



Graywater Recycling

Save Money, Water & the Environment



Graywater Laundry to Irrigation: Soap, Soil & Plants Information



Issues with graywater

Graywater has carbon and other particulates, some of which needs to be filtered out before it is used. This includes:

- Particles such as skin, hair, food, grease, etc.
- Microbes such as pathenogens.
- Additives such as soap, which may contain sulfates, chlorine, phosphorous or boron.
- Softened water - water that has been cycled through a water softener should not be used since the softeners are salts that harm plants. However, water collected from dehumidifiers is very pure and can be used on any plant.

Filters – filtering devices include mechanical such as screens, grease catchers, etc., or natural such as a man-made wetland or mulch field.

Soaps

If possible choose soaps that do not contain sulfates or chlorine. Sulfates make the soil more alkaline and inhospitable to many plants; they also increase leaf burn. Chlorine is a poison; therefore, use a non-harmful substitute for plants, such as ammonia. Never use a boron-containing product, it will kill plants. Environmentally friendly soaps include: Green Works (Clorox), Ecos or Kirkland Environmentally Friendly (Costco) or Trader Joe's Liquid Laundry Detergent.

Soil

If the ground does not drain and cannot be amended to create adequate drainage, do not use graywater for irrigation because graywater salts, particulates and bacteria will build on the surface of the soil. After using graywater for an extended period of time, test the soil for accumulated alkalinity and if necessary, treat with gypsum to restore the soil's pH. All graywater garden systems should have the water delivered underground to minimize the risk of people being exposed to potentially harmful agents or pathogens (sprinklers can lead to droplets that contain microorganisms to be suspended in the air). Also, when these particulates are delivered underground, nature is able to neutralize them through the process of providing water to plant roots.

Plants

Plants that require acidic conditions cannot tolerate graywater. This includes:

- Azaelias, rodedenderons, camellias.
- Any plant in a pot (salts accumulate in pots, even from tap water).

Therefore, graywater is best used on established plants that can handle alkaline conditions. Fortunately, this includes many of our coastal California natives as well as desert plants.

Other factors to consider when watering with graywater

- Most graywater contains phosphorus, potassium and nitrogen, all of which benefit plants.
- Use on broad areas so the concentration of salts is decreased.
- Plants that need arid conditions cannot handle regular watering or soggy conditions.
- If possible, alternate watering with fresh water and graywater.
- For health reasons, graywater should never be used on leafy or root vegetables, nor on veggies/fruit which will be eaten raw. It also should not be sprayed or sprinkled on above ground crops like tomatoes.

Other Resources

- Plant Culture & Maintenance: Recycling Gray Water for Home Gardens (University of Massachusetts Extension Program)
http://www.umassgreeninfo.org/fact_sheets/plant_culture/gray_water_for_gardens.html
- Grow with the Flow: Legal Uses for Graywater (Natural Home)
<http://www.naturalhomemagazine.com/Garden/2008-03-01/Graywater.aspx>
- Common Grey Water Errors and Preferred Practices (Oasis Design)
<http://oasisdesign.net/greywater/misinfo/index.htm#n>

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