

Grey water

Monday, June 04, 2007
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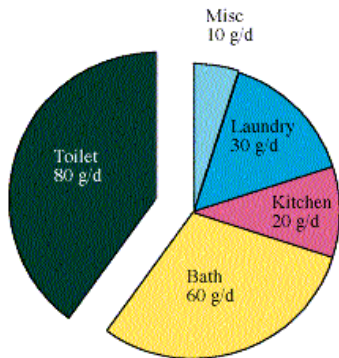
RainHarvest Company - Recycling water in Atlanta Georgia
<http://www.rainharvestcompany.com/>
Screen clipping taken: 9/2/2007, 5:56 PM

Greywater recycling systems



Canada

BLACK WATER
P=50%
N=90%
COD=60%



GREY WATER
P=50%
N=10%
COD=40%

10
30
20
60
80

200 g/d x 360 = 72,000 x 7/1000 =
434 \$/year
② 7 \$/1000

usage 72 k\$/yr

Pasted from <<http://www.greywater.com/>>

Net out Laundry & Bath which will be used in toilet. Say 120 g/day

The "old school" of wastewater treatment, still embraced by most government regulators and many academics, considers water to be a vehicle for the routine transfer of waste from one place to another. It also considers the accompanying organic material to be of little or no value. The "new school," on the other hand, sees water as a dwindling, precious resource that should not be polluted with waste; organic materials are seen as resources that should be constructively recycled. My research for this chapter included reviewing hundreds of research papers on alternative wastewater systems. I was amazed at the incredible amount of time and money that has gone into studying how to clean the water we have polluted with human excrement. In all of the research papers, without exception, the idea that we should simply stop defecating in water is never suggested.

It is estimated that 42 to 79% of household graywater comes from the bathtub and shower, 5 to 23% from laundry facilities, 10 to 17% from the kitchen sink or dishwasher, and 5 to 6% from the bathroom sink. [By comparison, the flushing of toilets (creating blackwater) constitutes 38 to 45% of all interior water use in the US, and is the single largest use of water indoors. On average, a person flushes a toilet six times a day.]

It is estimated that 30 gallons of graywater per person per day will be produced from a water-conservative home. This graywater can be recycled either indoors or outdoors. Inside buildings, graywater can be filtered through deep soil beds, or shallow gravel beds, in a space where plants can be grown, such as in a greenhouse. Outdoors, in colder climates, graywater can be drained into leaching trenches that are deep enough to resist freezing, but shallow enough to keep the nutrients within the root zones of surface plants. Freezing can be prevented by applying a mulch over the subsurface leaching trenches. Graywater can also be circulated through evapotranspiration trenches (Figure 9.3), constructed wetlands (Figures 9.4, 9.5, 9.6, and 9.7), mulch basins (Figure 9.10), and soilbeds (Figures 9.11, 9.12, 9.13, and 9.14).

Pasted from <<http://weblife.org/humanure/chapter9.html>>

Grey Water Central

Grey Water Central

Summary: All about all aspects of grey water systems. Why to use them, how to choose, build and use them, regulations, studies, and examples. Includes grey water irrigation, grey water treatment, grey water filters, and indoor grey water reuse.

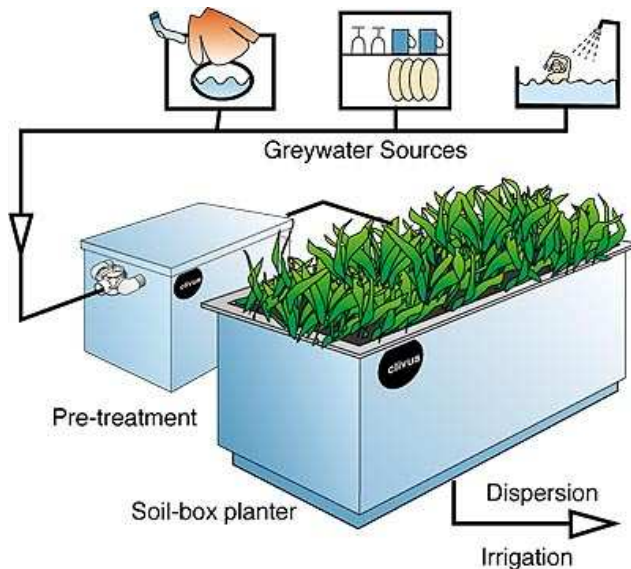
A typical residential grey water system will save \$5-\$20 worth of freshwater a month, at best. (in Atlanta probably can triple that number)

Here's an overview of the failure of greywater reuse to achieve more of the benefit which it easily could:

- Most new complex grey water reuse systems are abandoned, most simple ones achieve less than 10% irrigation efficiency within five years.
- If grey water treatment systems were built according to overdone legal requirements, many would consume so much energy and materials to save so little water that the Earth would be better off if the water were just wasted instead.
- Claims made for packaged grey water filtration systems are often inflated. Some are very expensive and many don't work. Some also have the preceding problem.
- The majority of successful grey water recycling systems are so simple and inexpensive they are beneath recognition by regulators, manufacturers, consultants, and salespeople.
- A web search on "grey water" "greywater" "gray water" or "graywater" will yield hundreds examples of the errors below. Many are designs from the early 70's, reprinted on the web as cutting edge, despite having been discredited in the field for twenty years.

Pasted from <<http://www.oasisdesign.net/greywater/misinfo/index.htm>>

GREYWATER what it is . . . how to treat it . . . how to use it



Pasted from <<http://www.greywater.com/>>