

It's the ultimate in recycling! You can now re-tap your tap water with a grey water reclamation system.

You may think that once you turn on the faucet, the water coming out is gone forever. That isn't always true anymore. Grey water reclamation systems are changing thought processes and lowering total water usage by "recycling" used water.

The most elaborate grey water systems can recycle nearly all the water you use in your home.

Toilet and kitchen sink water is referred to as "black water" and must be sent to a sewage treatment facility or a septic tank for further treatment. But "grey water" is water that is used in a bathroom sink, shower, bathtub, or washing machine. And in some cases, it can be reused in toilets and even landscaping systems.

Approximately 70% of a home's water use is in the bathroom, with about 35% used for toilet flushing and an additional 35% used in the shower, bathtub and sink. If homeowners could reuse the bathing water to flush toilets, overall water usage could be reduced by up to one third.

Untreated grey water is termed "wastewater" in North Carolina, and must be sent through a permitted treatment system (septic system or public owned treatment plant.) But NC residential building code does allow for treated grey water to be used for specific purposes, including flushing toilets located in the same building as the grey water recycling system.

How can you implement this in an existing home?

The simplest system can be installed under a bathroom countertop. It takes the water from the bathroom sink, treats it, and pipes it to the toilet. This is the easiest system to install in an existing home, as the system fits well inside an existing vanity cabinet, with only a hole needed to connect the system to the toilet. About 5% of all home water usage occurs in the bathroom sink, so installing a grey water system under the sink will provide only about 15-20% of the water needed for flushing, but an estimated 8 gallons less per day of fresh water needed to keep the toilet running can add up to 2920 gallons over a year's time.

Where can you find this simple system?

AquaPro Solutions, based in Asheville NC, offers the Aqus system. Currently priced at \$295 plus shipping, this system is installed under the bathroom sink. It has a 5.5 gallon tank. A filter and disinfectant tablets treat the water, then gravity and a small electric pump moves the water to the toilet water tank. If the tank is full, excess sink water goes down the regular drain. If there isn't enough recycled water to fill the toilet tank, fresh water is allowed to enter the toilet. With estimated once yearly maintenance (changing the filter and adding new disinfectant tablets), the Aqus seems easy to use, and can apply towards Leed Certification for Green Building. Find out more at <http://www.aquaproofsolutions.com/>.

Is there an advantage to adding this kind of system to a new home under construction?

In new construction, it's a little easier to install a larger system. This must be planned and integrated into the plumbing of the home, and can collect water from the shower, the washing machine, the bathtub, and the bathroom sinks. One system, the Brac GreyWater Recycling System, built by Brac Systems in British Columbia, has been noted as one of the top 10 green building products of 2007. This system collects the grey water into a tank, where it is treated and then sent to toilets as needed. There is an overflow pipe to send water to the standard drainage system if the tank gets too full. The filter can be removed and cleaned.

Where can you find this larger system?

This system is offered by several Raleigh area vendors. PACE Manufacturer's Representatives, based in Charlotte, has a Raleigh sales office. Further information can be found at <http://www.pace-incorporated.com/>. AquaPro Solutions also offers the Brac AP-W-200, which has a 55 gallon tank and is recommended for families of up to 5 people. Their list price is \$2820 for the system itself. Most homes will also need a sump & pump kit to get the water where it needs to go, for another \$450. Shipping is not included, but AquaPro ships at cost.

Who can install these systems?

A certified plumber familiar with this type of system will need to install it. Because it is a new technology, it is important to make sure the plumber has experience. Ask for references. Businesses such as PACE and AquaPro may be able to recommend Raleigh area plumbers that have installed their systems in the past. Be sure to budget for installation costs as well.

What are the overall benefits?

The benefits of a grey water system (besides lowering the monthly water bill) can be extensive, according to leading proponents. A system can:

- Lower use of fresh water from rivers and aquifers.
- Reduce energy use in treatment plants.
- Reduce chemical pollution from treatment plants.
- Increase life of septic systems.
- Help recharge groundwater.

Who came up with this great idea?

Australia and Germany have been leading the usage and research of grey water systems, and in many cases residents use more complicated systems to irrigate all landscaping as well.

As residents of Raleigh and the Triangle area become more conscious of their water supply, they are wondering what they can do to keep their usage down. Installing a grey water system is one more way to practice personal resource conservation.

Pricing and availability current as of 12/07. Although the information in this post is presented in good faith and believed to be correct, Stanton Homes makes no representations or warranties as to the completeness or accuracy of the information.

Stanton Homes is a custom home builder in the Raleigh/Triangle area. Find out more about us at <http://www.StantonHomes.com>

Stanton Homes – Building Exceptional Living Experiences

