

Going Gray

Trim Your Water Footprint—
and Bill—with Gray Water



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In this tough economy, everyone is looking for ways to trim their household expenses, whether by putting in new insulation, compact florescent bulbs or a vegetable garden. But there's another, often overlooked, way: using gray water. The wastewater generated by your sink, shower, washing machine and dishwasher can cut utility bills while reducing a household's water footprint.

Gray water (also spelled "grey" water) carries traces of food, grease, hair and cleaning products that make it look dirty. But if you get past your initial squeamishness, you'll find that it's a beneficial resource that can safely take the place of tap water for household tasks like flushing a toilet or watering a lawn.

The average household of four uses up to 400 gallons of water every day, according to the Environmental Protection Agency. By recycling just a little of that wastewater, family members get a quick lesson in water conservation.

The Big Drains

Gray water projects target the biggest water-wasters in the house—particularly bathroom showers and sinks, where a lot of gray water is generated (toilet water, known as "black water," is never to be reused). Some of that water can be recycled via an ingenious contraption called SinkPositive, a hand-washing station that sits atop the toilet tank. Soapy water falls into the tank, where it waits until the next time someone flushes the toilet. Then it does double duty, carrying away soap and toilet waste. The SinkPositive sells for \$110 plus shipping, but do-it-yourselfers can make their own versions for much less by cutting the drain pipe under the bathroom sink and connecting it via a hose to the toilet tank.

One-third of a household's water, over 120 gallons per day, is used on lawns and gardens. To trim that figure, gardeners often use gray water to slake grass and ornamental plants. Young plants need fresh water, but once they mature, many can thrive on doses of gray water.

But use caution when applying gray water to edible plants. Bath water can



The SinkPositive.

contain microorganisms like fecal coliform that might sicken people if sprinkled over lettuce or tomatoes. The best place for gray water in an edible garden is around the root zone of plants, far away from the produce. For the same reason, it's unwise to plug gray water into a sprinkler that sends it scattering. You'll need to check with your local building department for gray water regulations, too. There may be limits on the amount you can use outdoors and specific storage requirements.

A few simple precautions make gray water palatable for plants. First, keep in mind that common household chemicals like bleach and borax (found in some laundry detergents) kill plants. Also, ordinary soap contains large amounts of salt, which can build up in the soil over time and gradually strangle greenery. Many gardeners replace bleach with ammonia and switch to no-borax, low-sodium soaps to reduce this risk. Experts also recommend alternating gray water irrigations with fresh water.

Gray water irrigation can be as simple as placing a pitcher next to the kitchen sink. Whenever someone doesn't finish a glass of water or cup of tea, dump it into the pitcher. By the end of the day, you'll have enough "leftover" water to keep the houseplants happy.

Trickle-Down Economics

The amount of savings from gray water use depends on where one lives. In Arizona, where water is expensive, the adjustment will save more money than in Florida, where water is cheap. Gray water use can also extend the life of a septic system, which costs tens of thousands of dollars to replace.

There are other costs to consider, too, in the form of devastating infrastructure projects that might be spared from future water bills. "Where I live, there are proposals for raising dams, creating new dams, and building desalinization plants for new water sources, all of which are terribly expensive and environmentally damaging," says Laura Allen, an educator and gray water designer in Oakland, California. "Gray water is a simple, small-scale, decentralized way to save water."

CONTACTS: Greywater Action, greywateraction.org; Oasis Design Greywater Information Central, www.greywater.net; SinkPositive, www.sinkpositive.com. **E**

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