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POLLUTION PREVENTION VIEW

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NEWSLETTER FROM THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

Artful Garbage

Tote bags from used T-shirts? Wedding dresses from old bed linens? Lawn ornaments from tarnished dinnerware? Stuff that ordinarily gets thrown in the trash, can instead become a unique treasure — even a sellable product. Creative Reuse, also called “upcycling” and “repurposing” turns unwanted materials into wonderful pieces of art, decorative crafts or useful new items. This is different than ordinary recycling or conventional reuse, which are when “products are broken down to component parts and re-manufactured into new products” or “used in its original purpose again.”

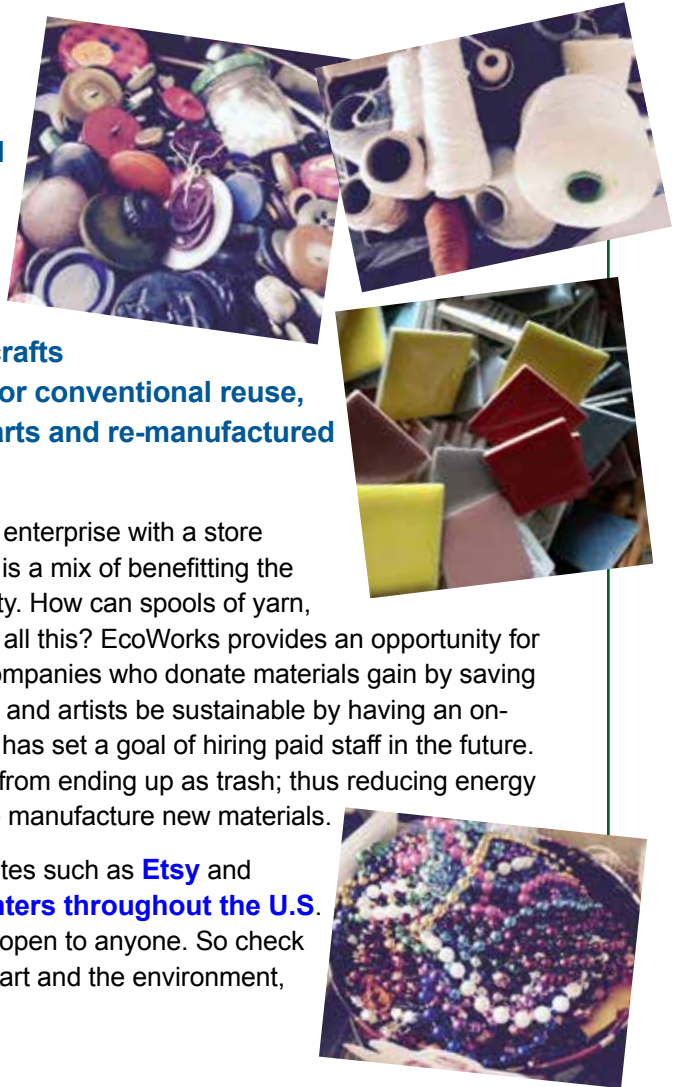
EcoWorks is home to Connecticut’s creative reuse center, a non-profit enterprise with a store and gift shop run by volunteers who hate waste but love art. Its mission is a mix of benefitting the environment, helping local artists and educators, and building community. How can spools of yarn, old game pieces, scraps of wire and a myriad of other random items do all this? EcoWorks provides an opportunity for artists and educators to get supplies and materials at no or low cost. Companies who donate materials gain by saving money on waste disposal costs. EcoWorks further helps the community and artists be sustainable by having an on-site re-boutique for selling upcycled items and holding classes — and it has set a goal of hiring paid staff in the future. EcoWorks also benefits the environment by preventing useful materials from ending up as trash; thus reducing energy use and air pollution, and conserving natural resources by not having to manufacture new materials.

Creative reuse is definitely catching on — many items on popular websites such as [Etsy](#) and [Pinterest](#) are often upcycled. And, there are more than **100 reuse centers throughout the U.S.** Some limit access to non-profits, teachers or members — EcoWorks is open to anyone. So check out their new location at 262 State Street, New Haven. Do your part for art and the environment, and let your creative juices flow!

Stay Safe as You Create

So you’ve been bitten by the creative bug and now paint, draw, or sculpt on a regular basis? That’s great! But as you create, please be aware of your personal safety and the environment in the process. Art supplies can have ingredients that are hazardous and should be used with caution. Commonly used paints, including artist grade acrylic paints, depending on the color, may contain toxic heavy metals such as cadmium, chromium and lead. Oil paints and other materials require clean-up with hazardous solvents and can impact indoor air quality. When inhaled or absorbed through the skin, these toxic materials can cause health problems. If disposed of improperly, they can be harmful to the environment.

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Stay Safe as You Create

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Here are some tips to help you stay safe as you create:

Choose safer:

- Try to use the least toxic materials — The Art and Creative Materials Institute (ACMI) is a group of manufacturers that certifies products to promote safety (www.acminet.org).

- Buy only non-toxic materials for children since they are more vulnerable to chemicals. Check for “non-toxic” on the label or do some research before heading to the store.

Work Safer:

- If you are creating dust, such as from sanding, using pastels, chalk and charcoal, wear a dust mask to avoid inhaling particles.

- Ventilate the room to reduce exposure to chemicals that you may breathe. Be especially mindful when using aerosols, like sealers, fixatives and spray paint.

- For the best protection, use nitrile gloves. Wash your hands before eating and periodically during the day.

- Clean up spills during the day and store used rags or



wipes in closed containers (fireproof if using a flammable paint or solvent, such as turpentine).

- Wash your “art” clothing separately from regular wash and always wipe your feet before leaving the work area.

Safer Environment:

- Do not put even small amounts of waste paints or solvents down the drain. If you have public water and sewer, these materials can contaminate nearby water bodies. If you have septic, these materials can affect the proper functioning of the bacteria in your septic system. For information on proper disposal of hazardous materials, visit www.ct.gov/deep/HHW.

- “Green” your art by using post-consumer recycled materials, natural and recycled ingredients (“trash-to-treasure” such as what you might find at [Ecoworks](http://www.ecoworks.com)), and make your own for certain art supplies (like finger paints). More information is available at the [Earth Day Network](http://www.earthdaynetwork.org).

- For more information, including an Art and Craft Safety Guide, visit the NIH Enviro-Health Links page: <http://sis.nlm.nih.gov/enviro/arthazards.html>.

CHEMICAL JEOPARDY — What's in Clothing?



Clothing that fights odors? Prevents sunburn? Guards against ticks? Chemicals added to clothing make all these things and more, possible. The latest method by which chemicals are being introduced is through nanotechnology. Nanoparticles — chemicals that are sub-microscopic and can be integrated into a fabric or sprayed on after its woven — may be found in socks, shirts, and hats, especially if they claim to be “sun-protective” or “anti-microbial.”

What chemicals are being used in clothing and what are the issues?

Smell relievers:

Triclosan — the antimicrobial in many liquid soaps that has been questioned for contributing to antibiotic resistance and hormone disruption — as well as triclocarban (a close relative) are both used as antimicrobials to prevent odor.

Silver nanoparticles are another widely used technology for antibacterial properties. Long known for its germ killing properties, the microorganisms causing odor can't live around silver. Silver nanoparticles as well as triclosan can

be toxic to aquatic organisms — which raises the question, are they washed out of the fabric and into the water system?

Sunburn protectors:

Chemicals such as titanium or zinc dioxide nanoparticles or benzophenone may be added to clothing for UV protection. As the fabric ages, these chemicals could be released onto the skin and into ecosystems.

Pest fighters:

Although permethrin has been sprayed on to clothing and equipment for years to prevent malaria, it is now also **used in outdoor wear** to guard against tick and mosquito borne

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What's in Clothing?

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diseases. Not a repellent, **permethrin** is registered as an insecticide by EPA, meaning that the insects are killed on contact with the clothing.

Stain & water repellents:

Perfluorinated compounds, one of which is perfluorooctanoic acid (PFOA), are synthetic chemicals. They are used in the finishing process so that fabrics repel water, oil, grease and stains. These chemicals have also been used to flame-proof textiles such as couch covers. U.S. EPA initiated the **PFOA Stewardship Program** to reduce or eliminate these chemicals in products by 2015 due to their levels and persistence in the environment.

Wrinkle-fighters:

Formaldehyde resin is used to produce no-iron or "wrinkle-free" clothing. The probable carcinogen has been implicated in skin rashes from certain clothing products, including baby clothes and undergarments.

Dyes & finishes:

Over **10,000 different chemicals** are used in clothing through the dyeing, printing, and finishing process, including **PCBs** and phthalates, contributing to potentially toxic effects for aquatic organisms. Dyes may cause mutagenic and carcinogenic effects and since they are developed to resist biodegradation, they persist for extremely long periods in the environment.

What's a person to do?

- Although labeling of chemical additives in clothing is not required in the U.S., reading clothing tags can

give consumers a clue that a chemical has been used to achieve a certain characteristic effect, such as no-iron shirts, ultraviolet protection ratings (UPF) for hats; water repellency for rain gear; or "anti-microbial" indicating odor protection. **According to the EPA**, a "hang tag" pesticide use label must be on clothing that is factory-treated with permethrin.

- If you're going to be out in the sun for hours, review **sun-safe clothing suggestions** from the Environmental

Working Group (EWG). Bright and dark colored clothing with a tighter weave and thicker fabric have been shown to provide UV protection. EWG recommends avoiding clothing that has been imbedded with chemical additives.

- Mosquito and tick-borne diseases have dramatically increased in CT and many regions. The Environmental Working Group's **Guide to Bug Repellents** recommends four

of the most effective, least toxic chemical repellents in skin-applied products and cautions against permethrin-sprayed clothing.

- Buy clothing that is durable, in classic styles made in the most sustainably produced way. **Bluesign technologies** certifies textiles that meet safety and environmental criteria.

More information: **Greenpeace** reports on chemicals in clothing and water pollution; **GreenBiz** reports on name brand clothing companies working to detoxify their clothing supply chain.

Textile manufacturers can consult a new resource, recently promoted by the **Toxic Use Reduction Institute**, the **ChemSec Textile Guide**. With over 6,000 chemicals in the database, a manufacturer can easily find out what chemicals are on Restricted Substances lists, plus potential alternatives that are safer. Another new guidance document specifically on dyes and pigments, the **Guidance for the Assessment of Colorants**, is available from Cradle to Cradle Products Innovation Institute.

CT Company is Safer Choice Award Winner



epa.gov/saferchoice

U.S. EPA's Safer Choice Program recognized Sun Products Corporation of Wilton, CT as an outstanding formulator-manufacturer. **Safer Choice** is a new label that will help consumers to choose products safer for health and the environment. Over 2000 products for use in homes, schools, hotels, sports venues and offices qualify for this label. **Sun Products Corporation** received this year's Partner of the Year Award for its implementation of company policy to certify products they market as "green" with Safer Choice. The company was commended for prominently using the Safer Choice label on products and displays, collaborating with large-chain retailers on in-store promotions, and offering discounts and promotions for the labeled products. Other notable achievements — Sun Products was one of the first manufacturers to replace petrochemicals in detergent formulas with plant-based surfactants and its corporate office in Wilton is **LEED certified**.

Ask Eartha



About a year ago, I read a [P2 View story](#) about micro-beads, the small pieces of plastic that are in personal care products like body wash and toothpaste. This year legislation was introduced to ban these products in Connecticut. How can I find out more about the outcome of the proposed law and other new environmental laws passed by CT General Assembly?

Eileen W., Glastonbury, CT



There are several ways for citizens to find out about legislation that has been introduced and the outcome. The [CT General Assembly website](#) has a daily bulletin, posts information on bills and also has a [search feature](#), or you can contact the state representative or senator for your town.

In the June Special Session, Connecticut passed the budget implementer bill ([PA 15-5](#)) that included several environmental issues. Section 50 phases out the sale of products with microbeads beginning in December, 2017. The problem with microbeads is that they pass through wastewater treatment plants, end up in local waterbodies like the Long Island Sound and endanger fish and wildlife that mistake them for food, and ultimately impact people. Connecticut is being praised for going one step further than other states that have banned microbeads. A loophole exists in these laws in other states that allows companies

to replace traditional plastic microbeads, made of polyethylene (PE) or polypropylene (PP), with biodegradable plastics. Connecticut's law includes a study on biodegradable plastics and requires additional legislation to allow biodegradable plastics if the study concludes they are safe.

New pesticide restrictions were also included in [PA 15-5](#) (Sec. 439). Existing law prohibits the use of lawn care pesticides at preschools and grades K–8 schools unless there is a human health emergency; the new legislation extends this prohibition to municipal playgrounds.

[PA 15-5](#) (Sec. 419) also promotes transit-oriented development, which is the development of residential, commercial, and employment centers within walking distance, or one-half mile, of public transportation, by making funds available for projects. Other legislation passed this year include the "Bike Bill," [PA 15-41](#),

making CT more bike friendly and protecting bicyclists on our roads and [PA 15-194](#) that gives incentives to homeowners who invest in solar energy.

Want to find out more or get involved? Local environmental organizations are another good source for information on legislation, such as the [CT Fund for the Environment](#), [CT Forest and Park Association](#), and the [CT League of Conservation Voters](#) (join their mailing list for regular updates or check websites).

Eartha answers selected environmental questions. Email your question to judith.prill@ct.gov and watch future issues for your answer.

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