## **Making Ripples**

by Amanda Bancroft

Water quality is a top priority for many people, and includes many priorities such as clean drinking water, recreation, healthy aquatic ecosystems, and preventing erosion. There is a lot we can do to help! You may already have a rain barrel for irrigating a garden, or turn off the tap while brushing your teeth. Another way to help protect water is to use soaps, laundry detergents, dish liquids and cleaners that support all our water needs (like swimming in a pond that's not clogged with algae). Compatible soaps are especially important for greywater systems. The wrong type of soaps can harm or kill the plants irrigated with greywater in your yard.

Greywater is produced from washing machines, sinks, showers and tubs, and can legally be used to irrigate non-food plants in most cases (check with authorities in your municipality to get familiar with any laws particular to your exact property). It's safe to put greywater on plants like flowers, shrubs, and fruit trees but not on crop plants that touch the ground or grow below ground. Usually, greywater systems have a diverter valve so that it can be switched to go to the sewer if washing diapers, for example.

First, check the labels on your current soaps, cleaners and detergents. Ingredients to avoid include: bleach, borax, boron, salts or sodiums, peroxygen, petroleum distillate, alkylbenzene, whiteners, softeners, anti-bacterial soaps, chromium oxide, and parabens (these include methyl, propyl, butyl, and ethyl). According to EcologyCenter.org, hydrogen peroxide is a safe alternative to whiteners. Unsure if your current products are ok? At EWG.org/skindeep, search over 70,000 products by typing in the one you own to see if it contains chemicals that may harm greywater gardens. (You may have to close their holiday gift box advertisement to see the search bar)

Products that are safe for greywater gardens will usually state that they are biodegradable, biocompatible or free of artificial and synthetic ingredients. Art Ludwig of OasisDesign.net, an expert installer of legal greywater systems, reminds us that most things biodegrade; the question is what will it biodegrade into, and how quickly? Biocompatible soaps are great, but they have to be compatible with the local environment.

Greywater garden-friendly brands include Dr. Bronner's Magic Soaps, Oasis, Ecos, Vaska, Bio Pac, and Aubrey Organics. For example, for doing laundry, you could use Oasis Laundry Detergent, Soap Nuts, ECOS liquid detergent, or Vaska Scent Free. For doing dishes, Dr. Bronner's Liquid Castille Soap or Oasis Biocompatible All Purpose Cleaner/Dishwash are both fine. For shampoo, conditioner, and body wash, Aubrey Organics, Burt's Bees Body Wash, or Avalon Shampoos and Conditioners are a couple options.

Accessibility is an ongoing issue with some brands. Check your closest natural foods store for products like Oasis or Bio Pac, which as of this writing can't be purchased online.

If possible, and if your plants prefer acidic soil, avoid bar soaps because they make the soil more basic, which certain plants dislike and others tolerate. The best indicator is to simply observe the

plants to determine if the kind of soap is hurting them, or if they are being over-or-underwatered. Try to use as little soap or detergent as needed for effective results. Powders can contain more sodium, so avoid those.

A fun alternative to soaps that come in plastic containers is the "soap nut," which is actually a berry from the Himalayas. They come with reusable wash bags and can be thrown into laundry loads, or used to create body care products and cleaners which are safe for greywater plants, sensitive skin, and the environment. At the end of their life, they're compostable! Learn more at EcoNutsSoap.com.

Amanda Bancroft is a writer, artist, and naturalist building an off-grid cottage for land conservation on Kessler Mountain. She and her husband Ryan blog about their adventures and offer a solar-hosted online educational center on how to make a difference with everyday choices at: www.RipplesBlog.org.