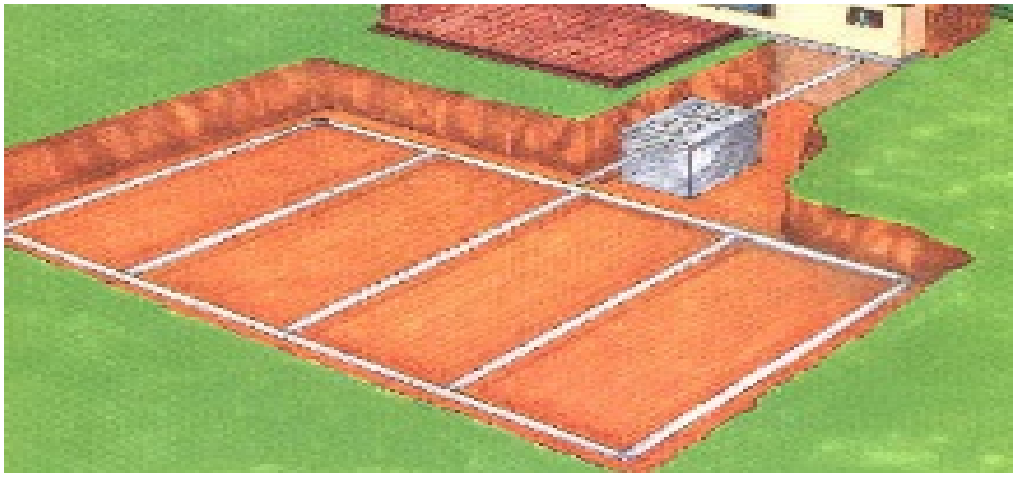
To better evaluate the desires and need of our residents, the Linn Sanitary District has broken the District into nine (9) sub areas that are the basis of our planning of our water and wastewater management efforts. Those sub areas are shown below.



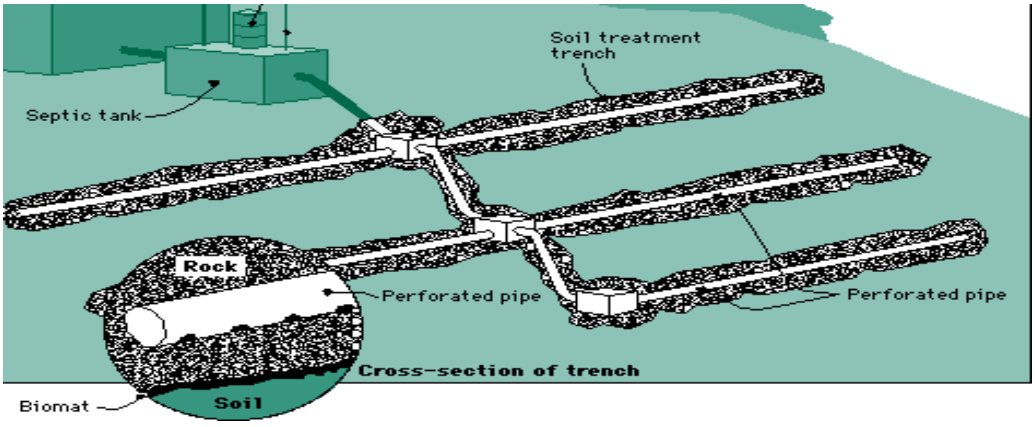
THE DIFFERENT TYPES OF PRIVATE ON-SITE WASTEWATER TREATMENT SYSTEMS

Private On-Site Wastewater treatment systems (POWTS) come in many different sizes, shapes and designed treatment processes. To help you better understand the type of system you have and its maintenance we have included the figures below that show the many different POWTS.

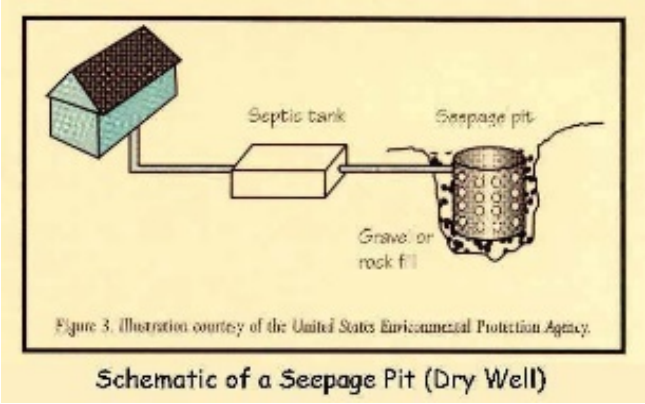
CONVENTIONAL SEPTIC TANK WITH A BED, TRENCH OR DRY WELL AS A SOIL ABSORPTION SYSTEM.



Conventional septic tank with a drain field for a soil absorption system. These systems need to be pump once every three years depending upon use. Usually there are vent pipes at the corners of the bed.



Conventional soil absorption vent pipes at

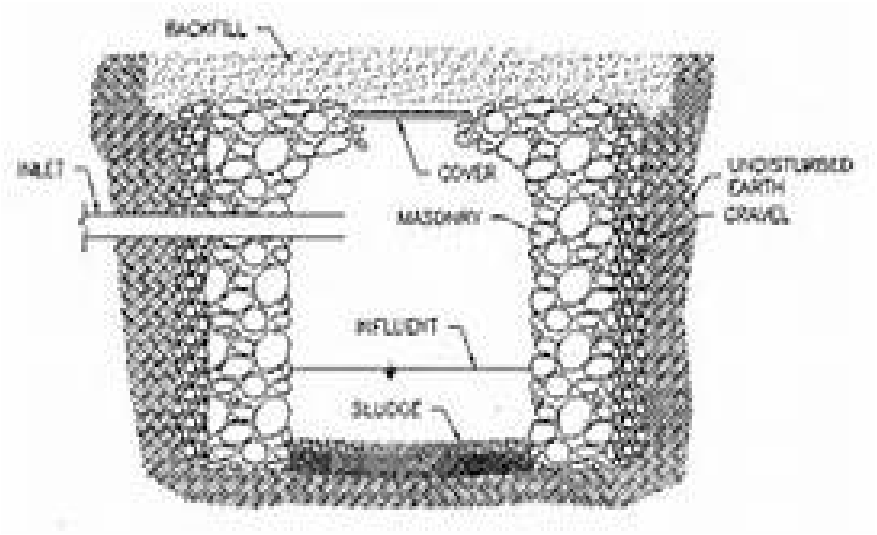


septic tank with trenches for a system. Generally, there are the end of each trench.

Septic tank and drywell or seepage pit for a soil absorption system.

This system includes a septic tank and another tank like structure that discharge the effluent to the soil. Generally, there is no outlet pipe from the second tank as the seepage pit allows water to pass through its walls or bottom into the soil.

CESSPOOL

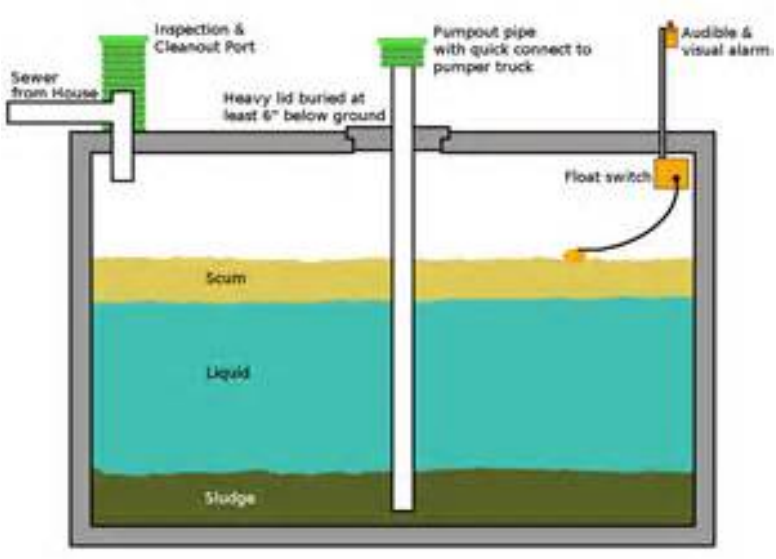


Cesspool

A cesspool is just one tank like structure that discharges solids and effluent directly to the soil. Generally, there is no outlet pipe. Older systems may have added an outlet pipe if the soils around the tank have become plugged.

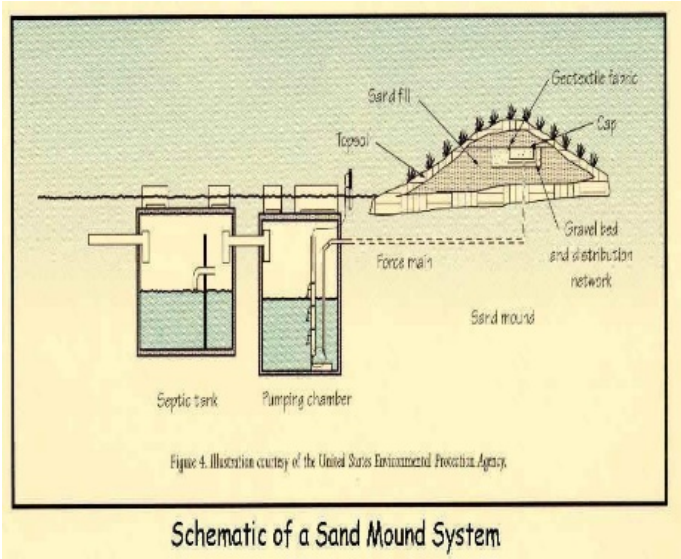
Cesspools are illegal by state code.

HOLDING TANK



Holding tank (note no outlet pipe). A holding tank is a sealed tank with only an inlet pipe, a clean out port and no outlet of any type. They need to be pumped frequently and require an annual report to the County.

A SEPTIC TANK WITH A MOUND FOR A SOIL ABSORPTION SYSTEM



Schematic of a Sand Mound System

A septic tank, pumping chamber and mound. A mound defines the soil absorption system where the effluent from the tank is absorbed into the soil. Good soil is mounded and the seepage bed with stone is established on top of the mound. The dispersal pipes are placed on the seepage bed to discharge into the mound's good soil. These systems require a septic tank and a pump to get the effluent from the tank to the top of the mound.

A SEPTIC TANK WITH A PRESSURIZED SOIL ABSORPTION SYSTEM,

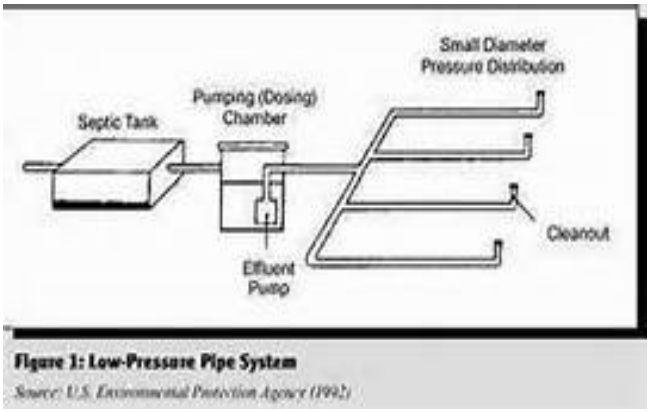


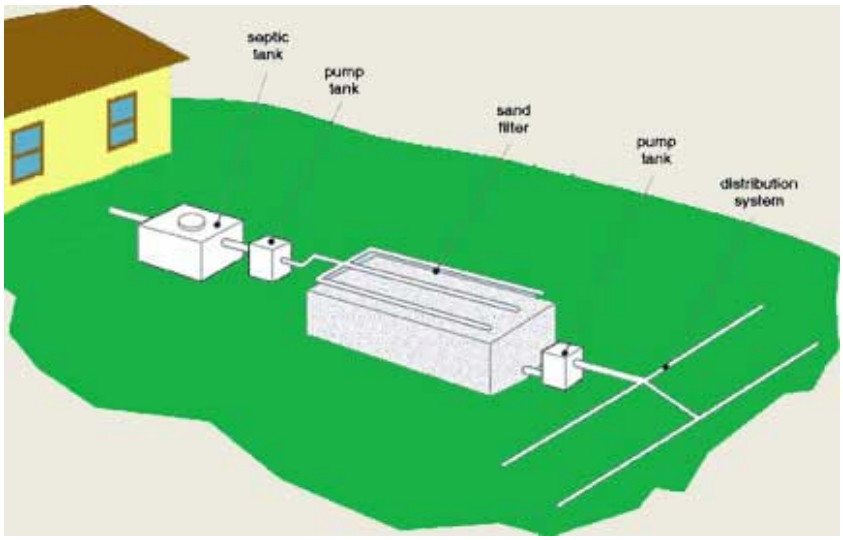
Figure 1: Low-Pressure Pipe System

Source: U.S. Environmental Protection Agency (1992)

Low Pressure system with a pump station and Soil absorption system.

This type of system uses a pump to move the effluent to and through the soil absorption system. The soil absorption system can be above or below grade or even below the tank. With the system being pressurized, better effluent distribution through the soil absorption system and into the soil is more likely. An example would be a low pressure at-grade system.

ADVANCE TREATMENT SYSTEM.



Note the additional treatment tank between the pump tanks.

This would be a system with a septic tank that discharges to a secondary treatment process such as a sand filter or fixed activated sludge treatment tank and then to the soil absorption system. These systems have pumps and require high maintenance.