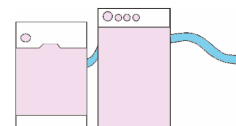




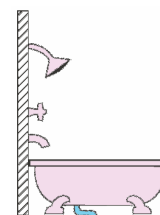
Greywater Reuse & Recycling

What is greywater?

Greywater is waste water from laundries, kitchens and bathrooms excluding waste water from toilets, bidets or urinals. Kitchen waste water must not be reused unless treated.



Greywater will vary from household to household but generally contains micro-organisms, chemical contaminants, (in particular nutrients and salts), and physical contaminants (such as dirt, lint and sand).



If left standing for more than 24 hours, these contaminants contribute to a discolouration of the water, turning it cloudy and grey.

Why reuse or recycle grey water?

At present, water fit for consumption is often used for everything around the home, with less than 5% used for drinking and cooking.

Using greywater helps us to :

- conserve drinking water resources;
- reduce stress on our sewerage system and the impacts of wastewater discharged into our oceans and rivers;
- reduce our water bills; and
- irrigate gardens during periods of drought.

Approximately 61 per cent of the total waste water produced by an average household can be used as greywater. Greywater is a fantastic resource for using in the garden, and if treated, can be plumbed directly for flushing the toilet, and even washing clothes.

What do I need to consider?

When considering the use of greywater is it important to understand your water use and needs, to calculate how much greywater you can potentially produce and use.



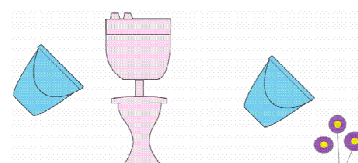
If not managed properly, a greywater system can cause health and environmental problems. In order to minimise the risks to health, soils and water the following tips should be followed:

- Do not store untreated greywater for more than 24 hours;
- Do not reuse water from nappies or heavily soiled laundry;
- Do not reuse untreated greywater to top up rainwater, ponds or swimming pools;
- Do not reuse untreated greywater on food crops, footpaths, driveways or cars;
- Do not let greywater go beyond the boundaries of your property;
- Untreated greywater should be dispersed via sub surface irrigation (at least 10cm below soil or mulch);
- Untreated greywater should be kept away from children and pets;
- Ensure the diversion device is not left switched to diversion all the time, especially after heavy irrigation periods or rainfall as this may lead to run off;
- Spread your irrigation over a suitable area;
- Allow a strip of land between you irrigation system and the edge of you property;
- Minimise the use of chemicals in greywater - seek natural, low sodium alternatives;
- Replenish soil health with organic compost and fertilisers;
- Monitor plant and soil response to greywater irrigation;
- Ensure regular maintenance of systems is undertaken including cleaning of filters and irrigation systems; and
- Ensure all pipes and fittings are marked (lilac colour) to identify greywater in use.

How can I reuse greywater?

There are 3 basic methods for the reuse of greywater:

- Manual Bucketing (untreated)
- Direct Diversion (untreated)
- Treatment (treated)





What approvals do I need?

Method	Systems Available	Approvals Required
Manual	Bucketing in garden or toilet	None
Direct Diversion	Gravity or Pumped Diversion Subsurface irrigation only (10cm under soil or mulch)	No Council approval required if device is Watermark licensed and installed by a licensed plumber
Treatment	Chemical, Biological and Physical Treatment for use in garden, toilet and laundry	Council approval is required System must be NSW Health accredited

The need for approvals will depend on the type of system installed.

Greywater diversion at residential premises may be carried out without the prior approval of the Council if the requirements of the NSW Code of Practice: Plumbing and Drainage 3rd Edition 2006 for the reuse of greywater by a greywater diversion device are met.

What will it cost?

The cost will depend on the system chosen. Manual bucketing is no cost. Direct diversion can be low cost but is influenced by the system, it's components and complexity (~\$1000-\$4000). Treatment systems require a considerable upfront expense and ongoing maintenance (~\$10000-\$15000 plus the cost of annual maintenance and possibly running a UV disinfection lamp).

How can I choose the system that is best for my household?

The following variables will influence your choice of system:

- Type of property;
- Cost;
- Amount of greywater produced;
- Amount of greywater potentially used;
- Soil Types;
- Slope;
- Potential listing of environmentally sensitive area;
- Accessibility of required pipes;
- Amount of space for system;
- Amount of space for irrigation; and
- Location of system/bathroom/laundry.



NSW Guidelines for Greywater Reuse in Sewered, Single Household Residential Premises were released in March 2007 and provide comprehensive guidelines and advice for the reuse of greywater for sewered, single household premises.

The reuse of greywater is not allowed in multi unit dwellings. For more information see you Local Council for advice.

References & Further Resources

The Watershed Sustainability resource Centre, 218 King Street Newtown, 9519 6366

Water for Life, www.waterforlife.nsw.gov.au

Sydney Water, www.sydneywater.com.au or 132092

NSW Health, www.health.nsw.gov.au

Alternative Technology Association, www.ata.org.au

Enviroplumber, www.envioplumber.com.au : Find a 'green' plumber

Lanfax Laboratories, www.lanfaxlabs.com.au : Find a low sodium laundry detergent

YourHome Guide at www.yourhome.gov.au

Your Local Council for information on planning approvals.