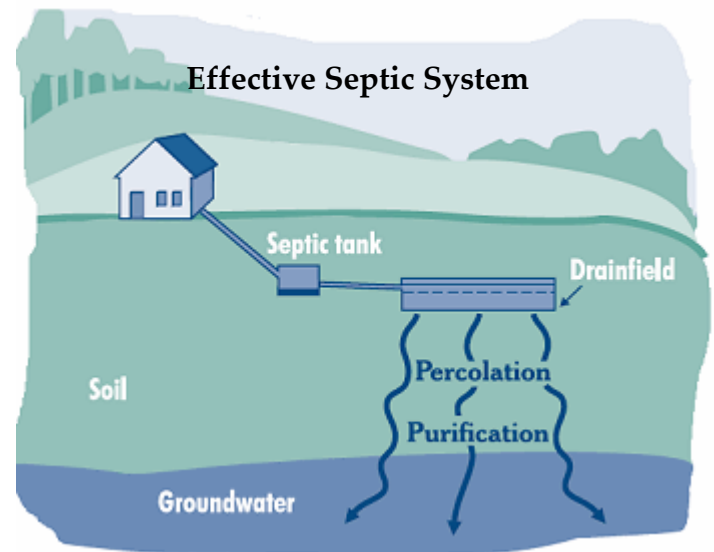


Handout 1: Why do we need sewers?

Septic Systems

- Good solution in rural areas in large lots with good soil and distance from groundwater or surface water sources.
- Microbes in soil digest or remove most contaminants before reaching groundwater or surface water in the right conditions.
- Professionally designed and maintained systems should perform well
- Very important to keep system maintained properly



Source: <http://www.healthgoods.com/>

However, septic systems do not work well in all situations.

- Poor soil or close proximity to ground or surface water will result in incomplete treatment and contamination of surface and groundwater.
- Too much wastewater being flushed into the drainfield or groundwater that is too high, keeping them constantly saturated and unable to treat properly.
- Contaminants include: bacteria, viruses, detergents, cleaners, other chemicals & pharmaceuticals – anything that gets put down the drains!
- Pathogens can threaten public health by carrying diseases.
- Nutrients, such as Phosphorus and Nitrogen, can increase in surrounding waters increasing the plant growth and algae blooms thereby damaging the lake or stream ecosystem.

Signs of insufficient septic system



Visible ponding, possible smell



Visible septic field lines

- One of the biggest issues is that over time many systems close together, in poor soil or too close to the water table will have a cumulative effect and will slowly add more nutrients and pathogens to the groundwater

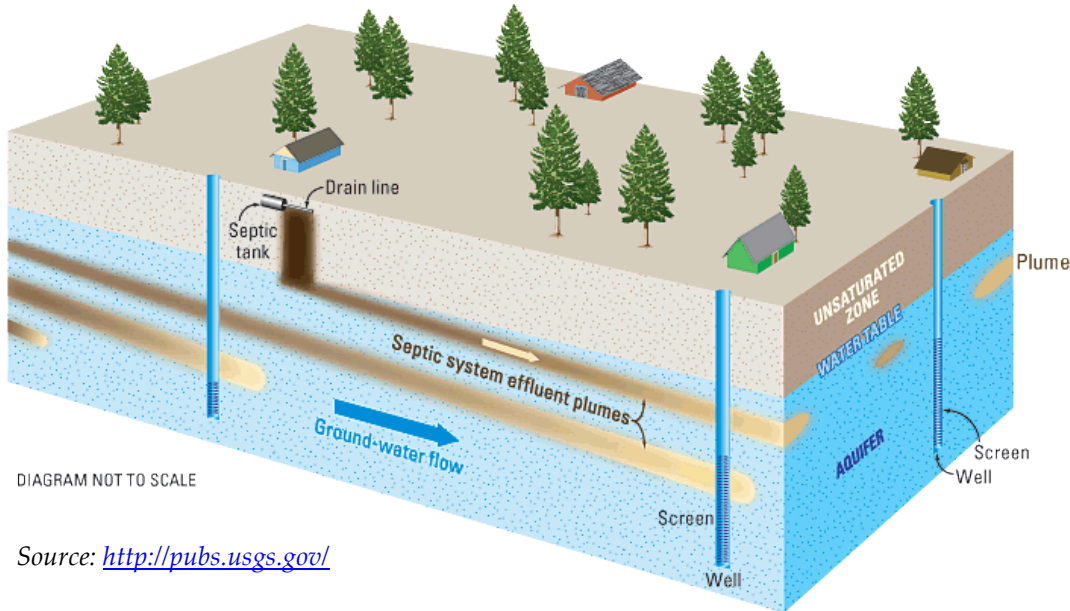


Diagram illustrating the accumulation of plumes from surrounding septic fields

Source: <http://pubs.usgs.gov/>

Sewer System

- Eliminates need to maintain septic tank or field
- Can improve property values and allows for some densification of central areas as sewer properties may be able to be subdivided depending on area OCP.
- Protects the environment by carrying wastewater to a central facility to undergo extensive treatment and disinfection before re-entry into the water system.
- Reliable service operated and maintained by qualified wastewater operators.
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Diagram of a typical connection into a gravity main

