



OFFALY COUNTY COUNCIL

Comhairle Chontae Uíbh Fhailí

HOMEOWNER'S GUIDE AND MAINTENANCE RECORD FILE FOR WASTEWATER TREATMENT SYSEMS

Houses located in rural areas, not served by public sewers, depend on either a septic tank system or a secondary treatment system to treat and dispose of their domestic wastewater.

If not installed and maintained appropriately, the effluent from these systems can pose a threat to human health when it enters our drinking water supply. Microbial pathogen in forms such as bacteria, viruses, E-Coli and Cryptosporidium in the effluent cause a variety of very serious health problems to the user. The environment is also put at risk of pollution through inadequate systems. All systems without exception need maintenance. In this leaflet, the Environment Section of Offaly County Council has outlined some of the steps that need to be taken to ensure that health risks and environmental pollution does not occur.

THE TWO MAIN TYPES OF SYSTEMS TO TREAT DOMESTIC WASTEWATER AS DETAILED BELOW:

Conventional Septic Tanks

While septic tanks can work quite effectively the key aspect of wastewater treatment performance is maintenance. The septic tank will only provide partial treatment of domestic effluent. It is necessary to have a percolation area to complete the treatment process. In situations where the water table is high or soils have poor drainage a septic tank should not be used and a secondary treatment system should be used. The septic tank is most commonly a watertight concrete tank with one or two chambers. The incoming domestic effluent enters below the surface so as to cause minimal disruption. The solids settle to the bottom and a scum layer forms on the surface. The solids are broken down anaerobically by bacteria and the outflow is discharged from beneath the surface to the percolation area. The treatment process is completed by bacteria which attach themselves to the stones and treat the effluent as it trickles through the percolation area. The septic tank requires emptying when either the scum layer or the solids at the bottom approach the outlet level. The solids or scum would cause blockages of the percolation area, prevent the septic tank discharging. A properly designed, installed and maintained system can provide years of reliable low-cost service. When systems fail to operate effectively, ground and surface water pollution, property damage, health risks and odour nuisance can occur

Secondary Treatment Systems

Secondary Effluent Treatment systems are used to treat wastewater from a dwelling where a site is unsuitable for a conventional septic tank system. They can be subdivided into two main types secondary systems - filter systems where media is used to treat domestic wastewater and secondary systems mechanical - aeration systems which use media and mechanical parts to treat domestic wastewater. They should not be regarded as an instant solution for all problem sites. It is crucial that systems are properly designed and installed, and that proper maintenance and monitoring procedures are put in place. Adequate capacity to allow for one year sludge storage should be provided with all secondary systems.

Secondary treatment plants differ in effluent treatment process, size, electrical consumption, cost and complexity. As of October 13th 2003, under the Offaly County Development Plan 2003-2009, an advanced secondary Treatment system must be installed with all new single dwellings in unsewered areas as part of their planning application. This is providing that the site passes a site suitability test. However in the rush to obtain planning permission and to build, many applicants do not consider the implications of their on-site treatment systems and go with the cheapest system. On sites, problems may not emerge in the first few years, but may do so in subsequent years. A long term view is necessary to ensure that there is no risk of water pollution or risk to public health from these systems.

WHAT MAINTENANCE IS NECESSARY?

Routine maintenance is critical to prevent system failure. For secondary treatment systems, the supplier should be able to advise you on the specific maintenance requirements for the system. In relation to septic tanks, a considerable amount of sludge and scum will accumulate overtank in the septic tank and can pass through and clog the secondary system if not timely and properly extracted. The tank should be inspected at least once a year to determine the accumulation rate of sludge and scum. With ordinary use and care, a conventional septic tank usually requires desludging every two to five years to remove the buildup of sludge and scum. The number of people using the system, the amount and type of waste generated, and the size and design of the system will determine how often the tank will have to be desludged. For example a 1000 gallon septic tank serving a home with five occupants should be desludged about every two years.

It is the responsibility of the homeowner to maintain, repair or replace all components of the septic tank or secondary treatment system so that it will protect the environment and public health. Keep all information about your septic system and it's maintenance on this record sheet supplied by Offaly County Council. This record will be important for future inspections by the Council. Should problems develop with your system or if you sell your home. Keep this folder with your house records as a reference for any questions that may arise.

Home Owner: _____

Home Address: _____

Date Installed: _____

Installer:	Operation & Maintenance Provider
Firm/Company:	Firm/Company:
Address:	Address:
Telephone Number:	Telephone No:

DATE	Service preformed:	Service Preformed by* :

***Service is to be preformed by an Authorised Waste Collector only**

Signs of a Failing Wastewater System:

- **Odours near the septic tank or secondary treatment system or percolation area**
- **Sewage surfacing over the percolation area (ponding), especially after heavy rainfall**
- **Plumbing backups or gurgling sounds in the plumbing**
- **Lush, green growth or wet or mushy ground over the percolation area**
- **Laboratory test results indicating the presence of bacteria in well water**
- **Slow draining toilets and drains**

Tips to Avoid Trouble:

DO inspect your septic tank or secondary treatment system yearly and have your septic tank desludged and system inspected every 2-5 years by a licensed septic tank contractor (If the sludge and surface scum combined are 1/3 the liquid depth of your septic tank, have the tank pumped out by a licensed sewage contractor. (List can be obtained from Offaly County Council).

DO divert roof drains and the surface waters flowing down paveways and hillsides away from the septic system.

DO ensure that the septic tank is water tight has an adequate cover that can be raised to inspections.

DO practice water conservation. Repair dripping taps and leaking toilets, run washing machines and dishwashers only when full, avoid long showers, and use water-saving fixtures.

DO learn the location of your septic tank and percolation area and keep a sketch of it handy for service visits.

DO take leftover hazardous household chemicals to your approved hazardous waste collection center for disposal. Use bleach, disinfectants, and drain and toilet bowl cleaners sparingly and in accordance with product labels.

DON'T allow anyone to drive or park over any part of the system or put any foundational structures on percolation area or tank. The area over the percolation area should be left undisturbed with only mowed grass cover. Roots from nearby trees or shrubs may clog and damage your percolation area.

DON'T use commercial septic tank additives. These products have not been proven to be effective and may damage your system or the environment.

DON'T use your toilet as a rubbish bin. No dumping non-biodegradables including nappies, sanitary towels, chewing gum, cigarette butts, fats, and greases or harmful chemicals down your toilet or drains.

Safety Checklist:

- Never enter the septic tank. Toxic gases are produced by the natural treatment processes in septic tanks and can give rise to potentially dangerous hazards (cave-in, collapse, methane gas explosion, or asphyxiation). Extreme care should be taken when inspecting a septic tank.
- Never smoke around or near septic tank openings.
- Electrical lights, appliances, or tools are to be kept away from the septic tank and water or wet ground near the system.
- Manholes serve the purpose for inspections and cleaning and should be locked or heavy enough to prevent children from opening them. Keep children and other spectators away from the system.
- Pathogens present in wastewater are also present in the contents of the septic tank. These organisms are capable of spreading infectious disease. Use eye protection and gloves and always wash hands thoroughly with antibacterial soap before eating, drinking, or smoking. Change clothes before coming into contact with food and others after being around an onsite system.
- When attempting to locate your system, be careful of both overhead and underground utility lines. Have all underground utilities located before starting

Who is Responsible for Ensuring Pollution Does Not Occur?

The primary responsibility for groundwater protection rests with any person who is carrying out an activity that poses a threat to waters. The Department of Environment, Heritage and Local Government places the responsibility of preventing water pollution from single houses located in Offaly on Offaly County Council.

STANDARDS TO BE ADHERED TO:

Septic tanks:

Septic tanks installed on or after 1 June 1992 must comply with Part H of the National Building Regulations. Technical Guidance A-M contains general advice on compliance with the Building Regulations (Section 3 of the 1990 Act and Section 7 of the 1997 Act, SI No. 497 of 1997). The relevant Technical Guidance Document (TGD) (Drainage and Waste Water Disposal) calls up the following standards:

Septic Tanks serving single houses: IS EN 12566 Small Wastewater Treatment Systems up to 50 PT – 'Part 1: Prefabricated septic tanks' is a product standard developed by CEN and published by the National Standards Authority Ireland.

Secondary Treatment Systems:

Irish legislation requires that a wastewater treatment system to be used for the treatment of effluent from a single house be certified by an Irish Agrément Board or other specified certification system, for details on the exact procedures refer to Part D of the Building Regulations, 1997 (S.I. No. 497 of 1997) and any amendments. In order to ensure compliance to water quality, planning and building regulations, an appropriate certification body should certify such systems.

Guidance in Relation to the Management of both Systems:

For further information in relation to the management of both systems the Environmental Protection Agency has produced a Code of Practice: Waste Water Treatment Systems for Single Houses which is available to download from their website - www.epa.ie. This code of practice provides general guidance on the siting, design, installation and maintenance for both types of systems. See also the specific requirements of the system supplied by the manufacturer.

Sludge Disposal:

Sludge from a septic tank or a sewage treatment system that is intended to be land spread should be managed in accordance with the Waste Management (Use of Sewage Sludge in Agriculture) Regulations S.I. No. 148 of 1998 and its amendment (S.I. No. 267 of 2001). These Regulations allow a limit of up to two tonnes per hectare per year on the amount of dry matter that can be added to soil on agricultural land. This is providing that certain criteria are met and that it is carried out in accordance with the nutrient management plan for the lands in question. It should also be noted that grassland should not be grazed within six months following land spreading.

The spreading of sewage sludge should never take place inside the estimated Zone of Contribution of private and public supplies.

Queries/further information may be forwarded to the Environment Section, Offaly County Council, Áras an Chontae, Charleville Road, Tullamore, Co. Offaly.

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This leaflet provides an outline of the Regulations. It does not purport to provide a legal interpretation of the meaning or effects of the Regulations.