
Greywater - recycling water at home

Summary

- Waste water from non-toilet plumbing systems such as handbasins, washing machines, showers and baths is known as 'greywater'.
 - Greywater needs to be used carefully. If it's not used properly, it can make the householders ill and kill the plants you are trying to care for.
 - Consult with a licensed plumber before you attempt to alter any plumbing in your home.
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Greywater is wastewater from non-toilet plumbing systems such as hand basins, washing machines, showers and baths. When handled properly, greywater can be safely reused for the garden.

Never re-use water from toilets, washing nappies or kitchen water. Do not use greywater on vegetables, fruit, herbs or anything you plan to eat.

Our use of water

The average Victorian household uses many litres of water every day, including in the:

- bathroom – 50 per cent
- laundry – 22 per cent
- garden – 19 per cent
- kitchen – 8 per cent.

Showers use the most water, followed by washing machines.

The majority of Victorians still use clean drinking water for most household uses. Some of this precious resource could be conserved by recycling water.

Recycling water

Victoria's recently-past water shortage has made us all more aware of the importance of recycling water. There is increasing interest in using greywater for the garden. However, there are a number of health and environmental risks involved if you don't use greywater safely.

Regulations about greywater use are different in different parts of Australia. In Victoria, greywater can be used either treated or untreated, although some conditions apply to each type of use.

This fact sheet offers general suggestions on recycling water at home, but it is important to consult with a licensed plumber before you alter any of your household plumbing.

Greywater – treated

Treated greywater generally carries lower health risks. Depending on the type of treatment, it can be used for a range of purposes, including garden watering, toilet flushing and in your laundry. However, greywater treatment systems can be expensive to set up and operate.

Greywater treatment systems must have a certificate of approval, which sets out the conditions for their use, from the Environment Protection Authority (EPA).

Greywater – untreated

Untreated greywater can be used in dry periods for gardens in Victoria. You can do this either by directly diverting it from your household plumbing fixtures, using a hose or diversion device, or by carrying it in a bucket. Council approval is not required for this in Victoria.

If it is not used properly, greywater can make the householders ill and kill off the plants you are trying to care for. A few simple precautions will help to minimise any risks to you, your family and your garden.

Never use untreated ‘blackwater’ or greywater from the kitchen

‘Blackwater’ is water that has come in contact with toilet wastes. Blackwater has to be treated and disinfected before it can be reused.

General precautions include:

- Never use water that has come in contact with the toilet or any other toileting fixture such as a bidet or urinal.
- Don’t use water that has been used to wash soiled nappies – this is also considered blackwater.
- Don’t reuse the water when you wash domestic pets, because of the high level of bacterial contamination.
- Don’t use greywater from the kitchen sink or dishwasher, as this can be contaminated with grease, bacteria and chemicals.

Common contaminants in greywater

Some of the common contaminants in greywater include:

- Salts
- Food materials
- Household detergents, soaps and chemicals
- Bacteria and other disease-causing microbes.

Health risk comparison

The health risks to you and your family depend on how you use untreated greywater. Examples include:

- Laundry rinse water is low risk, while greywater from the kitchen is high risk.
- Sub-surface irrigation pipes are low risk, while hosing the garden with untreated greywater is high risk.
- Using greywater on ornamental plants is low risk, while using it on vegetable gardens is high risk.

Untreated greywater irrigation systems

The various issues to consider before installing an irrigation system for untreated greywater include:

- **Expertise may be needed** – consult with a licensed plumber before tapping into your plumbing system. All household plumbing work must be undertaken by a licensed plumber and comply with the Australian Standard AS 3500.
- **Use ‘low risk’ greywater** – your irrigation system should divert greywater from low-risk sources, such as the laundry rinse cycle, bath and shower.
- **Keep it in your yard** – your greywater must not leave the boundaries of your property. It must not be allowed to discharge into any (piped or surface) drainage system.
- **Keep it out of the stormwater** – your greywater must not leak into the stormwater system. Make sure your

pipes don't discharge near any underground agricultural pipes.

- **Avoid overwatering** – check how moist your soil is and spread the water around – don't just water in the same place.
- **Check for blockages** – the contaminants in greywater, like grease and slime, can easily block pipes. A filter may help to avoid this problem.
- **Store only for a short time** – don't store untreated greywater for any longer than 24 hours, as microbes will thrive. Your surge tank shouldn't exceed 80 litres. Make sure you have an overflow drain connected to your surge tank that directs excess greywater straight to the sewer. You may want to get advice from a plumber on installing a settling tank to capture grease.

Practical suggestions for safe garden use

Suggestions include:

- Use a coarse filter to reduce the amounts of solids in your greywater. Otherwise, your plants will suffer from clogged soil.
- Ingredients in cleaners and detergents that can harm or kill plants include total salts, sodium, chloride and boron. Check product labels carefully.
- Evidence suggests that microbes from greywater have higher survival rates on the topsoil. All irrigation should be located sub-soil. Never hose, spray or mist untreated greywater.
- You may need to reduce the amount of fertiliser you use (note that native plants don't like nutrients – plant selection could be critical for nutrients and soil moisture levels). Consult with your local nursery for further information.
- Regularly water your garden with fresh water to help prevent the build-up of salts in your soil.

Reduce health risks

Suggestions include:

- Use lower risk sources of greywater, such as water from the shower, bath and laundry rinse cycle.
- Don't use greywater on vegetable gardens.
- Don't use greywater if any member of your family is suffering from gastroenteritis.
- Don't irrigate your garden with greywater in wet weather or if the soil is already sodden.
- Don't allow greywater to form pools or ponds in your garden. The microbes will thrive, creating an offensive stink and a health hazard.
- Don't allow your pets to drink greywater.
- Take all steps to reduce public access to areas irrigated with greywater.
- Keep children away from garden areas irrigated with greywater.
- Make sure your swimming pool and any other water features, like ponds and birdbaths, are safe from greywater runoff.
- Encourage all the family to wash their hands before eating.

Improving the quality of your greywater

You can improve the quality of your greywater by monitoring how your water is used in the first place. Suggestions include:

- Choose phosphate-free or low-phosphate household cleaners and detergents.
- Install a lint filter in your washing machine.

Where to get help

- Licensed plumber
- Your local council

- Environment Protection Authority Tel. (03) 9695 2722
- Department of Health Victoria Tel. 1300 761 874

Things to remember

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- Consult with a licensed plumber before you attempt to alter any plumbing in your home.

This page has been produced in consultation with and approved by:

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