



A BI-MONTHLY NEWSLETTER OF THE SEBASTOPOL TOXICS EDUCATION PROGRAM

What Are VOCs?

Paints, paint strippers, and other household products can contain **volatile organic compounds (VOCs)**. **Volatile** means that the compound releases into the air easily. **Organic** is used as a chemist means it, to indicate that it includes a carbon atom, not as we've come to refer to organically-grown foods.

Some VOCs are relatively benign, while others potentially cause health and environmental problems – during use and afterwards.

Health problems from VOCs can include: eye, nose, and throat irritation; headaches; dizziness; loss of coordination; nausea; damage to the liver, kidney, and central nervous system; and cancer. VOCs also accumulate in a community, and are a **major contributor to smog**, which can harm forests and crops. **VOCs can accumulate in humans and animals;** they're found even in fish in remote areas like the Arctic.

Toxic VOCs are found in cleaning, cosmetic, office, and hobby products, including disinfectants, solvents, degreasers, preservatives, sprays, moth repellents, air fresheners, and dry-cleaned clothing. Toxic VOC chemicals include benzene, formaldehyde, toluene, xylenes, acetone, and perchloroethylene.

Resources

To find healthier products, check at these local suppliers:

■ **Analy Furniture & Accessories**, Sebastopol, 823-2514

■ **Bare Woods**, Santa Rosa, 528-7373, and Petaluma, 763-5827

■ **Auro Natural Home**, Petaluma, 782-0735, <www.aurousa.com>

■ **Natural Home Products**, Sebastopol, <www.naturalhomeproducts.com>, 824-0914

For more materials information, see <www.greenbuilder.com/sourcebook/FinishesAdhesives.html>. More about VOCs, smog, and a European proposal to address them is at <<http://ens-news.com/ens/jan2003/2003-01-15-03.asp>>

And stay tuned here for more articles about how to make a healthier home and world!

~ Patricia Dines

Choosing Healthier Paints & Stains

Did you know that many common finishing supplies contain toxics that harm our health and environment? Whether you're painting a new baby's room, staining shelves, or creating an addition for your home, understanding the toxicity of your materials – and looking for less-toxic alternatives – can make your project healthier, during both construction and use.

The Problem: Toxic Components

All paints, especially oil-based paints, can contain toxics – including toxic VOCs, which disperse easily into the air (see box). For instance:

■ **Solvents** (used to mix paint components more easily) can include **toluene** (which harms the nervous system), **glycol ethers** (which can go through the skin and cause organ damage), **ammonia** (a respiratory irritant), **nonylphenol ethoxylates** (which harm reproductive health), **naphtha** (which harms the central nervous system), and **xylene** (which can cause dizziness, breathing and memory difficulties).

■ **Color pigments are often based on toxic heavy metals** – like cobalt, cadmium, titanium, tin, and chromium – or **petrochemical toxics** like **toluene** (which harms the

nervous system), **benzene** (a human carcinogen), and **xylene**.



■ **Fungicides and preservatives** (biocides) can include **formaldehyde** (a carcinogen and strong irritant) and **mercury** (which harms the brain and nervous system).

In addition:

■ **Spray paints** can contain **methylene chloride** (a known carcinogen), as well as toxic **VOCs**.

■ **Strippers and thinners** – required for oil-based paints, sealants, and stains – often contain toxics like **toluene** and **methylene chloride**, which can harm reproductive health, even at low levels.

The Solution: Shop & Use Wisely

So, what's the solution? To reduce the risk to yourself and others:

■ **Avoid petroleum-based paints, stains, and sealants.** Choose **water-based products**, for safer use and cleanup (no toxic solvents!). **Milk-based paints** are also attractive, for special applications. **If you want an oil-based paint**, look for one based on plant oils.

■ **Look for products that indicate how they avoid the toxics** described in the previous section. **Low-VOC or zero-VOC** products are an improvement but can still contain toxics. **Look for colors made from natural clays and minerals**, and avoid those from heavy metals. **Avoid paints with toxic fungicides and preservatives** (often sold as bathroom or kitchen paint).

■ **Work in a well-ventilated area**, follow label directions carefully, and air out the room or item before use.

■ **Dispose properly** of used thinner and old oil paint. They're toxic; don't put them in the sink or gutter! (Call 565-3375 for more information.)

To Protect Salmon, Judge Creates Pesticide Buffer Zone Along Russian River

Because of the harm many pesticides cause to endangered salmon, a Seattle federal court has ordered the Environmental Protection Agency (EPA) to establish pesticide buffer zones near salmon-bearing rivers and streams. To avoid toxic runoff, 54 common pesticides won't be allowed to be used along these waterways (which include the Russian River and many of its tributaries). These buffer zones are an interim measure to protect the fish until the EPA enacts more permanent regulations.

U.S. District Judge Coughenour's ruling came in response to a suit filed under the Endangered Species Act by the Washington Toxics Coalition, Northwest Coalition for Alternatives to Pesticides (NCAP), and two fishing groups. The suit put forth evidence that the EPA had failed to protect 26 species of threatened or endangered salmon and trout from pesticides.

In his order, Judge Coughenour found that the requested buffer zones would, "unlike the status quo, substantially contribute to the prevention of jeopardy" to salmon.

According to Aimee Code of NCAP, "Pesticides pose a threat to every aspect of salmon survival, from reproduction to their habitat needs. Pesticides that pollute water and harm salmon also present a clear threat to people and our health."

According to NCAP, the EPA has documented fish kills from many of these pesticides, even when used according to the EPA-approved label. The U.S. Geological Survey has also detected these



pesticides in waterways at levels that harm salmon development, behavior, reproduction, and habitat. NCAP considers pesticide use to possibly be a serious, yet often overlooked, factor in the decline of northwest salmon.

Glen Spain of the Pacific Coast Federation of Fishermen's Associations, one of the plaintiff groups, said that "It makes no sense to keep poisoning salmon in our rivers while trying to protect them.... Requiring minimal buffer zones is a logical step toward restoring a billion-dollar salmon-fishing industry to our region." Miles Croom, a manager in the Santa Rosa office of the National Marine Fisheries Service, applauded the news, indicating that the agency has long urged the EPA to better protect salmon from pesticides.

Many of the 54 chemicals are used on farms, timberland, and in homes and on lawns (including diazinon, malathion, and chlorpyrifos). Though some pesticide labels require users to keep the chemicals from going into bodies of water, awareness can be missing and enforcement difficult.

According to Nick Frey of the Sonoma County Grape Growers Association, grape growers use a few of the 54 chemicals, and in most cases could switch to other products, though some are more expensive. John Short, at the North Coast Regional Water Quality Control Board, indicates that limited studies seem to show that urban pesticide use is contaminating Sonoma County streams.

Salmon and steelhead fishing was once a valuable part of the West Coast economy. In 1988, it brought \$1.25 billion to Oregon, Washington, Idaho, and northern California, supporting an estimated 62,750 family wage jobs. Since then, many salmon runs have declined, some to almost nothing, impacting whole coastal communities of families who had supported themselves with fishing for generations. For instance, in 2000, fewer than 5,000 native wild coho salmon were expected to spawn in California, 1% of their former population.

SOURCES: NCAP <www.pesticide.org>; includes list of the pesticides. Washington Toxics Coalition <www.watoxics.org>. "Judge bans 54 pesticides from along Russian River," Carol Benfell, *Press Democrat*, July 26, 2003.

Pesticides Linked With Prostate Cancer

Farmers using certain pesticides have a higher risk of prostate cancer, according to a study, published in the *American Journal of Epidemiology*, that confirmed previous studies.

Researchers at the National Cancer Institute, the National Institute of Environmental Health Sciences, and the Environmental Protection Agency studied 55,332 farmers and nursery workers who worked with pesticides. They found that the risk of developing prostate cancer was 14% greater for the pesticide applicators compared to the general population.

One pesticide, methyl bromide, increased the risk of prostate cancer in all men. Six others raised the risk in men with a family history of prostate cancer. (The six pesticides are chlorpyrifos, coumaphos, fonofos, phorate, permethrin, and butylate.)

More than 220,000 U.S. men will be diagnosed with prostate cancer this year, according to the American Cancer Society, and 30,000 will die of it.

SOURCE: Reuters, May 1, 2003.

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.

Past issues of TNS are at <www.ci.sebastopol.ca.us>; look under Programs. **An ongoing index by topic** is at <www.healthyworld.org/STEPIndex.html>.

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