



Greywater Reuse

What is Greywater?

Greywater represents a valuable renewable resource that can allow significant household water savings and reduces demand for potable water. Reusing greywater also reduces discharge to the sewerage system, which can lead to community cost savings through reduced pressure on sewerage treatment systems and infrastructure. Greywater consists of wastewater from showers, baths, spas, hand basins, washing machines, laundry troughs, dishwashers and kitchen sinks.

Toilet wastewater, termed “blackwater” must be chemically treated before reuse. NT approved Treatment systems, termed “Alternative Septic Tank Systems” that treat greywater and blackwater are available. For more information visit the Department of Health and Families website www.nt.gov.au/health

Greywater diversion devices do not treat wastewater, but divert the water directly to the desired enduses rather than to the sewer. This is achieved through gravity or the use of a pump. Gravity fed systems have a simple valve or tap fixed to the waste outlet pipe of a plumbing fixture that can be manually switched on or off by the householder. Those systems that operate a pump incorporate a surge tank that collects greywater before distribution by the pump. Untreated greywater must not be stored.

Health and Greywater

There are health risks associated with greywater reuse due to the high levels of disease causing micro-organisms and pollutants it may contain. To manage health risks, the NT Department of Health and Community Services approve greywater and other waste water treatment systems on a case by case basis before allowing marketing, sale or installation in the Northern Territory. Only approved devices may be installed and used in the Northern Territory. Use of kitchen water is excluded from all greywater diversion devices as contaminants may

clog equipment and attract vermin. To prevent greywater from coming into contact with people or animals, only subsurface irrigation is permitted and irrigation to edible food crops is discouraged.

How Much Greywater Can you Expect to Reuse?

How much greywater you can expect to reuse depends on the amount of water that can potentially be reused in your home and the amount of land you have available to soak up the greywater. You will firstly need to calculate how many litres of greywater are generated in the household each week.

Following is an example of a household that wishes to reuse water from the shower and washing machine;

Average Daily Water Consumption From Shower and Washing Machine

4 people x 1 shower/day x 5 minute shower x 9L/min showerhead = 180 litres

1 wash/day x 80L per wash = 80 litres

Total potential greywater reuse = 260 litres per day (1820 litres per week)

To determine how much greywater your household has available for reuse you can conduct a household water audit. A variety of home water audit forms can be found on the internet. Alternatively, contact DKA COOLmob to book a trained auditor who will help you to investigate your household water use and provide tips for saving water in the home www.dkacoolmob.org

What Type of System Do You Need?

NT approved greywater diversion devices range in size, design, function and price. Choose an appropriate greywater system based on how much greywater your household produces and how much you wish to reuse, the area of land you have available (lawn and garden) and how much you wish to spend. Note that young plants and plants with shallow root systems may require a separate surface irrigation system. An updated register of approved greywater diversion devices can be found

on the Department of Health and Families Web site www.nt.gov.au/health

Greywater Diversion Device Installation and Maintenance

Installing greywater diversion devices can involve a degree of disruption in terms of earth moving in the garden or accessing pipes. Some household plumbing arrangements are unsuitable for connection to greywater systems, such as where wastewater exits the home in a single pipe, greywater mixing with blackwater.

There is some uncertainty as to the long term effect of diverting greywater on soils and plants. Choose detergents with a neutral pH (pH 6), low Sodium (less than 20mg Sodium per wash) and low Phosphorus. High pH and Sodium (Na) can affect plants and soil structure while Phosphorus (P) can contaminate groundwater.

All greywater diversion devices require a degree of maintenance, such as flushing pipes and cleaning tanks or filters. Manufacturers' guidelines should be adhered to during installation and operation.

Relevant Regulations on Greywater Diversion Device Installation

Installation of greywater diversion devices must comply with NT Department of Health and Families (DHF) guidelines including approval of greywater system installation by DHF Environment Health Branch.



Nylex Greywater Diverta redirects water from the washing machine or shower and diverts to subsurface irrigation.

Visit the DHF website www.nt.gov.au/health for more information on the greywater approvals process.

All greywater systems must be installed by an NT licensed, self certifying plumber in accordance with the requirements of the *Building Act*, administered by the Department of Lands and Planning, Building Advisory Services.

Greywater diversion devices must exclude kitchen water and an overflow connection to the sewer must be maintained at all times. Greywater systems must be labelled as per the Australian Standard AS2700. See a licensed plumber for advice. The greywater systems pictured here are for single domestic dwellings only and only direct reuse of greywater is permitted (untreated greywater cannot be stored).



CSAT Marshall Greywater Reuse System collects water in a tank, pumps it through a series of pipelines and disperses water through Atlantis cells.



GFlow Waste Water Reuse System diverts water from the washing machine or air-conditioner into a sub-surface dripper line.

NT Waterwise Central Australia Rebate Scheme

The Northern Territory Government is offering a Plumbing Rebate of up to \$500 (incl. GST) to households in Alice Springs and Tennant Creek for eligible services associated with installing an NT Government approved greywater diversion device.

For more information refer to the Waterwise website www.nt.gov.au/waterwise.

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