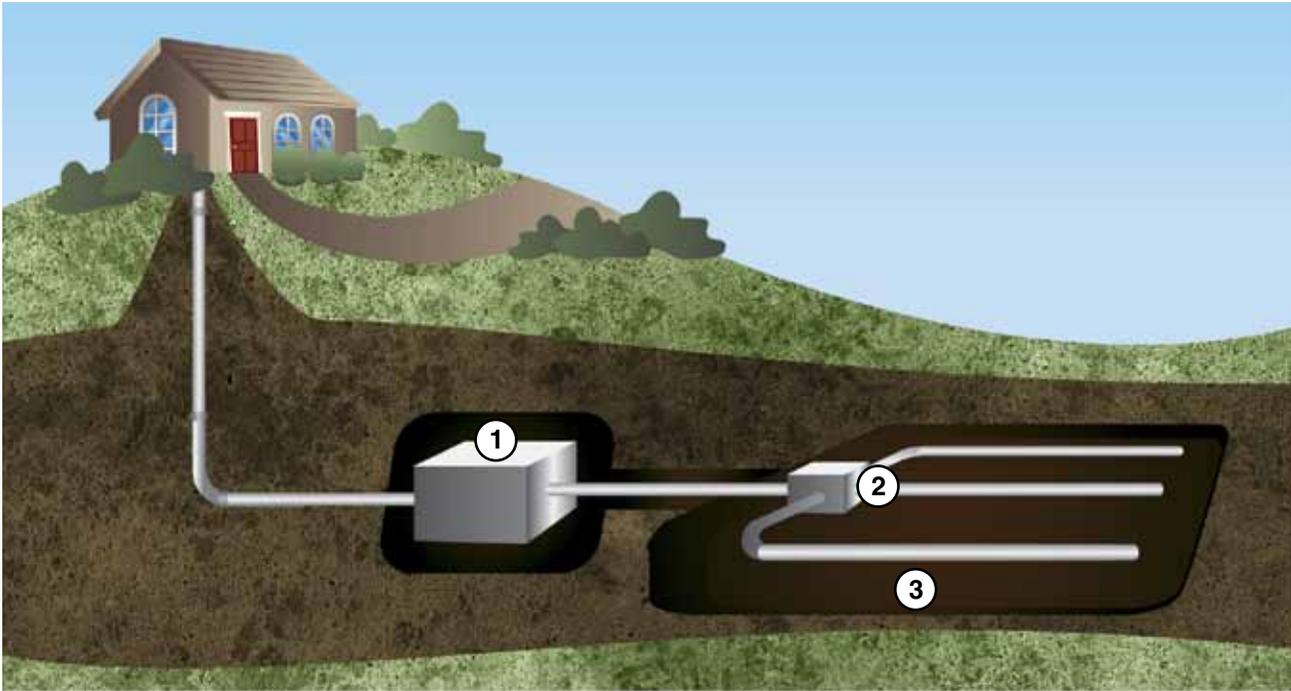


## What is a Septic System

A conventional septic system has three main components: ① Septic tank; ② drainfield; and ③ soil.



① **Septic tank:** A septic tank is a large watertight tank usually divided into two compartments, with access ports at the top for inspection and service. The size of the tank depends on the size of the house, the number of bedrooms and the number of people living in the house. The purpose of your septic tank is to remove solids, fats, oil, and grease from the wastewater in order to prevent these materials from being transferred to your drainfield, as this will cause the drainfield to clog and fail. Older tanks often consist of only one compartment and are usually smaller than newer tanks, making it even more important for owners to conserve water, and to conduct an annual inspection to determine if the tank needs to be pumped out.

② **Drainfield** (also known as a distribution system, absorption field or tile field): A pipe from the septic tank transfers the settled wastewater to the drainfield, which typically consists of a grid of perforated pipes that distribute the wastewater over a large area where it enters the soil. The wastewater transfer can be done either by gravity, or by pumps. If a gravity system is in place, the wastewater first enters a distribution-box that equally distributes the wastewater flow into the pipes. A pumped or pressurized drainfield system ensures more uniform distribution minimizing the potential for overloading or clogging the drainfield or any particular drainpipe segment. The drainpipes are typically surrounded by gravel. The purpose of the gravel is to provide liquid storage, increase soil surface area for absorption, and prevent soil from blocking the perforations in the distribution pipes.

③ **Soil:** The purpose of the soil beneath the drainfield is to absorb, treat and transfer the wastewater away from the drainfield, down to groundwater and eventually to a river or lake. The soil must be granular enough to allow wastewater to be absorbed into the soil and allow oxygen to be available. The soil acts like a filter removing particles from the wastewater. Aerobic bacteria attached to the soil digest and treat the wastewater. For this soil-based treatment system to work, there needs to be at least three to four feet of unsaturated soil beneath the property. Where there is not enough soil depth, or the groundwater (saturated soil) is too close to the drainfield pipe, sand may be added to the site to increase the soil depth for treatment and dispersal.