

Frequently Asked Questions for Septic Tank and other Wastewater Treatment Systems

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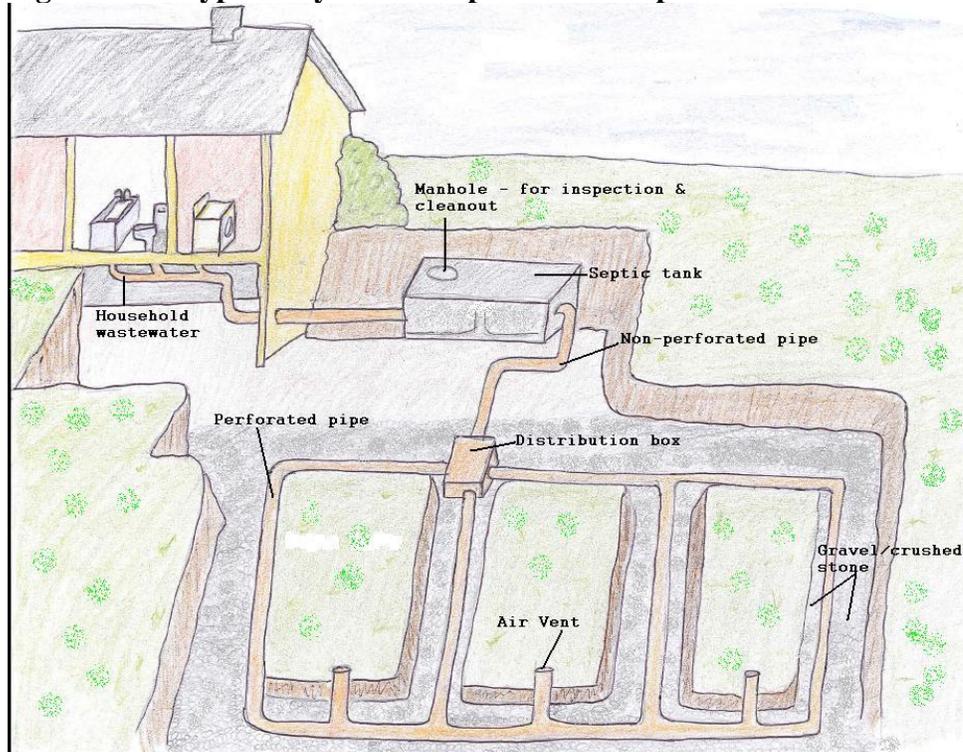
1. What happens to wastewater from my home?

When houses are not served by a public sewerage system, the wastewater from a house should be treated by a septic tank and percolation area or advanced wastewater treatment system. With new houses the type of system used is determined by testing ground/soil conditions at planning stage. Many older houses may not have systems that are up to current standards.

2. How should a septic tank wastewater treatment system work?

A modern septic tank system includes a double chamber tank and percolation area. Wastewater is partially digested by bacteria in the septic tank and the effluent then passes through a percolation area where effluent is further purified.

Figure No1: Typical layout of a septic tank and percolation area.



3. What is a percolation area?

A percolation area typically consists of a system of sub-surface perforated pipes which allow the liquid waste to be absorbed and filtered by the soil. Flexible land drainage pipes, though often used are not permitted for percolation areas. Solid 100mm (4inch) pipes perforated typically at 4, 6 and 8 o'clock are recommended to provide even distribution of effluent in the percolation area. A well designed and properly levelled distribution box is also critical for proper percolation. Other requirements for a percolation area are listed on Table 7.3 (page 23) of the EPA Code of Practice.

Photo No 1: Percolation area under construction



(Photo provided by Traynor Environmental Limited)

Photo No 2: Distribution Box _ to ensure even distribution of effluent to percolation area / polishing filter



(Photo provided by Traynor Environmental Limited)

4. What is a package or an advanced wastewater treatment system?

Package or advanced wastewater treatment systems consist of mechanical aeration or filtration units that enhance the treatment of domestic wastewater. A polishing filter is installed after these systems to allow further treatment of the wastewater. These systems may be suitable in some areas where a septic tank system is not acceptable. The EPA 2009, Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e.≤10) provides general guidance on the location, design, installation and maintenance of both secondary treatment filter systems and packaged wastewater systems.

5. What is a polishing filter?

Polishing filters consist of either soil or sand and are employed to reduce microorganisms from wastewater. They are used to treat wastewater from advanced treatment systems and constructed wetlands to allow for the discharge of treated wastewater to ground.

Photo No 3: Sand Filter under construction



(Photo provided by Traynor Environmental Limited)

6. Are all sites suitable for septic tanks and other treatment systems?

NO— not all sites are suitable. The following are possible reasons for site unsuitability:

- A high water table.
- A slow percolation rate of the soil which would result in ponding on the surface because effluent cannot get away
- A fast percolation rate of the soil which would result in effluent moving through the soil too quickly without effective treatment.
- Site restriction issues i.e not enough space to achieve the minimum separation distances between the treatment system and domestic wells, watercourses, other houses etc.

7. How do I know if my wastewater treatment system is not working properly?

Some signs that your wastewater treatment system may not be working include the following:

- Smell of sewage from the general area of the tank and percolation area.
- Slow draining toilets, sinks or drains or backing up of sewage at the inlet.
- Overflow of wastewater from the tank or ponding of sewage on the percolation area.
- Discolouration of nearby watercourses (greyish slime growths)

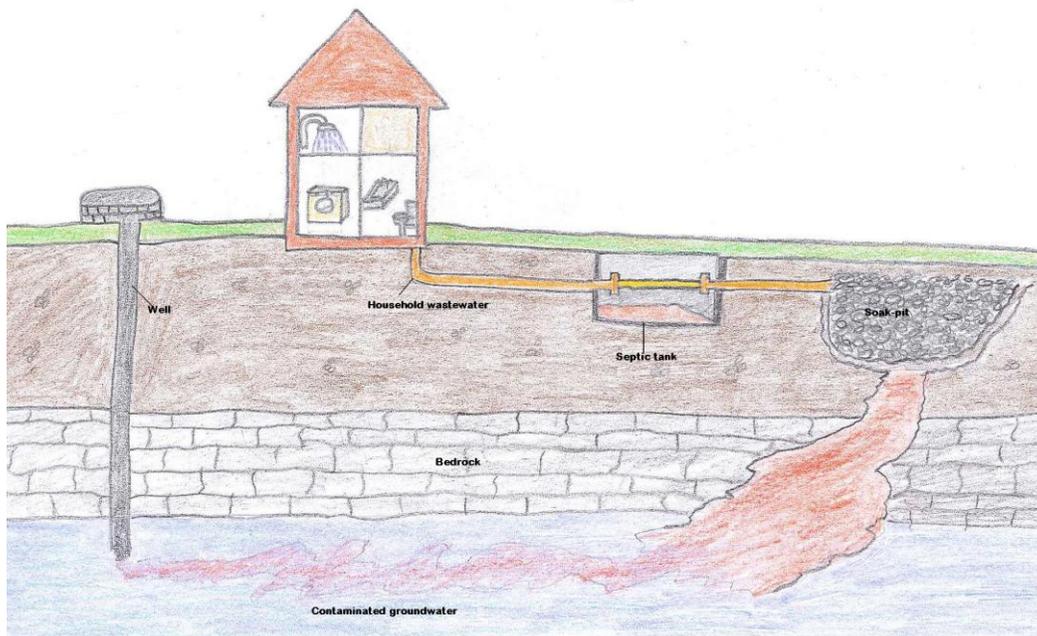
Photo No 4: Downstream of a septic tank discharge



8. Could my wastewater treatment system pollute my well?

Yes it is possible. If you suspect that your wastewater treatment system is affecting your well firstly you should have your household well checked - this service is provided by Monaghan Co Council (047 30592) or by private laboratories. Advice on well disinfection is available from an Environmental Health Officer at your local authority or <http://www.gsi.ie/Programmes/Groundwater/FAQ.htm>. If you suspect contamination of your well you need to have a full assessment of your wastewater treatment system carried out by a suitably qualified person.

Figure No: 2 : Shows contamination from soak pit entering the household well.



9. My house is over 20 years old – how do I know if it is working effectively?

Septic tanks prior to the 1990's may not be built to current standards and performance should be checked. You should check tank structure, provide access points for maintenance and de-sludging, replace soak-pits and pipes to drains (if present) with a properly designed percolation area or other approved polishing system, exclude roof and yard water from the system. (See further information below No.25)

10. What about the use of Soakpits?

In areas with poor soil percolation properties soakpits or direct discharges from soakpits pose a risk to local surface waters. In areas with very shallow soil and high percolation rates soakpits and in particular a cluster of soakpits pose a risk to local ground waters. The use of soakpits significantly increases the risk factor and households using soakpits should consider upgrading their systems. It is likely that the use of soakpits will be targeted in new legislation and in measures adopted to protect surface and ground waters.

11. When buying a house what do I need to do?

Before buying a house you should have the septic tank or wastewater treatment system inspected by a suitability qualified person. You should ask for installation and maintenance records for the system. You should check that the treatment system will adequately serve the anticipated number of occupants of the house.

12. How do I care for my household wastewater treatment system?

You should visually check your system at least every six months and note any ponding of effluent, bad smells or discoloration of nearby drains. If you have an advanced treatment system check the electrical components (pump, blower etc) are operational.

Don't be tempted to turn off the power to save electricity - If there is no air going to the system it becomes an undersized septic tank and treatment is ineffective. You should also check the distribution box i.e. the manhole between the wastewater treatment system and the percolation area to ensure even distribution of effluent and ensure there are no blockages. (See further information below No.25)

13. How often do I need to desludge my septic tank or advanced wastewater treatment system?

The EPA recommend that a septic tank is de-sludged at least once a year but this varies with the systems capacity and use.

14. Why do I need to desludge my household wastewater treatment system?

If the level of sludge builds up in the tank it may make its way out of the tank and block the distribution box and the percolation area or polishing filter. And if the percolation area or polishing filter becomes blocked it is very difficult to clean and may require replacement – an expensive option!

15. I have noticed ponding in my garden close to my wastewater treatment system what should I do?

First of all you should arrange to have your system de-sludged. If it is an advanced wastewater treatment system you should contact the supplier of your system and have your system serviced. (See further information below)

Photo No: 5 : Shows ponding of sewage effluent



16. Should “grey water” from dishwashers, sinks and washing machines be directed to my wastewater treatment system?

YES - grey water should in all circumstances be directed to the wastewater treatment system. Grey water is also a pollutant and if directed to the rain water system may cause contamination of waters. Take care with house extensions or alterations – don't connect any wastewater pipes to the rain water disposal system.

17. Should water from roofs and yard areas be connected to my wastewater treatment system?

NO - Roof and yard waters should not be connected to your wastewater treatment system. Clean water should be collected and discharged separately to a local watercourse or soakaway.

18. I want to extend - can I build over my septic tank and percolation area?

Under no circumstances should you build over a septic tank or percolation area. Access to the tank is needed for regular maintenance and the percolation area should not be compacted.

Even with a hard standing area located above a percolation area traffic may damage percolation pipes and result in ponding or escape of untreated effluent...

19. Can the use of bleach and cleaning agents affect the operation of my wastewater treatment system?

Excessive amounts of bleach or cleaning agents will reduce the treatment capability of your system as the micro organisms required to treat the wastewater will be killed off. Therefore bleaches and cleaning agents should be used sparingly.

20. What effects will oils and greases have on my wastewater system?

Oils and grease from cooking that escape down the drain can damage your system. Food waste and cooking oils can be recycled (see information below) and avoid the use of food macerators or “in-sink disposal units” Excess amount of food, grease or oils will cause blockages, smells, overload your treatment system and damage you percolation area.

21. What effects could using a macerator or in sink disposal unit have on my wastewater treatment system?

Adding macerated food waste to your wastewater increases the organic strength of the wastewater. This in turn could result in inadequate treatment, blocked pipes and smells arising from the tank or percolation area.

their systems. It is likely that the use of soakpits will be targeted in new legislation and in measures adopted to protect surface and ground waters.

24. The law and your wastewater treatment system?

Section 70 of the Water Services Act, 2007 places a **Duty of Care** on owners of premises and states the following

“The owner of a premises shall ensure that all drains, manholes, gullytraps and storage and treatment systems for wastewater, including related accessories, not in charge of a water services provider, which serve that premises are kept so as not to:-

- (a) cause, or be likely to cause, a risk to human health or the environment, including to waters, the atmosphere, land, soil, plants or animals, or*
- (b) create a nuisance through odours.”*

For new builds site characterisation must be carried out in accordance with the EPA Code of Practice for Wastewater Treatment and Disposal Systems Serving Single Houses (p.e≤10), 2009. The EPA Code of Practice can be downloaded at the following location <http://www.epa.ie/downloads/advice/water/wastewater/>

Section 3 of the Local Government, (Water Pollution) Act, 1977 as amended by the Local Government, (Water Pollution) Amendment, Act, 1990 prohibits the entry of polluting matters to waters.

If using a contractor to desludge your wastewater treatment system you must ensure that the contractor holds an appropriate Waste Collection Permit for European waste code 20 03 04. You may be breaking the law if you use an unlicensed contractor to desludge your system. A list of licensed contractors operating in Co. Monaghan is available from Monaghan County Council.

New regulations on wastewater treatment systems are due in early 2012

25. Where can I get more information?

You can contact Monaghan County Council’s Environment Section at 042 9661240.

<http://www.epa.ie>

<http://www.gsi.ie>