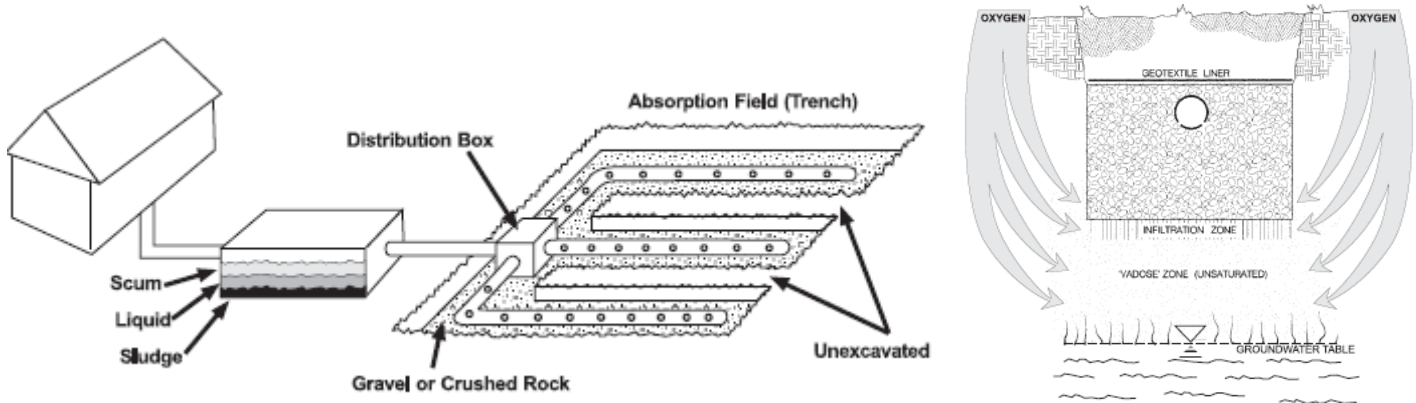


System Type: Septic Tank to Soil Absorption Trenches

Basic design: Septic tanks to soil absorption (leaching) trenches are the most common system installed in Ohio. These system typically consist of a 1,000 to 2,000 gallon septic tank that may be divided into one or two compartments. The tanks are manufactured from precast concrete, polyethylene plastic, or fiberglass. The septic tank provides some treatment of the effluent from the house by allowing for the settling of solid materials, and separation of scum, fats and greases. The partially clarified liquid, or effluent, is then drained by gravity to plastic perforated pipes laid in gravel trenches in the soil. The soil is used as the primary treatment media to remove the smaller suspended particles (TSS) and organic material (BOD). Research confirms that 2 to 4 feet of unsaturated soil is needed to completely remove bacteria, viruses and protozoans from sewage.



Advantages: Septic tank to soil absorption trenches are passive, simple and low maintenance systems. They can effectively treat sewage and their performance has been extensively studied. They are also a reasonably priced system where soil conditions permit their installation.

Disadvantages: These systems require soils that are not seasonally saturated with water to ensure treatment, and prevent ponding or nuisance conditions in yards. Over time, the soil absorption trench will develop a biomat consisting of suspended particles, organic matter and bacterial slimes which will eventually clog the trenches and lead to system failure. Lowering the amount of suspended particles, organic and bacterial load to the trenches by pretreating the wastewater can help extend trench life.

Operation and Maintenance: Regular pumping of the septic tank (every 2-5 years) at a cost of approximately \$50-100 per year.