

## On-Site Sewage Management Systems: Conventional Systems

### How does a conventional system work?

- All wastewater from the household enters the septic tank. The solids settle to the bottom of the tank and form a sludge layer.
- The fats and greases collect at the surface, forming a scum layer.
- Micro-organisms slowly break down the matter in both the scum and sludge layers.
- Any material that cannot be broken down will gradually build up. As a result the tank needs to be pumped out periodically by an accredited waste service provider.
- The wastewater then flows, or is pumped, to a sub-soil bed or sub-soil trench for disposal (i.e. land application area).
- The wastewater is distributed along the length of the bed or trench through a system of pipes.
- The wastewater is eventually absorbed by the soil and/or plant roots around the disposal area.

### Role of Owners

It is the responsibility of the owner of the property to ensure that the on-site sewage management system is designed, installed and managed so that pollution of groundwater or surface waters does not occur, and there is no risk to public health, safety and the environment from the operation of the system.

Householders must take an active role to ensure effective operation of the system. Correct operation involves regular monitoring, supervision and system maintenance. Ensure:

- Your system is safe and well maintained.
- The septic tank is structurally sound and the tank doesn't leak.
- Monitor sludge levels within the septic tank and engage the services of an accredited service provider to de-sludge the tank when levels are high.
- Adjust household activities accordingly by using low phosphorus detergent, minimising use of chemicals, avoiding 'shock loading' and conserving water.

- Problems are fixed immediately when detected. If the system cannot be corrected by proper operation and maintenance, owners should consider replacing the system.

Poorly maintained septic systems are a serious source of water pollution and may present health risks, unpleasant odours, attract vermin and insects. Look after your On-site Sewage Management System to help protect the environment, your health and that of your family.

### Land Application Areas

The land application area is the area where effluent is applied through a sub-surface absorption system (i.e. beds or trenches) or through an irrigation system (drip sprinklers). Land application areas usually have a lifespan of 15-25 years however this lifespan can be shortened if not designed, installed or maintained properly. Ensure the land application area is:

- Installed in accordance with Australian Standards.
- Functioning effectively and the soil is by taking up the nutrients and organic load.
- Not causing untreated effluent to be discharged onto the ground surface or running off into waterways or neighbouring properties.
- Adequately sized to dispose of wastewater generated from your premises.
- Kept free of livestock and children.
- Kept free of trees with an extensive root system. Plant them well away.
- Kept free of fruit and vegetable crops are planted in the land application area.
- Provided with plants that are suited to the soil, climate and for uptake of excess nutrients.

A good idea is to have a reserve or back up land application area identified should your existing area fail or come to the end of its lifespan. If a reserve area cannot be provided due to space limitations then it is recommended that a higher level of wastewater treatment is undertaken and wastewater is alternated into a different section of the disposal area after each pump cycle, thereby allowing each section to have a rest during the day.

## Sale or Renting of Premises

It is the responsibility of the owner of the premises to ensure that the new householders (new owners or tenants) receive an operating manual that includes all relevant information regarding the system installed. When the property sells, the new owner has 2 months to lodge an application for an 'Approval to Operate' with Council.

## Performance Standards

The Local Government (General) Regulation 2005 specifies that an on-site sewage management system must be operated in accordance with the following:

- The prevention of the spread of disease micro-organisms.
- The prevention of the spread of foul odours.
- The prevention of the contamination of water.
- The prevention of the degradation of soil and vegetation.
- The discouragement of insects and vermin.
- Ensuring that persons do not come in contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned.
- The minimisation of any adverse impacts on the amenity of the premises and surrounding lands.

Where a system is not meeting the above performance standards, it will be classified as a 'failed system' and rectification works or upgrades will be required to bring it up to compliance.

## Signs Your System May Be Failing

- Water not draining away easily from basins and sinks in the house.
- Drain pipes making a gurgling noise.
- Sewage smells from the drains or system.
- Water backing up into sinks or yard gully.
- Wastewater pooling over the land application area.
- Soft, damp and boggy areas alongside the trench, bed or subsurface irrigation is noticed.

## Common Problems

Common problems identified with on-site sewage management systems include:

- Too much water going into the system which causes effluent to flow too quickly through the septic tank before bacteria have a chance to work. Solids can be pushed through the system, clogging absorption trenches.
- Too much sludge and scum in the tank. Not having a tank de-sludged regularly will result in the tank failing and untreated wastewater with heaving solids flowing out of the tank in the absorption trench.
- Toxic chemicals going into the system like solvents, oils, paints, disinfectant, pesticides, household cleaning products and bleaches that kill the helpful bacteria in the septic system. This stops the digestion of effluent and pollution of the absorption trenches.

## Preventing Problems

*Do:*

- Learn how your sewage system works and its operational and maintenance requirements.
- Learn the location and layout of your septic system and land application area.
- Have your septic tank de-sludged every 3-5 years to prevent sludge build-up, which may clog pipes and transpiration beds/trenches.
- Conserve water! Conserving water around the house will reduce the amount of wastewater produced that to be treated. This will result in less frequent de-sludging and longer life of your system.
- Check household products for suitability for use in septic systems.
- Engage a contractor to regularly check and service your system.
- Keep a record of servicing's, inspections and other maintenance.

### Did You Know?

Septic systems are unable to cope with large volumes of water such as several loads of washing over a short period of time. Avoid these 'shock loads' by ensuring water use is spread evenly throughout the day and week.

*Don't:*

- Don't put large quantities of bleaches, disinfectants, whiteners, nappy soakers and spot removers into your septic system – they kill off the helpful bacteria that digest the waste.

- Don't allow any foreign materials such as nappies, tampons, condoms and other hygiene products to enter the system – they cause blockages and expensive servicing and repairs.
- Don't use more than the recommended amounts of detergents.
- Don't put fats and oils down the drain – they clog the system.
- Don't install or use 'sinkerators' – instead dispose or compost of your fruit and vegetable scraps separately.
- Don't let children or pets play on the land application area where they could be exposed to harmful bacteria.

**More information**

Visit Council's website at [www.federationcouncil.nsw.gov.au](http://www.federationcouncil.nsw.gov.au). Alternatively, contact Council on (02) 6033 8999 and ask to speak to the Environmental Health Officer (EHO).

**Did You Know?**

Wastewater from a failing disposal area could contain millions of bacteria in every litre; bacteria which could be highly infectious to you and your family.