

THE NEXT STEP

Toward a Healthier Future

A BI-MONTHLY NEWSLETTER OF THE SEBASTOPOL TOXICS EDUCATION PROGRAM



Keeping Toxics Out of Your Graywater System

We all know that California is experiencing one of the most severe droughts on record, with a State of Emergency called earlier this year.

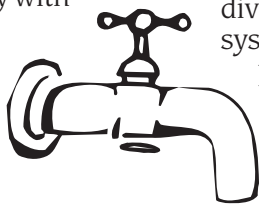
Among the water reduction remedies being suggested are graywater systems, which channel modestly dirty household water to feed landscaping. If you're considering this, be sure to educate yourself, to protect your health, plants, and ecosystem.

So what is graywater? It's untreated wastewater from household bathtubs, showers, washing machines, and bathroom and laundry sinks. (Not included are "blackwater" discharge from kitchen sinks, dishwashers, toilets, and laundry with soiled diapers.)

This recovered graywater is then directed to subsurface irrigation, where it nurtures plants while reducing freshwater usage, saving energy and money, keeping more water in ecosystems, helping us meet drought regulations, and earning LEED eco-certification points.

These savings do add up! The average family of four uses 5,000 to 8,000 gallons of water annually just in the washing machine. Reusing that water is like finding a new water source.

Graywater system designs vary from the simple and inexpensive that don't require a permit to more complex ones that tap into your plumbing and do need a permit. Some folks are even just capturing waste tap water in a pail and bringing it outside.



Whatever your approach, be sure to avoid sending harmful materials out with your water. For instance:

■ **Be smart if your water is softened.** If you're using sodium salts, as most systems do, don't put that water (or the cleaning backflush) onto your landscaping; it harms plants. Options include creating a softener bypass (say for your washing machine).

■ **Ensure that any materials going into your graywater system are plant-friendly.** This includes household cleansers, shampoo and conditioner, and laundry and dish soaps. Check that products are biodegradable, non-toxic, free of boron (borax), and very low in salt (sodium). The latter two ingredients aren't toxic to people but harm plants and soil.

Also avoid chlorine bleach (or divert its discharge to the sewer system). And look for pH-neutral products, to keep acid-loving plants happy, such as ferns, rhododendrons, and blueberries. Avoid products that don't list all ingredients; they likely include harmful ones. More on choosing products is at www.ecologycenter.org/factsheets/greywater-cleaning-products.

Also, don't store your water more than a day, and deliver it underground to avoid health issues. For more, explore the links below and look for local workshops and incentives.

SOURCES: www.scwa.ca.gov/graywater • www.sonoma-county.org/prmd/docs/misc/drought_alert.htm • www.dailyacts.org/100-greywater • www.greywateraction.org/faqs/greywater-recycling • www.pressdemocrat.com/news/1859186-181/gardeners-go-gray-to-save • www.sonomanews.com/news/3388357-181/graywater-still-a-gray-area

Eating Organic Drops a Family's Body Pesticides

We've previously discussed the evidence that switching from mainstream food to organic greatly reduces the pesticides in our bodies. We've also described the studies linking toxic exposure to health problems. (For more, see www.healthyworld.org/GRAPHICS/STEP/stepvol3no3.pdf.)

Recently, a Swedish family of five experienced this information in a more personal way. In a study sponsored by the Swedish supermarket chain Coop, the Palmberg family switched from a mainstream diet to an only-organic one for two weeks. At the study's start, the family was stunned to learn that their urine contained numerous agricultural toxics known to cause and worsen a range of health problems. Even more clarifying was the fact that, after just two weeks of eating all organic, these materials were almost completely gone from their urine.

The mother, Anette, previously didn't buy organic because of cost concerns. But this study showed them that they were "eating pesticides" (as their daughter commented). Afterwards, Anette said, "There were a whole number of chemicals removed from my kids' bodies and I don't want them back."

Coop's website says, "The result was so interesting that we made a film to share with the masses. We want to inspire more people to eat organic — we think it's good for both people and the environment." The video has had over a million views.

Oh, and in case you're thinking that you can just wash mainstream produce to remove pesticides — sadly, it doesn't work that way. Pesticides are often systemic, permeating food. Plus, organic generally offers higher nutrition than mainstream food, because plants are nourished not just propped up with toxics. (Note: It is important to wash all produce, though, to remove dirt and germs.)

SOURCES: www.sbs.com.au/news/article/2015/05/12/what-happens-when-family-eats-only-organic-food-two-weeks • "Clean Your Greens," *Delicious Living March 2008* • www.huffingtonpost.ca/brent-preston/pesticides-systemics_b_7252650.html

Toothpaste Microbeads Cause Dental Concerns

Adding plastic microbeads to health and beauty products might seem like just a fun way to bring color and scrubbing action to exfoliants, shampoos, and toothpastes.

However, as we've previously explored, these tiny never-biodegrading plastic bits pass through water treatment systems, dump tons of pollution into our ecosystems each year, harm wildlife, get into water supplies, and bioaccumulate back up our food chain. Yum!

It seems that they could also be impacting our health. Dental hygienists are increasingly seeing these colored flecks flush out of people's gums. Dentists are concerned that they could be getting stuck in gumlines, potentially trapping bacteria, and increasing the risk of gingivitis and periodontal disease. (Plus the speckled gumlines look unsightly!)

Brian Moore, a Kentucky dentist, says, "Any time you have any foreign body in the pocket around the tooth, it's a breeding ground for bacteria."

Marc Lowenberg, a New York City dentist, adds, "I personally would never brush my teeth with something that had plastic in it. The whole concept is bizarre to me."

The FDA says that it never approved microbeads in toothpaste, but it's not considered an active ingredient so manufacturers are responsible for ensuring its safety.

The American Dental Association (ADA) says there have been no studies proving harm. But, according to an investigation done by *Allure* magazine, there've been no studies at all on microbeads' effect on teeth.

As concerns mount overall about these plastic micropollutants, state and national legislatures are exploring various limits on their use. In response, some manufacturers are proactively removing microbeads from their products. For instance, Procter & Gamble plans to phase out microbeads from its Crest toothpastes by March 2016. While P&G says the materials are "completely safe" and only used for color, it adds that it's making this change in response to "changing consumer and dental professional preferences."

To find out if a product has microbeads, look for "microbeads" in the description, or "polyethylene" or "polypropylene" in the ingredients. You can get product lists and an app to scan product bar codes at www.beatthemicrobead.org. This website also has more information about the overall issue and solutions.

If you do have a product with microbeads, don't wash it down the drain. Either return it to the store, or seal it tight and put it in the garbage. Then consider purchasing from manufacturers that don't even think about putting materials such as these in your body care products.

For more about the problem, alternative products, and what you can do, see www.healthyworld.org/GRAPHICS/STEP/stepvol14no3.pdf.

*SOURCES: "Why dentists are speaking out about the plastic beads in your toothpaste," The Washington Post, April 23, 2015, www.washingtonpost.com/news/to-your-health/wp/2014/09/18/why-dentists-are-speaking-out-about-the-plastic-beads-in-your-toothpaste • "Top Dentists Weigh in on the Microbead Controversy," By Catherine Q. O'Neill, *Allure Magazine*, Sept. 23, 2014, www.allure.com/beauty-trends/blogs/daily-beauty-reporter/2014/09/microbeads-toothpaste.html*

Toxic Plastics Found In Large Fish

A recent study, published in the journal *Marine Pollution Bulletin*, adds to the evidence that our culture's plastics are permeating nature's ecosystems and wildlife — and likely coming back to us in our food and water.

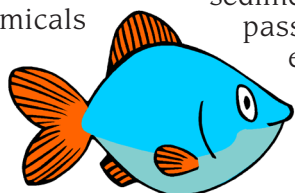
In this study, researchers tested bluefin, albacore, and swordfish from the Mediterranean Sea — and found that that over 18% of sampled fish carried plastic pollution in their bodies. These fish are commonly consumed by humans, and because these species migrate through the Atlantic Ocean, could easily arrive on the plates of American consumers.

Even worse, the recovered plastics contained chemicals such as nonylphenol, bisphenol A, and brominated flame retar-

dants. These have been linked to endocrine disruption, low reproductive rates, and other health problems.

These large fish live in the open sea, so how are they being exposed to our plastic waste? First, because our plastics are filling the oceans, they could've eaten floating plastics directly. Also, they likely ate smaller fish that had eaten plastic pieces; these then culminate in the larger fish and up the food chain.

Alison Chase of the Natural Resources Defense Council says, "Data continues to mount about the pressing problem that plastics pose for our ocean environment. Plastic litter simply doesn't belong in the ocean. It often looks like food to animals, may contain and soak up toxins like PCBs and pesticides in marine sediments, and can potentially be passed on to people when we eat seafood. We need to stop treating our oceans like a trash can."



You can help by reducing your use of plastics (including microbeads) discarding plastics properly, and supporting the groups acting to stop this harm at the community level.

SOURCE: "Toxic Plastic Found in the World's Favorite Fish," By John R. Platt, May 7, 2015, www.takepart.com/article/2015/05/07/micro-plastic-found-bluefin-tuna-swordfish-first-time

ABOUT STEP

The Next STEP (TNS) is published six times a year by the **Sebastopol Toxics Education Program (STEP)**. **STEP is a project of the City of Sebastopol**, implemented by local citizen volunteers. **STEP's mission** is to support city residents in reducing their toxic use and exposure, creating a healthier and safer Sebastopol for everyone.

Newsletter Editor, Lead Writer & Layout: Patricia Dines, Email STEP@healthyworld.org

Newsletter Editorial Team: Patricia Dines and Jim Gleaves

Newsletter Design Concept & Logo Design: Lyn Dillin (née Bouguereau)

STEP Founders: Michael Black, Patricia Dines, Rebecca Dwan, Jeff Edelheit, Nan Fuchs, Craig Litwin, and Larry Robinson.

STEP, P. O. Box 1776, Sebastopol CA 95473
www.healthyworld.org/STEPIndex.html

Printed on recycled paper.