

GREYWATER SAVER



GREYWATER REUSE SYSTEM

Keep these instructions for future reference

GREYWATER

Greywater is the wastewater generated in the bathroom, laundry and kitchen that has not originated from the toilet. Whilst greywater does not contain toilet waste it nevertheless contains the same types of pathogenic microorganisms found in toilet waste, though in much lower numbers, from washing underwear and the body etc. Therefore health authorities throughout the world agree that caution must be exercised for safe garden irrigation with greywater. The best method of irrigating greywater, without using expensive treatment and disinfection methods, is therefore simply to irrigate below ground so human contact will not occur whilst providing optimum plant access to the water and minimising water loss by evaporation.

Greywater also contains oils, fats, detergents, soaps, nutrients, salts and particles of food, hair and lint etc. that impact on the long term performance of a greywater irrigation system. Whilst greywater from the kitchen contributes little to the total greywater volume it accounts for the bulk of fats, oils and food particles, which necessitate the use of large and expensive treatment tanks to remove these components so the irrigation system does not quickly clog and fail. In contrast, greywater from the bathroom and laundry accounts for the majority of greywater but generally contributes very little to the organic waste load that causes clogging and therefore generally requires only minimal treatment to remove particles such as hair and lint that might clog an irrigation system.

Greywater contains contaminants, which vary in their effect from beneficial to detrimental for irrigation of plants. These contaminants include nitrogen, phosphorous and potassium, which in most cases are beneficial to plants, except for a number of native plants that have a low phosphorous tolerance. Greywater also generally has slightly alkaline pH making it preferable not to use greywater to irrigate acid loving plants, unless the pH is managed by conditioning the soil around your irrigation trenches using soil conditioners such as peat or compost. Information about suitable plants and soil conditioners should be discussed with your local garden centre. Some laundry detergents and bleach can result in greywater with high levels of sodium salts, which can be detrimental to healthy plant growth. Therefore, it is preferable to use products with low sodium levels, as found in most, but not all, liquid laundry detergents. Further advice about the sodium content in your laundry detergent can be obtained by contacting the product manufacturer. The sodium content of most Australian laundry detergents can also be found on the Lanfax Laboratory Website at <http://www.lanfaxlabs.com.au/papers/Na-P-graph.PDF>. Use of detergents, bleaches, or other household cleaners and disinfectants should nevertheless still be used sparingly to reduce impact on plants, and because overuse can also cause excessive foaming in the greywater that will hasten filter blockage and because excessive use of these materials is simply wasteful.

Some strong household products such as caustic soda (drain cleaner) and other strong surface and floor cleaning agents can be quite detrimental to plant growth and when such products are being used your greywater should be diverted to the primary wastewater system (sewer or septic) to avoid plant damage by diverting the greywater system to sewer or by disposing the garden unfriendly water via a fixture that is not connected to the greywater system (eg. toilet). Simply think about what you are sending through the greywater system and ultimately the garden and remember to use household-cleaning products sparingly.

More detailed information about greywater and the garden and garden friendly products can be found in a number of worldwide publications found in libraries or by searching the web.

OPERATION AND MAINTENANCE

The Greywater Saver recycles greywater to irrigation trenches beneath the garden. The system has a push-pull valve for selecting whether your greywater is diverted for garden irrigation or to the sewer. Garden irrigation is normally not required during the winter or wet season and over watering during these periods can be detrimental to the plants.

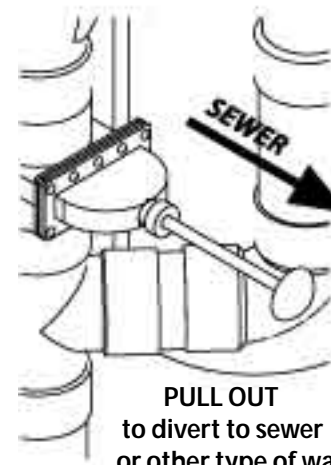
The system is fitted with a mesh basket filter to stop larger particles such as lint and hair from entering the irrigation system. Regular cleaning of the filter is required to ensure greywater can flow through the system and irrigate your garden. Failure to clean the filter will result in greywater being wasted to sewer via the failsafe overflow. The required cleaning frequency will vary from less than weekly to greater than monthly depending on the particular development's characteristics (eg. person numbers, whether the laundry and/or bathroom are connected and the type and amount of laundering being done). New users are therefore recommended to initially inspect the unit's filter twice weekly, whilst greywater is discharging, to establish the typical period taken for the filter to become fully clogged before greywater overflows to sewer so they may establish a suitable cleaning frequency to achieve maximum greywater reuse.

Pre-wash rinsing of waste materials from nappies or cleaning/scaling fish in the laundry trough etc. can cause the Greywater Saver Filter to quickly block, and should be diverted back to the main wastewater system for the premises (sewer, STEDS, or onsite system).

Gloves should be worn when cleaning the strainer. The material collected in the strainer must be disposed to an external rubbish bin. Any spills of greywater from the greywater device when removing the strainer must be cleaned with suitable disinfectant. Hands and arms must be thoroughly washed with soap after this procedure has been carried out.

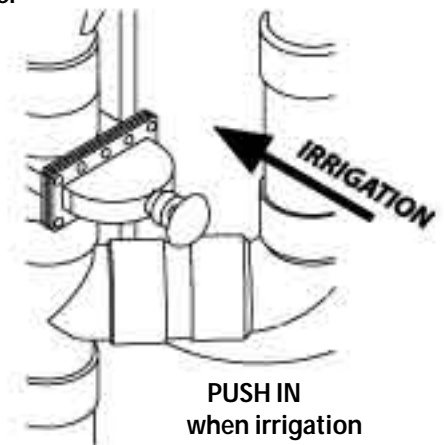
POINTS TO REMEMBER:

- Clean your filter regularly
- Greywater irrigation during the winter or wet season is not required in most locations and greywater should be diverted back to sewer to avoid over watering and damage to your plants.
- Think about what you are sending through the greywater system and ultimately into the garden.
- Don't allow strong household products to be irrigated to your plants and use household cleaning products sparingly.
- Pre-wash rinsing of waste materials from nappies, fish cleaning etc. can block the filter and should be diverted back to the main wastewater system for the premises (sewer, STEDS, or onsite system)



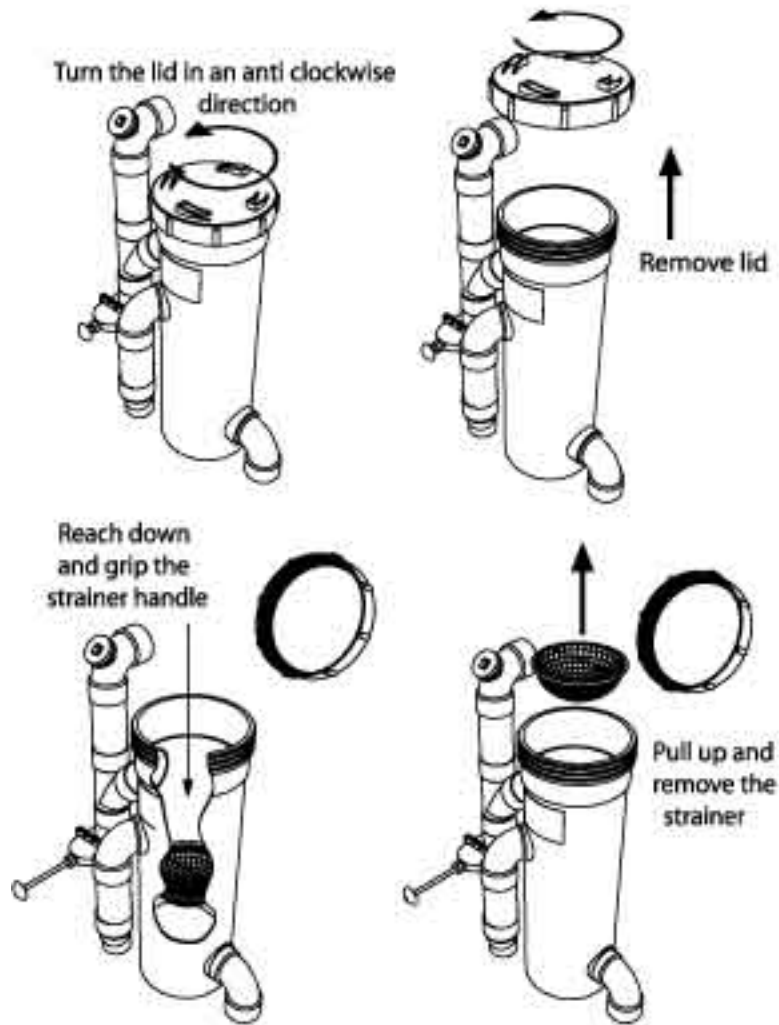
PULL OUT
to divert to sewer
or other type of wastewater
system that is servicing
the premises

SEWER DIVERTER



PUSH IN
when irrigation
is required

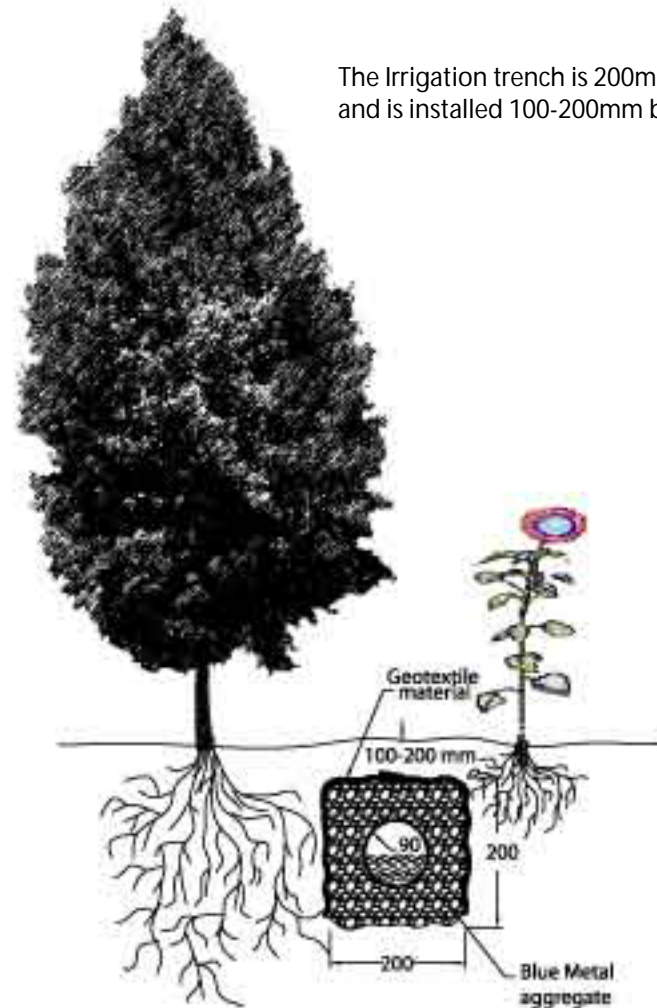
CLEANING THE FILTER



To clean the filter simply unscrew the access cover and withdraw the mesh filter basket for cleaning. After cleaning, care must be taken to ensure that the basket has been correctly re-inserted before replacing the screw-on cover and after which, hands and arms should be thoroughly washed using soap.

The Subsurface irrigation trench is drainage pipe surrounded by an aggregate of gravel Blue Metal or similar. Geofabric material is layed down the sides and across the top of the aggregate to stop the sand entering the irrigation trench. Be careful not to damage this material when digging in the garden by knowing where the irrigation trenches are located. Note: for further information about the irrigation system refer to the installation instructions.

The Irrigation trench is 200mm x 200mm and is installed 100-200mm below the surface



How is the system installed?

The Greywater Saver Diverter Vessel is simple to install for new or existing developments, but this must by law only be done by a licensed plumber (the person authorised to do this), whilst the irrigation system pipework and trenches can generally be installed by anyone capable of ensuring it is done correctly. Detailed installation Instructions for plumbers and users are provided with each unit and may be viewed on the website.

Approval to install any greywater reuse system requires that the responsible local government issue an approval for systems to be constructed and used. Further Information about this approval should be sought by contacting your local Government Environmental Health Officer.

WARRANTY

Your Greywater Saver Diverter vessel unit is manufactured using only quality robust components which are covered by a full two year faulty workmanship or parts replacement warranty.

To validate your 2 year warranty you are required to complete and post the attached warranty sheet back Greywater Saver within two months of purchase or installation.

The warranty does not extend to the trench irrigation system which will be provided by others or to situations where the unit has been damaged due to abuse or improper use or being installed not as detailed in the manufacturer's installation notes.

Warranty claims should be directed to Greywater Saver :

-ph: 08 93580937

-Fax: 08 93586778

-e.mail: sales@greywatersaver.com

-Post: Greywater Saver

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Wilson, WA 6107



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