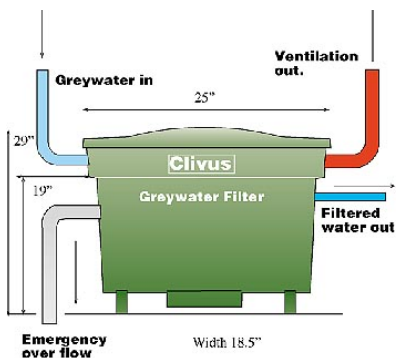


## Greywater Systems

**Greywater is wastewater. If it is allowed to pool on the ground surface, it can become a health hazard and a nuisance. Follow these guidelines for proper management.**



Greywater system for Crater Secondary School (Nakuru, Kenya) implemented by the ROSA project. Photo courtesy Sustainable Sanitation's Photostream ([www.SuSana.org](http://www.SuSana.org))

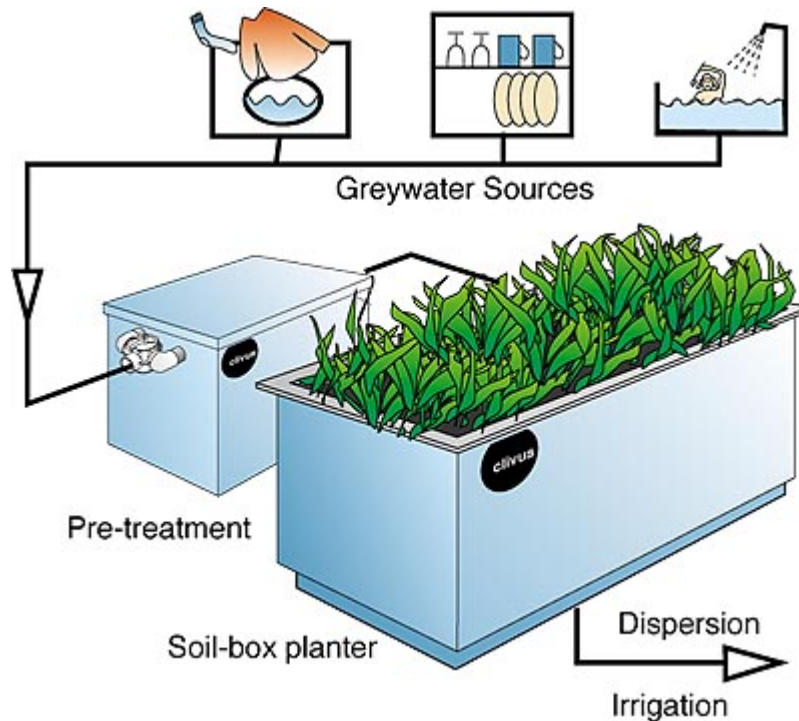


Greywater filter, courtesy Clivus Multrum, Inc. Note the vent on the right side of the tank. Proper venting is required to minimize odor. Utilize the vent stack connected to the plumbing system if possible. If not, installation of a dedicated vent pipe will be required.

Clivus Multrum manufactures a full line of greywater treatment and composting toilet equipment. Visit them on line at [www.clivus.com](http://www.clivus.com).

### Background

Greywater is the drainage from lavatory sinks, showers, bath tubs and clothes washing. It may contain high levels of bacteria, nutrients, and organic matter. In the developing world, greywater is often separated from toilet water, and simply discharged on the ground surface. In time, it will turn black, become anaerobic and odorous, attract vermin, and become a significant health hazard. Worse yet, simply allowing greywater to pool on the ground robs it of its potential for recycling. Once treated, greywater can be used in agriculture, for landscape watering, and even toilet flushing.



This illustration, courtesy of Carl Lindstrom ([www.greywater.com](http://www.greywater.com)) illustrates the concept of greywater treatment and reuse. Greywater systems have two main components: pretreatment that accomplishes filtration, and treatment where the organic matter and nutrients are reduced. The pretreatment box is a small tank with a filter screen that can easily be cleaned once a week. The filtered water then flows to a planter box where the nutrients in the greywater fertilize the plants. The final discharge is clean enough to be dispersed for landscape or agricultural irrigation.

Greywater, once filtered and treated, may also be used for toilet flushing, provided separate plumbing lines are used. Never create a cross connection between greywater and potable water systems. Many innovations in greywater management are both inexpensive and easy to install, operate, and maintain.