

TOWARDS BETTER ONSITE WASTEWATER MANAGEMENT IN VICTORIA - COMMUNITY EDUCATION SERIES

FACT SHEET 9: SERVICING OF AERATED WASTEWATER TREATMENT SYSTEMS

This fact sheet will assist you if you have an aerated wastewater treatment system on your property to better understand the role of service agents looking after your systems. This fact sheet provides an overview of expectations, servicing requirements, common issues encountered, and legal responsibilities.

9.1 WHAT DO YOU NEED TO DO AS AN OWNER/USER?

In general you should familiarise yourself with the type of Aerated Wastewater Treatment System (AWTS) that you have and get to know how the system works. As an owner/user of an AWTS you should:

- Have it serviced 4 times a year or as required by EPA certificate of approval to maximise the performance of your system. This service needs to be undertaken by a competently trained person or company and they should be contracted to undertake the task. A copy of the maintenance report is to be submitted to the Council after each service.
- Have it de-sludged once every 3-5 years depending on use.
- Ensure it is accessible for servicing and other works. The system should be free of overgrown vegetation, rubbish and any other obstructions. Also slightly raised above ground level and the lids tightly sealed to prevent stormwater inundation.
- Have it repaired quickly if the alarm goes off. The alarm indicates that one of the mechanical devices that operate within the system has failed or malfunctioned.
- Routinely check the irrigation filter (between the irrigation field and the AWTS) and clean it if needed. Please be careful when cleaning the filter because you will be dealing with effluent that contains dangerous pathogens (bad bugs) that can affect your health.
- Routinely check that the irrigation system is working adequately. Some common signs that the irrigation field is struggling or failing include water ponding, the ground being heavily saturated, or significant vegetation die off.

9.2 WHAT SHOULD A SERVICING AGENT DO?

- **Knowledge and skills** – a service agent should be trained in the installation, operation and service requirements of each system they service. The system manufacturers should provide this training;
- **Accreditation** – a service agent must be accredited in writing by the system manufacturer in accordance with the requirements of the relevant Certificate of Approval for each AWTS approved for installation in Victoria that they service;
- **Servicing frequency** – prescribed servicing must occur at the frequency nominated within the Council Certificate of Approval to Use and relevant Certificate of Approval to best maintain system performance;
- **Reporting** – the servicing agent should complete a service report for each system service undertaken. This report must state that the system is functioning correctly or, alternatively, the remedial action that has been recommended. This report should be forwarded to the Council and the property owner. The report should include copies of all laboratory analytical test results and the inspection and maintenance reports for the period.

9.3 COMMON PROBLEMS:

- AWTS are mechanical systems made up of many parts which can break down. There needs to be a functioning electronic alarm fitted to the system to warn of any malfunctions and it must be working correctly;
- If the system includes a chlorination treatment stage then there needs to be a constant supply of chlorine tablets. This is the responsibility of the servicing agents to check during their quarterly service;

- The irrigation system can become damaged (e.g. drippers damaged by kangaroos looking for water to drink), exhibit installation faults, or become blocked by small particles in the wastewater and soil;
- Within the AWTS:
 - The tank can become too full - wastewater levels should not be higher than the outlet;
 - Too much sludge can accumulate in the tank. This can result in untreated wastewater heavy with solids leaving the tank and clogging up pipes and absorption trenches;
 - Too much water introduced into the system. can also result in solids being pushed out of the tank and clogging the system components. This can be because of poor wastewater flow rate calculations or overuse of the system;
 - Excessive amounts of detergents and chemicals going into the system can result in the bacteria being killed off, halting the digestion process;
 - The bacteria that support digestion of wastewater inside the tank can grow too rapidly. This can cause the system components and irrigation network to clog with colonies of bacteria.
 - Power must be supplied to the system at all times. Interrupting power supply can damage aeration processes and can overload the system with wastewater. Without power the irrigation pump will not work.

9.4 SERVICING REQUIREMENTS INCLUDE:

During a servicing visit, a service agent should:

- Undertake a sludge and scum depth test and if there is too much, then they will recommend the tank be de-sludged.
- Check the tank for leaks, odours, lids are not cracked or broken and can be sealed, outlet filter (if fitted), and that all internal pipes, clamps and hosing are in working order.
- Check the mechanical components of the system for function and to determine they are coping with the demands placed on the system. The main mechanical parts are the mechanical aeration device which provides air for the secondary treatment processes and the pump that takes the treated effluent to the disposal field.
- Conduct some on-site testing of the effluent for a range of common water quality indicators. Your service agent uses these tests to better understand how effectively your AWTS is operating. Not all these tests will necessary apply specifically to your system.

These common water quality indicators include:

pH (acidic or basic)	Alkalinity (the measure of calcium carbonate and the buffering ability of the liquid)
Temperature	Dissolved Oxygen (DO)
5 Day Biochemical Oxygen Demand (BOD5)	Turbidity (cloudiness)
Total Nitrogen	Salt Content (TSS/EC)
Free Residual Chlorine	and in some cases sample for Faecal Coliforms (bad bugs)

- Check the disinfection process which will be either chlorine or Ultra Violet (UV) treatment (if part of your system). A chlorinator will need the chlorine tablets replaced. Alternatively the UV treatment system will need to be cleaned if it is not self cleaning.
- Conduct a detailed assessment of the irrigation system to ensure that it is functioning as it was designed to, has been installed correctly, is not damaged or in disrepair, and has sufficient capacity to cater for the volume of wastewater being generated. This assessment includes checking the irrigation filter, root invasion invisible sections, the field rotation device (manual or automatic), and that there is sufficient cover over the irrigation (e.g. bark or topsoil).
- Check the timers, alarms and boards to make sure they are working and where needed repair or replace these systems.
- Sample the effluent from your AWTS annually and have it analysed by a NATA approved laboratory to check that it is meeting the standards set within the Certificate of Approval issued by the Environment Protection Authority (Victoria).

9.5 LEGAL RESPONSIBILITIES:

Failure to service an AWTS in accordance with the requirements set out in the relevant Certificate of Approval issued by the Environment Protection Authority (Victoria), and the Permit to Install and Certificate to Use issued by your local authority maybe an offence under the Environment Protection Act 2017 and Environment Protection Regulations 2021. Penalty Infringement Notices (on-the-spot fines) may apply to those involved or, worse, you could be taken to court. It is also a good idea to ensure you have read and understood any conditions listed on the Permit to Install or Certificate to Use, which may affect the servicing of your system. No-one, not you, a licensed plumbing practitioner or your service agent, can physically alter any part of an AWTS without first getting formal approval from your local council.

9.6 WHO TO CONTACT:

Gannawarra Shire Council

Patchell Plaza 47 Victoria Street, Kerang VIC 3579

PO Box 287, Kerang VIC 3579

(03) 5450 9333

