Greywater recycling: appropriate uses

The purpose of this guidance note is to describe the uses of greywater that the Department of Human Services considers appropriate to minimise health risks. The content of this guidance note should be considered in conjunction with the relevant guidance from the Environment Protection Authority (EPA).

What is greywater?

Greywater includes all household wastewater except toilet waste. It can be a valuable water resource, and an increasing number of householders are recycling greywater for a variety of purposes. However, care must be taken with this practice as it can carry health and environmental risks.

Recycling greywater

Greywater can be used untreated, or it can be treated to varying degrees to reduce nutrients and disease-causing microorganisms. The appropriate uses of greywater depend on both the source of greywater and the level of treatment, and are listed in the table overleaf. The potential health risks associated with greywater recycling when it has been sourced from a multi-dwelling or commercial premises are considered potentially greater than those associated with greywater recycling within single domestic premises.

Greywater recycling must always occur in a safe and controlled manner. Local council officers may investigate recycling activities that place public health at risk under the nuisance provisions of the *Health Act 1958*, and recycling that causes environmental pollution may be investigated by the EPA under the *Environment Protection Act 1970*.

Untreated greywater

Recycling untreated greywater is not subject to specific legislative control in Victoria, and it can be temporarily diverted from the house for garden watering (for example during dry summer periods). However, the guidance provided in the EPA brochure *Greywater Reuse* (publication 884.1) should be followed to minimise the health and environmental risks associated with this practice.

Untreated greywater must not be stored for periods longer than 24 hours as it will become septic, and it is not recommended that untreated greywater is used for any purpose within the home.

Treated greywater

The EPA must approve greywater treatment systems that are designed to treat **up to** 5000 litres per day, before a local council permit can be issued for their installation. The EPA approval specifies monitoring and maintenance requirements, and the approved forms of dispersal of treated water to the environment. Different levels of treatment can be achieved with these systems, depending on the technology. More information on greywater treatment systems can be obtained from the EPA.

Greywater treatment systems that are designed to treat **more than** 5000 litres per day for domestic and commercial recycling must comply with the requirements in the EPA's *Guidelines for Environmental Management: Dual Pipe Water Recycling Schemes* (Publication 1015).

Appropriate uses of greywater according to level of treatment

Treatment	Appropriate use, if greywater is sourced from and reused within a single domestic premises	Appropriate use, if greywater is sourced from a multi-dwelling or commercial premises[1]
Temporary Diversion Systems:		
Untreated (with or without screening or coarse filtration)	Garden irrigation: • manual surface • sub-surface	Garden irrigation: • sub-surface
Permanent Treatment Systems[2]:		
Secondary treatment (20/30 standard) (≤5000L/day)	Garden irrigation: • sub-surface	Garden irrigation: • sub-surface
Secondary treatment and disinfection (20/30/10 standard) (≤5000L/day)	Garden irrigation: • surface • sub-surface	Garden irrigation: • surface (drip only) • sub-surface
Advanced secondary treatment and disinfection (10/10/10 standard) (≤5000L/day)	Garden irrigation: • surface • sub-surface In-house use: • toilet flushing • washing machine	Garden irrigation: • surface (drip only) • sub-surface
Treatment and disinfection (Class A standard, as per EPA publication 1015) (>5000L/day)	*Not applicable*	Garden irrigation (any method) In-house use: • toilet/urinal flushing • washing machine

1. Sites with sensitive sub-populations such as hospitals, aged care facilities, childcare centres and schools should only use sub-surface irrigation and not irrigate children's play areas.
2. Treatment standards and uses are taken from the *EPA Guidelines for Environmental Management – Onsite Wastewater Management*.

Definitions:

Manual surface irrigation includes bucketing to lawns and gardens or the use of a hose fitted to a temporary diversion device.

Surface irrigation describes the application of water at ground level. Unless otherwise indicated it includes the use of low-rise sprinklers, microsprayers, hand-held hoses and drip systems.

Sub-surface irrigation describes the application of water at a depth of 100mm to 300mm below ground level.

20/30 standard describes a water quality of 20 mg/L BOD and 30mg/L suspended solids

20/30/10 standard describes a water quality of 20 mg/L BOD, 30mg/L suspended solids and 10 *E.coli*/100mL

10/10/10 standard describes a water quality of 10 mg/L BOD, 10mg/L suspended solids and 10 *E.coli*/100mL

Who to contact for more information

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Published by the Environmental Health Unit, October 2003
Updated October 2008