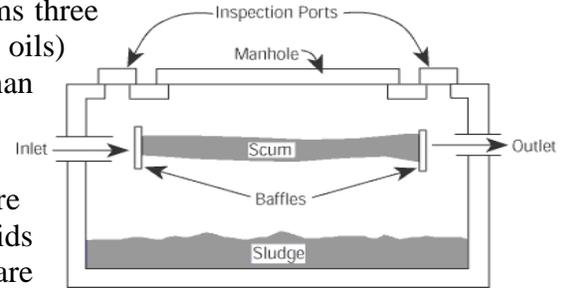




Licking County Health Department ---Environmental Division
675 Price Rd. Newark, Ohio 43055
740-349-6535

Household Sewage Treatment System---Factsheet

- Septic Tank:** A septic tank is a major component of a HSTS system. The tank is made of concrete, fiberglass, or pvc and contains baffles and tees at the inlet and outlet points. The port opening should have a riser to grade or above grade of the lawn. The septic tank holds the wastewater in the tank long enough for solids and liquids to separate. The wastewater forms three layers inside the tank. Sediments lighter than water (greases & oils) float to the top forming a layer of scum. Sediments heavier than water settle at the bottom of the tank forming a layer of sludge. This leaves a middle layer of partially clarified wastewater. The layers of sludge and scum remain in the septic tank where bacteria found naturally in the wastewater work to break the solids down. The sludge and scum that cannot be broken down are retained in the tank until the tank is pumped.

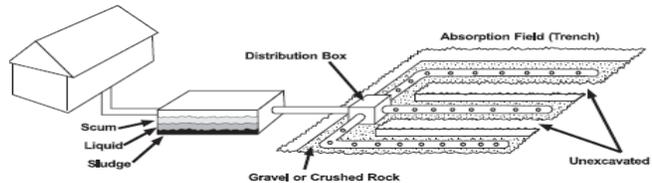


➤ Septic Tank Sizing

Bedrooms	Gallons
1-2	1,000
3	1,500 two tanks or compartments
4-5	2,000 two tanks or compartments
6 or more	1,000 plus 250 gallons for each bedroom in two tanks or compartments

Types of Secondary Treatment

- | | |
|-----------------|--------------------------|
| Leach field | Dry well |
| Sand Mound | Evapotranspiration Mound |
| Drip Irrigation | Subsurface Sand Filter |



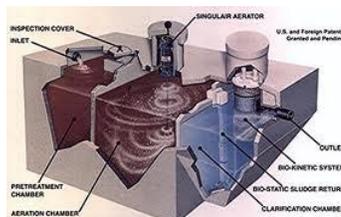
- Aeration Tank:** An aeration tank is a major component of a HSTS system. Unlike a septic tank the aeration tank depends on an electric motor. The main principal behind the operation of this type of tank is air injected into the sewage; the air is utilized by aerobic bacteria. Aerobic bacteria work to break down the wastewater and convert it to odorless liquids and gases. Aerobic bacteria are more efficient in breaking down the wastewater than anaerobic bacteria found in a septic tank. Effluent being discharged should be clear and odorless.

Common Types of Aerators found Licking County:

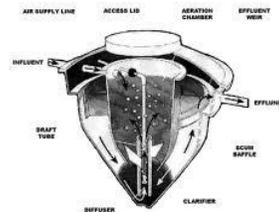
Jet



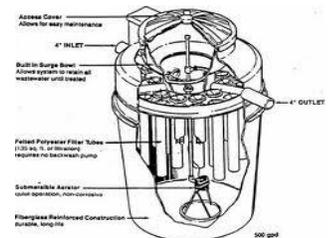
Norweco



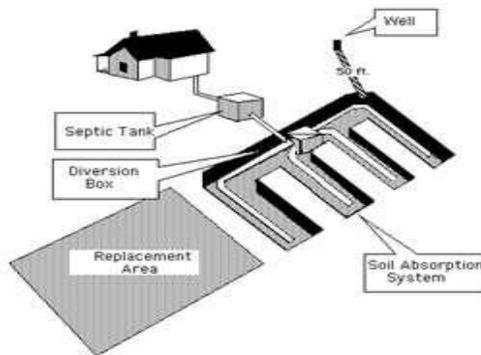
Nyadic



Multi-Flo



- **Leach Field:** The wastewater exits the septic tank or aeration tank and either gravity flows or is pressure pumped to a distribution box (d-box) or bull-run valve. Some older leach systems may not have a distribution device. The wastewater is then distributed into a leach field. The leach field can



either be a series of trenches or a square footage bed. The distribution device controls and diverts wastewater from one half of the leach trenches or bed to the other. Depending on water usage it is recommended that the d-box or valve be switched every 6 months. The leach field treats the wastewater by allowing it to slowly trickle from pipes into the gravel and down through the soil. The gravel and soil act as biological filters. As the wastewater moves through the soil to the ground water the filtration process and organisms in the soil work to remove toxins, bacteria, viruses and other pollutants.

- **Discharging Systems:** Aeration tanks were permitted to be installed without any type of secondary treatment (leach field, mound, ECT...) and then discharge to a creek, stream, pond, ditch, or even the surface the ground. Aerators with discharge are no longer permitted to be installed for new homes in Licking County. Some aeration tanks have an internal filters and some tanks have a separate filter such as an up flow filter (gravel, or sand) or subsurface sand filter, followed by a chlorinator or ultra violet light and possibly an inspection port. Due to systems installed prior to any regulations or changing regulations there are many types and configurations of these systems. Since these types of systems discharge, it is extremely important that they are maintained and in good working condition to prevent the spread of disease through bacteria in water, insects, and rodents.

Aerator Maintenance Tips:

- ✓ Check timer/control panel periodically for malfunction, light or alarm
 - ✓ Motor should be running at all times
 - ✓ Motor should be clean & free from hair & debris
 - ✓ Chlorine should be present in chlorinator
- ✓ Check discharge to make sure effluent is clear & odorless

- **The Licking County Health Department recommends the following activities to keep your septic system working correctly:**

- Have your septic tank or aeration tank pumped every 3 years
- Do not place any buildings or other structures on top of your system
- Keep downspout and sump pump drains away from your system
- Repair any faucet or toilet leaks to avoid adding extra water to your system