



# Greywater Reuse

Greywater is gently used water from sinks, showers and washing machines. Using greywater for irrigation conserves water and reduces the energy, chemicals, and costs involved in treating water to potable quality and at the sewer plant.



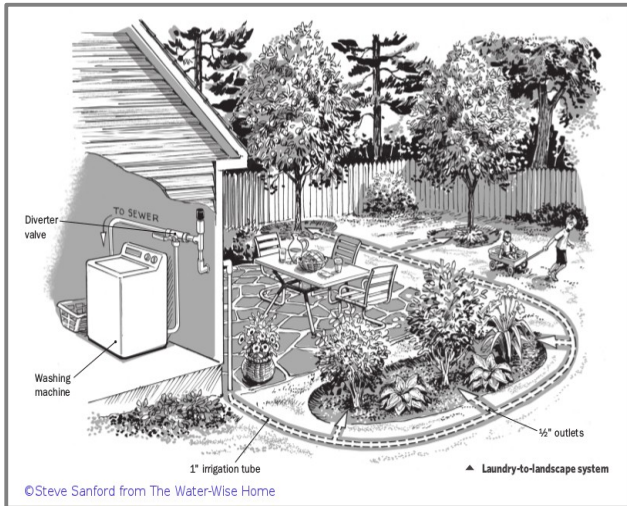
► House using greywater for irrigation with simple laundry-to-landscape and gravity-fed systems

© Steve Sanford from *The Water-Wise Home*

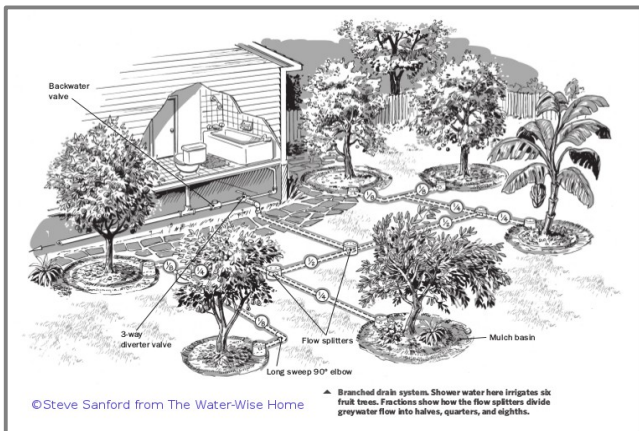
## Ways to Use Greywater

- 1. Simple, landscape direct irrigation systems** are lowest in cost, easiest to install, most reliable, and easiest to obtain permits for.
- 2. Pumped and filtered systems** deliver greywater uphill and spread it out across a larger area, but cost more and require more maintenance. Systems with automatically cleaned filters require less maintenance but are expensive.
- 3. Indoor non-potable reuse systems** filter and disinfect greywater for toilet flushing. These systems are more costly and complicated than simple systems, and generally best suited for commercial-scale applications or in new construction without irrigation needs.

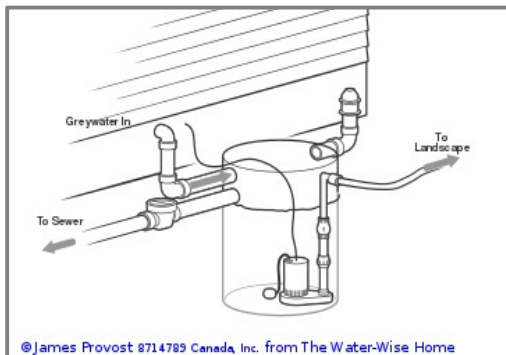
# Popular Greywater Systems



**The laundry-to-landscape (L2L) system** captures greywater from the drain hose of the washing machine and connects to a diverter valve which allows greywater to be directed to the landscape. The water is distributed through 1-inch irrigation tubing with 1/2" outlets to water specific plants. This system doesn't require a permit in CA so long as basic guidelines are followed. The L2L system is typically the lowest in cost and easiest to install. Materials cost around \$200 and professional installations typically cost between \$700 and \$2,000.



In a **gravity-based branched drain system** greywater flows by gravity through a series of branching pipes and is distributed in the landscape. The landscape must be lower than the plumbing and the system is best suited for larger plants. This system usually requires a permit. This is a low-maintenance system and a great choice for irrigating trees and bushes. Materials cost around \$300 and professional installations typically cost between \$1,000 and \$4,000 (excluding permitting fees).



**Pumped systems**, both filtered and unfiltered, can move greywater uphill and can spread the water over a large area. These systems are more difficult and expensive to obtain permits for, and may require backflow protection.

Materials cost around \$600 and professional installations typically cost in the thousand of dollars.

## Other Considerations

- ✓ Always use “plant friendly” products, those that don't contain salts or boron, with a greywater system.
- ✓ Never store greywater (more than 24 hours) or it will become smelly.
- ✓ Make sure greywater soaks into the ground- it should never pool on the surface or runoff the property.
- ✓ Consider making some landscape changes so your yard can be compatible with more types of greywater systems.

## Resources

**How-to guide book:** The Water-Wise Home by Laura Allen

**Web:** [www.greywateraction.org](http://www.greywateraction.org), [oasisdesign.net](http://oasisdesign.net), [cleanwatercomponents.com](http://cleanwatercomponents.com)

**Local Resources:** Urban Farmer Store (parts). SFPUCC program: [sfwater.org/greywater](http://sfwater.org/greywater)