

Maintenance of aerobic wastewater systems

This fact sheet provides basic information about types of aerobic systems, obtaining approval to install the system and how to operate and maintain the system to prevent risks to health and safety or nuisance conditions.

There are basically two types of aerobic systems:

- aerobic wastewater treatment units,
- aerobic sandfilters.

What is an aerobic wastewater treatment unit?

An aerobic wastewater treatment unit is designed to treat septic tank effluent to a level suitable for surface irrigation within the site.

The unit may incorporate a septic tank or it may be separate.

Following primary treatment in the septic tank, the effluent is treated by a process of aeration, settling and disinfection and then pumped to a dedicated irrigation area as reclaimed water.

What is a sand filter?

Sand filters achieve a similar result to aerobic wastewater treatment systems but the treatment process is different.

The effluent from the septic tank is filtered through a sand layer which provides natural aeration and biological oxidation through aerobic and nitrifying organisms.

From the disinfection chamber the reclaimed water is pumped to the dedicated irrigation area.

Aerobic systems

Both types of treatment achieve a level of water quality that permits the discharge of the reclaimed water to surface irrigation within a dedicated landscaped irrigation area.

Before an aerobic system can be installed, an approval must be obtained from the local council, or in some cases the Department of Health.

The approval specifies the plumbing and drainage layout, septic tank, aerobic system and location of the dedicated irrigation area.

The occupier of the premises should have received a comprehensive manual on the care, operation and maintenance of the aerobic system when it was installed.

As a condition of approval, the occupier of the premises served by an aerobic system must maintain the system to ensure that reclaimed water complies with safe water-quality standards.

An aerobic system may create health risks for the occupants if it is not correctly maintained.

WARNING: To prevent injury or drowning, the access covers for the septic tank and aerobic system chambers must be securely fixed to prevent access by children. Access should only be by service personnel. Damaged covers must be replaced and securely fixed in position.



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Operation and maintenance

A correctly operated and maintained aerobic system provides the occupants with a safe means of re-using reclaimed water without risk to health and helps conserve water.

Servicing

Aerobic wastewater treatment units and sand filters must be serviced by the system manufacturer or an accredited service agent at 3 monthly intervals or as recommended by the manufacturer in the service manual.

Maintenance, depending on the type of system, may include checking the blowers, contact media, pipework, valves, diffusers, effluent clarity, sludge return, removal of excess scum, testing the pump and general operation of the system.

A supply of chlorine tablets sufficient to last until the next scheduled service must be installed in the unit.

Septic tank pump-out

The septic tank needs to be pumped out every 4 years or more often according to approval conditions.

Pumping out of the septic tank must be done by a licensed contractor.

Alarm

All aerobic systems must be provided with an alarm system to alert occupants to an electrical or mechanical malfunction.

The alarm must have an audible and visual (indicator light) component with muting for the audible alarm.

The fault indicators should be located inside the premises preferably within the kitchen or laundry or other location.

Odour

Slight odour from the system is normal. However, strong persistent odours indicate the system is not functioning correctly.

Irrigation

Remember that the dedicated surface irrigation system and irrigation area must function every day of the year - rain, hail or shine.

When setting up the irrigation system, the following points should be considered:

- a typical residential dwelling will require 200m² of land for the irrigation area. Larger or commercial systems may require larger areas,
- the irrigation area must comply with setback distances from the building, boundaries, swimming pools etc,
- the irrigation area must be landscaped with suitable salt and nutrient tolerant plants,
- the irrigation area must be designed to discourage or prevent access by people, pets or vehicles,
- the reclaimed water must be evenly distributed over the whole area without spray drift, pooling or run-off. On some sites it may be necessary to install drippers,
- the irrigation system must not be connected to the reticulated mains supply or other drinking water supply,
- all distribution pipework for the irrigation system should be buried at least 150mm below the ground surface,
- the reclaimed water is not to be used for growing food crops,
- roof and surface waters must be diverted away from the irrigation area,

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- the irrigation area must not be located on land subject to flooding or waterlogging,
- the irrigation area should have precautionary signs placed on all sides worded as follows:

**Warning - Reclaimed water,
Not suitable for human
contact/consumption**

The signs should have a white background with red lettering of at least 20mm in height,

- the pump provided in the aerobic system must be of sufficient capacity to ensure an even distribution of reclaimed water to the whole of the irrigation area.

Aerobic system manual and approval conditions

If you did not receive a copy of the operating and service manual and the approval conditions when you moved into the premises, contact the system installer or the manufacturer to obtain this information.

SA Health codes and forms

This fact sheet is only a brief guide to the basic requirements. For more detailed information on the installation, operation and maintenance of aerobic systems refer to the South Australian Health Commission Codes (see our [Onsite Systems](#) webpage):

- Standard for the Construction, Installation and Operation of Septic Tank Systems in South
- Supplement A - Aerobic Sand Filters
- Supplement B - Aerobic Wastewater Systems

To download application forms for approval to install aerobic systems go to our [Onsite Systems](#) webpage.

- Application to Install an Aerobic Wastewater Treatment System
- Application to Install an Aerobic Sand Filter System

Further information

- Contact the Environmental Health Officer at your local council. Go to the [Local Government website](#) to locate the Council responsible for a particular Town or Suburb.
- Contact SA Health's Wastewater Management Unit (details below).

Contact

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