



Collection of Residential Shower and Bathtub Gray Water for Reuse to Flush Toilets and for Irrigation (/initiative/4Wcc/collection-of-residential-shower-and-bathtub-gray-water-for-reuse-to-flush-toilets-and-for-irrigation)

There is great potential to recycle gray water from baths and showers for use in irrigation. However, many commercial gray water filtration systems are expensive, costing as much as \$18,000. In this proposal I describe a much more economic means of filtering grey water for recycled use.

Submitted by Kenneth Garges

Comments

LeAnne Ravinale 3w, 4d ago

SUGGESTION

Laundry to Landscape and Branched Drain Greywater code-compliant systems have been installed in CA since 2010. These systems are used for water re-use in the landscape. In many cases, they require no pumps, filters, or storage, but rely instead on using the pump from washers, plant-based soaps and mulch basins surrounding plants to be irrigated. Laundry to Landscape system materials cost about \$150 and can be installed by homeowners, with the help of rebates from 4 water agencies in the country. If you would like more information, please see www.centralcoastgreywater.org (<http://www.centralcoastgreywater.org>), thanks!

PS- The state has also recently offered grants to test rainwater catchment for toilet and laundry use.. Some of these systems are already in use now, including the Live Oak Grange on 17th Ave.

Candace Brown 1m ago

QUESTION

Average cost per household? How long would it last before requiring replacement? What are the maintenance costs and issues--need servicing or chemicals?

Heather Lukacs 4w ago

QUESTION

I really like this proposed idea. You mentioned in your comments at the open house today that your technology works better and is more affordable than other comparable commercially available products. What are these comparable products? And how is yours better/preferred? (I do not think it is an either or scenario - one household might prefer a more expensive commercial product that is installed for them while another household may choose a lower-cost DIY option. Both are important options.)

Robert Singleton 3w, 4d ago

PRO

Seems pretty straight forward. I think it should be built into a larger plan but I support the idea in general. Definitely needs to be used in conjunction with other ideas though.

Kenneth Garges 1w, 1d ago

NEUTRAL

@Candace Brown - Hard to estimate actual costs since this is just a proof of concept at this point. I've spent \$950 in materials. The labor was all my own and it would have to be added for any kind of deliverable product. Depending on the layout of the existing plumbing in the building this could range quite a bit. My home had all the needed pipes reasonably accessible in the crawl space. Other homes (particularly those built on concrete slab with pipes in the slab) would require major reconstruction.

Recurring costs would be pretty small: electricity demand is about 2kWhr per month. That's about \$0.40. The prefilter should be replaced periodically, I'm guessing every couple months. That's \$0.06. No chemicals are needed.

Lifespan is hard to know. The main components are pipes, plumbing parts, construction steel, and steel barrels. These should all last the lifetime of a building. The pumps have 3 year warranties and can be expected to last that long. The electronics have no parts that would wear out so I'd expect they would never require service.

Kenneth Garges 1w, 1d ago

NEUTRAL

@Heather Lukacs - One other commercially available system is the Flowtender (<http://www.flotender.com/> (<http://www.flotender.com/>)). Other than the price I don't know much about this system.

Kohler (manufacturer of faucets, toilets, et al) did a review of 4 systems (http://www.us.kohler.com/webassets/kpna/pressreleases/2012/KOHLER-GRAYWATER_111412.pdf (http://www.us.kohler.com/webassets/kpna/pressreleases/2012/KOHLER-GRAYWATER_111412.pdf)). It's not very encouraging. They found severe problems with all of them.

Elizabeth Scholar 6d, 10h ago

I do this already

Jude Todd 2d, 20h ago

PRO

I'm especially glad to see the greywater-to-toilet component. I hope the WSAC will give this proposal further consideration.