ALPINE
SHIRE COUNCIL

Wastewater in the Alpine Shire Council

Contents

Glossary

Aerated Wastewater Treatment System (AWTS)	Aerated Wastewater Treatment System (secondary standard) is a mechanical septic tank system designed to digest sewerage through the action of aerobic bacteria. AWTS treat sewage waste through a combination of biological treatment and aeration, resulting in a higher standard of wastewater effluent. The units require power to operate and it should be noted that most systems require quarterly maintenance from an approved maintenance contractor, for the life of the system.
Approval to Use (ATU)	Applicants are required to obtain, from council, a 'Permit to Install' prior to installation and an 'Approval to Use a Septic Tank System' prior to using the system.
Certificate of Compliance	A certificate issued by the installing plumber/drainer guaranteeing the work that has been carried out is in accordance with the plumbing regulations. This must be supplied prior to an approval being issued.
Composting Toilet	Composting toilets are toilet systems which treat human waste by composting and dehydration.
Effluent Disposal Field / Area	The area dedicated to the location of effluent disposal trenched and/or sub-soil irrigation.
Land Capability Assessment (LCA)	A report that looks at several site-specific factors including soil percolation rate. It is designed to determine the capability of the site to make recommendations as to the size, type and location of the effluent disposal fields to ensure its sustainability. It is important that the LCA is carried out by a competent assessor.
Permit to Install (PTI)	Applicants are required to obtain, from council, a 'Permit to Install' prior to installation and an 'Approval to Use a Septic Tank System' prior to using the system. Council's Environmental Health Officer must approve the design of a wastewater system. Council has an obligation not to approve any wastewater system if it believes that the system will pollute the environment or cause a risk to public health.
Sand Filter	A septic tank and sand filter secondary treatment system involves effluent from the standard septic tank passing through a body of sand, which effectively purifies the effluent through a process of aerobic oxidation of suspended bacteria.
Septic Tank	A partitioned holding tank in which sewage is broken down to a liquid and sludge by the action of anaerobic bacteria. The liquid is then disposed of in subsoil trenches.
Setbacks	It is important when designing your system and drawing up plans that your system meets the minimum setback distances, please refer to the current Code of Practice - onsite wastewater management
Subsurface Irrigation	Subsurface irrigation uses a network of polyethylene pipes located just under the ground's surface to apply effluent in the root zone of plants
Special Water Supply Catchment	Water Supply Catchments Areas officially recognise designated catchments for water supply purposes. This process highlights to the community, land managers and planners, the importance of the catchment for water supply purposes.
Worm Farm	A secondary treatment system that relies on the action of worms to reduce sewage to a liquid form that can be disposed of in effluent trenches.
20/30 Standard (Secondary Treatment)	A treatment standard for effluent with biological oxygen demand less than 20mg/L, suspended solids less than 30mg/L. Used for monitoring of water quality for indicators BOD/SS.

Alpine Shire Council

Council's Environmental Health Unit are responsible for ensuring that the installation and alteration of wastewater systems throughout the Shire are in accordance with the current Environment Protection Authority (EPA) Code of Practice - onsite wastewater management and relevant EPA Certificates of Approval. It is important that these systems do not harm the environment or become a risk to public health. This document has been developed to assist property owners, plumbers and developers primarily for domestic purposes. The document does not cover all or recommended any wastewater systems.

Frequently Asked Questions

When do I need a wastewater system?

When you are considering buying a parcel of land, check with North East Water to find out if the property is serviced by sewer or whether sewer extension work is proposed. Persons considering 'pump to sewer' systems will need to approach North East Water to discuss approval and costing for this method of disposal. If connecting to town sewer is not an option, then an onsite wastewater management system is required to be installed. It is the owner's responsibility to apply for, and receive, a permit to install or alter the system before works commence.

Onsite wastewater management systems (commonly known as septic tanks) are used on residential, community and business premises. They treat, then recycle or dispose of:

- Greywater - from showers, baths, hand basins, washing machines
- Blackwater - from toilet waste (water-flush or dry composting systems)
- Sewage - combined greywater and blackwater.

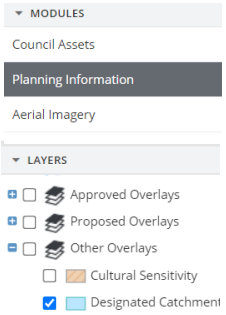
Do I need a Land Capability Assessment (LCA)?

You may be required to obtain a Land Capability Assessment (LCA) to determine the quality of the soil including the percolation rate which dictates how much disposal trench or irrigation area will be required. Domestic Wastewater Management Plan 2019- Table 5-3: 'Land Capability Assessment requirements and referrals' indicates when an LCA is required.

Domestic wastewater management plan 2019- Table 5-3: Land Capability Assessment requirements and referrals. Please refer to the Domestic Wastewater Management Plan 2019 for further information.

LOCALITY	TYPEOF APPLICATION	REQUIREMENT
Special Water Supply Catchment Area.	Subdivision	LCA required in line with the Code of Practice and Victorian Land Capability Assessment Framework. Must include water and nutrient balance. Referral to relevant authorities including GMW and NEW.
	New buildings with onsite wastewater disposal	
	Alteration increasing flow rate	
	Alteration	Requirements determined on individual application at EHO discretion
Non Special Water Supply Catchment Area.	Subdivision	LCA required in line with the Code of Practice and Victorian Land Capability Assessment Framework.
	New buildings with onsite wastewater disposal	
	Alteration increasing flow rate	Requirements determined on individual application at EHO discretion (likely LCA)
	Alteration	Requirements determined on individual application at EHO discretion.

Is my property in a Special Water Supply Catchment Area?



1. Follow the link to access IntraMaps Alpine http://maps.alpineshire.vic.gov.au/Public80/default.htm?project=ASC_Public
2. On the left side of the screen under **modules** section select the **planning information**
3. Under **layers** section expand the **Other Overlays** tab
4. Under **Other Overlays** click **Designated Catchment**
5. Search the property address under Global Search at the bottom of the page

What renovations require an upgraded wastewater system?

Renovations increasing the daily flow rate require an assessment and most likely an upgraded system. As the daily flow rate increases the system needs to be assessed to ensure that it can manage the proposed flow and is operating at current standards.

Why do bedrooms increase daily flow?

EPA Code of Practice 891.4 - onsite wastewater management, section 3.4.1, describes the calculations for minimum daily domestic flow rates. Using the formula 'number of bedrooms plus one' it takes into consideration the potential future occupancy, not just the (possibly smaller) number of people intending to live in the house. It also notes that assessors should include any additional room(s) shown on the house plan such as a study, library or sunroom that could be considered as a bedroom for the purposes of the calculations.

Why does my current system require upgrading?

The calculation for wastewater can be confusing when upgrading current systems. Often the septic tank/ AWTS is large enough, the limiting factor is the disposal area (trenches/ subsurface irrigation). The current disposal area may be insufficient for the increased daily flow rates, therefore the process for altering a wastewater system is required and as a result the system must be brought up to current standards.

Why do I need a secondary treated wastewater system?

Most common reasons for secondary treated systems are:

- Unable to meet setback distances required by the EPA Code of Practice 891.4 - onsite wastewater management
- High risk locations (high rainfall, small lot size)
- Space limitations
- Sloping blocks (>20 degrees)
- Soil type (if water drains to quickly the wastewater can enter the water table, if poorly the wastewater will pool on the surface)

Where do I find more information?

Wastewater information specific to the Alpine Shire can be found in the Domestic Wastewater Management Plan 2019 on the Alpine Shire website.

The 891.4: Code of practice – onsite wastewater management provides standards and guidance to ensure the management of onsite wastewater (up to 5000 L/day) protects public health and

the environment, and uses our resources efficiently. Additionally, the Australian/New Zealand Standards 1547:2012 – On-site domestic wastewater management provides valuable information.

How do I manage my wastewater system?

How to manage your own onsite wastewater management systems to increase its life and prevent harm to the environment can be found on the EPA Victoria website.

Types of Wastewater Systems

There are several different wastewater systems available. To choose a system that is right for you and your property you need to ensure that the system is approved by the EPA and will receive council approval. It is also suggested that you obtain the manufacturer's brochures to look at installation costs, energy usage, quality of water, maintenance requirements and service charges. A list of approved wastewater treatment systems and the appropriate conditions can be found on the EPA website at www.epa.vic.gov.au

Primary Treated System - Septic Tanks

The most basic method of waste decomposition which requires minimal maintenance and has no mechanical parts other than an effluent pump, should this be necessary. Septic Tanks are to be Australian Standards accredited and need to be desludged every 3 to 5 years to ensure efficient operation.

Secondary Treated Systems

Secondary Treated Wastewater Systems are designed to produce an effluent to a secondary standard (classed as 20/30 standard). Commonly used secondary treatments include but not limited to Aerated Wastewater Treatment System (AWTS), septic tank and sand filter system and worm farms. Council does not recommend any system and will only approve wastewater systems that have been approved by the State Environment Protection Authority (EPA), have a Certificate of Approval (CA) Number and have daily flow rates not exceeding 5000 litres per day.

Dry/No Flush (Composting) Toilets

Composting toilets are toilet systems which treat human waste by composting and dehydration. They come in a variety of different shapes and designs to enhance the natural composting process. They use little or no water and are not connected to sewage systems. A preferred option where all land capability criteria is exhausted and may be installed where there are no other options. Decomposed solids must be removed and properly disposed of on a regular basis. An additional wastewater disposal system is required to treat kitchen, bathroom and laundry wastes.

Commercial Grease Interceptor Traps

Any commercial food business/operation established in a non-sewered area will need to be provided with a grease interceptor trap prior to the Septic Tank System in addition to a flow meter. Businesses in the sewered areas are required to contact North East Water regarding grease traps.

Effluent Disposal Area

Standard Subsoil Absorption Trenches

Commonly used to dispose effluent, which has only been subjected to primary treatment in a septic tank. The effluent is mainly absorbed into the soil and partly evaporated by the sun, wind and plants. It is important that these trenches follow the contour of the land and meet the setback distances required by the EPA. Trenches require minimal maintenance other than maintaining top dressing, keeping vegetation healthy, etc. Dependant on the topography of the land, a pump may be required to dispose of the waste to the trenches. Blocks >20 degrees are considered unsuitable for the installation of effluent disposal trenches.

Standard Absorption - Transpiration Trenches/Beds

Similar method of disposal to effluent disposal trenches, however, these may be used where the soil has low percolation rates.

Subsurface Irrigation (Secondary Treatment)

The default land application for secondary treated sewage or greywater effluent to land is pressure-compensating subsurface irrigation installed along the contour, which evenly distributes effluent throughout the irrigation area. Subsurface irrigation uses a network of polyethylene pipes located just under the ground's surface to apply effluent in the root zone of plants, preventing airborne drift and minimising runoff.

The Approval Process

Wastewater Application Checklist

Your system can only be used once you have completed all points of the checklist

- ☐ Planning permit (where required)
- ☐ Land Capability Assessment (where required)
- ☐ Application for a Permit to install (health@alpineshire.vic.gov.au)
    - ☐ Application for a Permit to Install or Alter a Septic Tank System form submitted (available from Alpine Shires website)
    - ☐ Detailed floor plan
    - ☐ Detailed site plan with septic system marked - which includes all planned developments, driveways, outbuildings/sheds, pathways/paving, water tanks, swimming pools etc (dimensions and roads marked)
    - ☐ Application fee paid
- ☐ *Permit to Install* issued, a building permit cannot be granted by the Building Surveyor without an unless a Permit to Install has been issued
- ☐ System inspection by EHO during installation
- ☐ After the system is installed and inspected by Council the installing plumber supplies council with a Plumber's Certificate of Compliance and a final as laid plan of the system (distances and location of building, tank and disposal area).
- ☐ *Approval to Use* issued, a certificate of Occupancy cannot be granted by the Building Surveyor without an Approval to Use.
- ☐ Understand how to manage your own wastewater system