

## FACTSHEET 10: COMPOSTING TOILETS

If you live in an unsewered area, you need to choose an appropriate method for the treatment and disposal of household wastewater to protect public health and preserve the environment. Waterless or wet composting toilets are alternatives that can achieve sustainable on-site wastewater management. For specific information go to <http://www.epa.vic.gov.au/your-environment/water/onsite-wastewater>

There are two kinds of composting toilet systems – the waterless system, which requires a separate greywater tank, and the wet composting system, where all wastes go in together.

### What are waterless composting toilets?

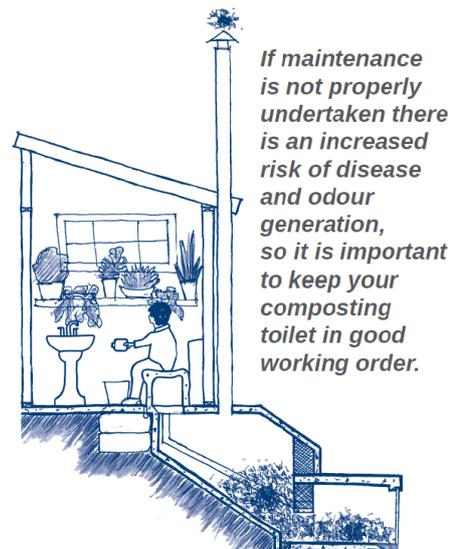
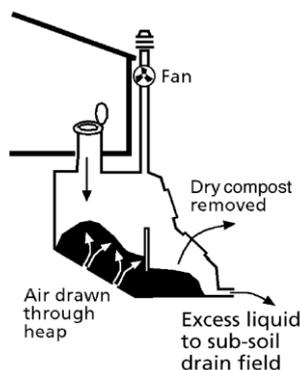
Waterless composting toilets (also known as humus closets) are systems that rely on the principles of composting by microorganisms to decompose human waste, paper, and other materials into humus (organic material that forms in soil when plant and animal matter decay).

Waterless composting toilets can be utilised on difficult sites as they do not require water.

This can reduce household water usage by up to 35%. They also remove high levels of nutrients from wastewater, which decreases the land disposal area required.

Waterless composting toilets do not treat greywater from other sources such as showers, sinks, and washing machines, so an alternative split system will be required for this.

A split-system can incorporate a waterless composting toilet to deal with human excreta and collection and treatment of all other greywater using a reed bed or septic tank or sand filter.



Dry composting toilets are good for houses on tank water, or on a restricted water supply. They use very little energy and are the most water efficient type of 'septic system'.

### PROS

- saves water – no toilet flush
- reduces volume of solids
- reuses resource use
- no sludge removal necessary
- source of humus for non-food plants
- can cope with short term high use
- cheap to run

### CONS

- a separate greywater system is required
- can be smelly
- require additional carbon sources (old sawdust, leaf litter, food scraps)
- compost must be removed (once a year) and buried below ground

### How do waterless composting toilets work?

- Waterless composting toilets may be installed inside or outside.
- Excreta (both faeces and urine) is collected in a sealed chamber beneath the toilet pedestal.
- Extra organic matter such as wood shavings, paper or vegetable scraps are added to create an ideal composting environment.
- Micro-organisms decompose the material, converting around three quarters of it to carbon dioxide and water vapour, which is removed by air drawn through the heap by an exhaust pipe.
- Any remaining solid material slowly falls down a sloping floor as more material is added to the pile.
- It then moves under a dividing baffle and into the humus chamber.
- The composting matter should remain in the chamber for at least 12 months and can then be used on your garden or buried.
- Excess liquids are drained to a disposal area or to the greywater treatment system.

### How do I maintain waterless composting toilets?

- Maintenance of the toilet is the responsibility of the owner/occupier.
- It is recommended that systems be serviced annually by a suitably experienced contractor.
- Ensure material is spread evenly over the compost heap.
- Correct operation of the system requires the addition of carbon-rich materials such as vegetable scraps or lawn clippings into the composting system. This assists the decomposition process and reduces moisture content.

- Ensure the toilet seat/lid is kept shut when not in use to stop insects entering the composting chamber and to reduce odours.
- Only clean the pedestal by hand, using appropriate personal protective equipment, with minimal use of water and no disinfectants (vinegar is a good substitute).
- The minimum composting period should be no less than 12 months.
- All compost from your system must be buried within the boundaries of your premises at minimum 300mm depth.

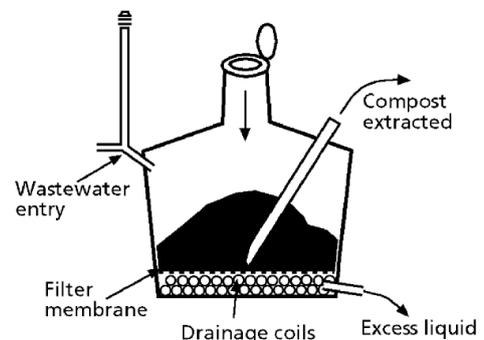
### What are wet composting toilets?

Wet composting toilets include the increasingly popular worm farm treatment systems which treat both black and grey water.

### How do wet composting toilets work?

These systems are primary wastewater treatment systems relying on biological activity to reduce pathogen load via worms, insects, and microbes.

These systems like waterless composting toilets, requires wastewater outputs to be treated via land application to soil absorption trenches. The wastewater can be further treated before disposal via and sand filters and reed bed systems.



Effluent is directed to sub-soil drains or to reed beds / sand filter for use for garden watering, etc.

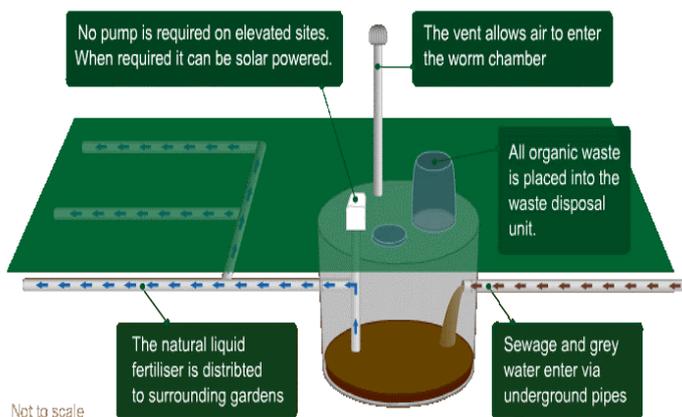
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### PROS

- no need for separate greywater tank
- can accept kitchen and food wastes
- option for flush or no flush toilets

### CONS

- compost must be removed and buried below ground
- can be smelly if used incorrectly



### How do I maintain wet composting toilets?

- Maintenance of the toilet is the responsibility of the owner/occupier.
- It is recommended that systems be serviced annually by a suitably experienced contractor.
- Ensure material is spread evenly over the compost heap.
- Correct operation of the system requires the addition of carbon-rich materials such as vegetable scraps or lawn clippings into the composting system.



- Ensure the toilet seat/lid is kept shut when not in use to stop insects entering the composting chamber and to reduce odours.
- If maintenance is not properly undertaken there is an increased risk of disease and odour generation, so it is important to keep your composting toilet in good working order.

For more information call (03) 55680555 or go to [www.moyne.vic.gov.au](http://www.moyne.vic.gov.au)

Information Guide adapted from existing Tweed Shire Council, Dept. of Local Government NSW and A & A Worm Farm resources. Moyne Shire Council acknowledges these sources.