The Blog

Consider a Greywater System for Saving Water and Money

Posted on 22. Oct, 2012 by Maryruth Belsey Priebe in Articles

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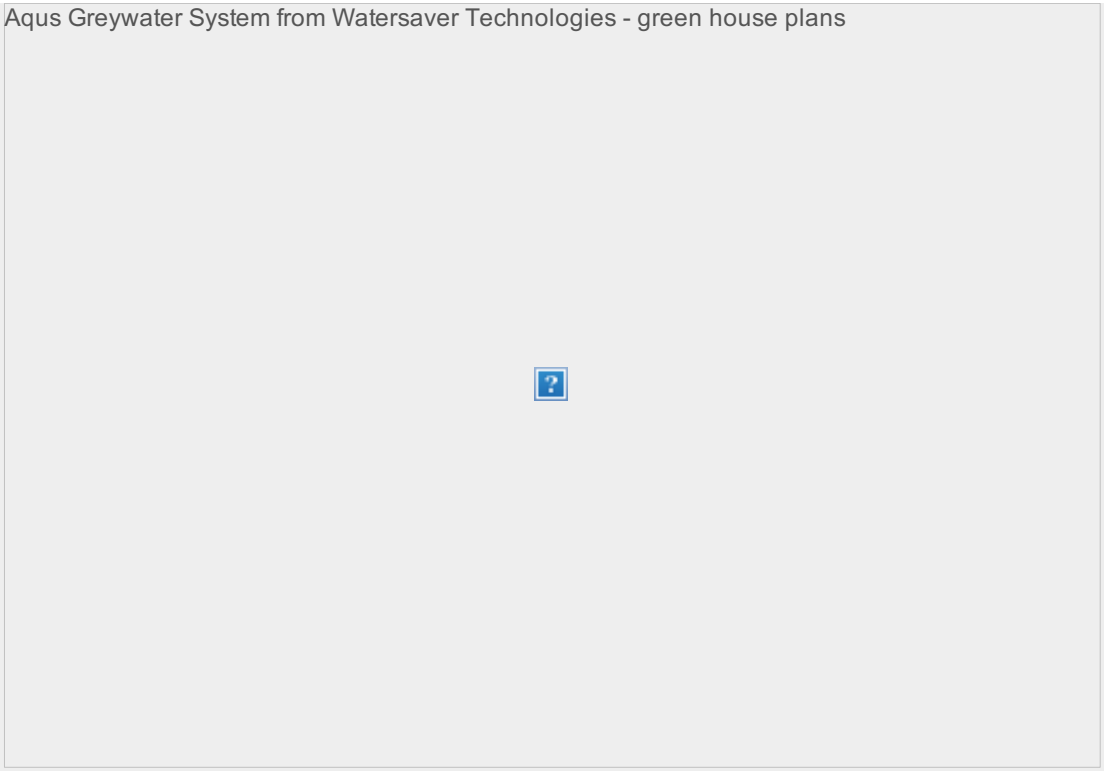
Reusing Greywater



Aqus Greywater System from Watersaver Technologies

The severe drought of 2012 has many people wondering exactly what greywater is and how using it can help save water and money. Well, we've got some answers regarding this water-saving technique. Greywater is household wastewater from appliances such as the washing machine, kitchen sink, or shower, as long as it is free of serious contaminants. Greywater like this is suitable for re-use for irrigating your garden, landscaping or lawn as long as whatever soaps and detergents you use are labelled as "greywater safe," meaning they will biodegrade quickly and don't contain toxic chemicals. This water may, in some cases, also be suitable for use in flushing your toilets. A greywater recycling system can save substantial amounts of water. If you pay for your water, that can also mean cutting your water bill significantly.

Some Facts About Residential Water Use in North America

- **Overall Residential Water Use**: The average family of four in the US consumes upwards of 400 gallons of water per day, with 70% (280 gallons)

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of that being used indoors and the remaining 30% (120 gallons) going to outdoor uses such as lawn watering and the irrigation of gardens and landscaping.[i]

- **Indoor Residential Water Uses:** Doing laundry at home accounts for 21.7% or nearly 90 gallons of daily water consumption. Taking showers and baths accounts for another 16.8% or 67 gallons while water used in sinks and faucets accounts for 15.7% or nearly 63 gallons. The remaining water used indoors goes to toilets or is a result of leaky fixtures.
- **The Price of Water**: The average price of water in the United States is about $2 for every thousand gallons used.[ii] That means the average household is spending close to $300 each year just for the water, not to mention other surcharges for maintaining sewer pipes and water treatment plants. The price of water varies considerably by location, so you may be spending a lot more than average depending on where you live. This is especially true in water-stressed regions.
- **Savings through Greywater Systems:** If you could re-use water from the sources mentioned above and divert it to replace the water you use in the outdoors, you'd probably be saving at least $100 each year, again depending on the price of water in your area.

Given that many water experts believe that future wars will be fought over water shortages rather than energy sources (such as fossil fuels), and knowing that water shortages will only intensify in light of climate change, it's in our best interest conserve water whenever possible. Not only is this cost-effective, it's also prudent as a means of avoiding future water cost hikes.

Greywater Systems for Your Green House Plans

Knowing what we know about water consumption and costs, it's clear that recycling water may be a very beneficial green house technique.

1. **1. Laundry to Landscape**: This is one of the easiest DIY greywater systems to implement in your home. Making sure you use "greywater safe" laundry detergent, you just divert the washing machine's outflow to your landscaping rather than sending it down the sewer. This YouTube video shows how one household did this themselves. A more sophisticated version is Oasis Design's Laundry to Landscape Grey Water System. You should also check out their gravity drum approach to achieve the same

results.

2. **2. Sink to Toilet**: Toilets are the single biggest water users in every house, accounting for nearly 30% (120 gallons per day) of indoor residential water use. Figuring out how to use greywater instead of drinking water in toilets can result in substantial savings. The AQUS System from Watersaver Technologies can be retrofitted in any bathroom to use sink wastewater to flush the toilet. In a two-person household, this can save 5,000 gallons of water each year. The BRAC Grey Water Recycling System is a more complex version that utilizes wastewater from showers, sinks and laundry for all toilet-flushing needs and must be installed by a licensed plumber. Another interesting option is the toilet-top sinks from SinkPositive.

1. **Manual Greywater Recycling to Toilet:** Of course, you could always just disconnect the bathroom sink drainpipe from the sewer pipe and put a bucket under it and then pour that directly into the toilet tank. If you hand-wash your dishes in a basin, you can always just pour that directly into your toilet tank as well. If you don't mind the manual labor involved, you can also

divert your laundry outflow into a large container and then pour that directly into your toilet tank for flushing. You can watch a short YouTube video on this very low-tech approach.

2. **4. Advanced Greywater Systems**: Advanced systems run the full gamut of complexity, including branched-drain, constructed wetlands and greywater irrigation systems that require a good deal of work and technical know-how to install. Consult a professional if these are of interest to you.

If you'd like more information on greywater recycling, check out The State of California's 45-page PDF booklet Graywater Guide: Using Graywater in Your Home Landscape. Other resources include the Sierra Club, The Ecology Center, the National Geographic, and the Greywater Action (formerly greywater guerillas).

Image via Watersaver Technologies.

[i] Indoor water use in the United States. US Environmental Protection Agency. Retrieved from http://www.epa.gov/WaterSense/pubs/indoor.html

[ii] Water on Tap: What you Need to Know. US Environmental Protection Agency. Retrieved from http://www.epa.gov/ogwdw/wot/pdfs/book_waterontap_full.pdf

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