

tion provisions were debated in 1992. Water-conservation rules should be left to local governments, he said. "I cannot believe that in all seriousness we are on the floor of this House establishing toilet police for the United States of America."

But in the long run, federal standards may be the only way to goad manufacturers into large-scale manufacturing of water-efficient toilets. Without national standards, "we will create a situation where each locality will establish its own standards for energy consumption and water consumption," says Chester Atkins, the former Democratic congressman from Massachusetts who led the fight for water-efficient plumbing. "That will make it impossible to have a national marketplace."

—VINCENT KIERNAN

## New Life for Old Paint

■ If you are like most Americans, chances are you'll find at least a few half-empty cans of paint or stain lying around from your last home-improvement project. In fact, a 1991 survey of 500 households in Vermont found an average of 3.6 gallons of paint in every basement.

The problem is that although most people say they intend to use the paint, most of it gets thrown out. And the chemicals in paint, by any other name, are toxic waste, which is difficult to dispose of. For example, Michael Bender, project coordinator with the Environmental Law Foundation of Vermont (which conducted the household paint survey), says that paint is now banned from the state's landfills. The only legal way for most Vermont residents to get rid of their unused paint (other than finishing that weekend project) is to bring it to one of the state's household hazardous-waste collection centers, which then sends it to a toxic-waste facility for destruction.

Ironically, most of the paint brought to such collection centers—roughly 3 pounds per household per year—is still valuable. With that in mind, Bender established one of the first schemes in the nation for recycling paint. His so-called "drop-and-swap" program, established in Vermont in 1989, took a low-tech but eminently practical approach. "We take in the paint, open the can to make sure that it's still good, and give it out to another resident." The state saves the cost of sending the paint to a toxic-waste facility, and some lucky state resident gets a free can of usable paint.

A few companies in the United States and Canada have been taking the drop-and-swap concept a step further by retrieving paints from municipal drop-off points, blending and reformulating the materials, and selling the resulting mixture back to consumers. Officials at the companies claim it's an innovative, closed-loop way of dealing with a haz-



ard that makes up perhaps half of the household toxic-waste stream.

"We are processing 10,000 packs [45-gallon drums] of used paint per year," says John Langan, who manages paint recycling for the Canadian-based Laidlaw Environmental Systems. Laidlaw has been recycling paint for nearly 10 years, he says, but its capacity dramatically increased in 1992 when it started operating its \$3 million facility in Mississauga, Ontario, the only automated paint-recycling plant in the world.

Each can of paint that arrives at Laidlaw is first sorted by hand into light latex, dark latex, light oil, and dark oil paints. The cans are put into one of Laidlaw's automated machines, which extract the liquid, filter it, and test it for chemical contamination. "If there is a detectable presence of PCBs, pesticides, or other hazardous materials, the paint is rejected and set aside for incineration.

What's left is compared against performance specifications for new paint. Laidlaw might have to add fluid to improve the paint's viscosity, titanium dioxide to strengthen its covering ability, or chemicals to control bacterial growth, which is common in old latex formulations. The paint is then shipped off to Laidlaw's partner, Scraf Paints, which blends it to a particular color and sells it as recycled paint through its distribution channel.



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*Once collected cans of unused paint are sorted by type and color at Laidlaw Environmental Systems, machines extract, filter, and test the contents for chemical contamination.*

for improving the number of households participating in hazardous-waste collections, which now hovers between 5 and 10 percent. The key to making municipal collections work, says Scott Herbert, president of Green Paint, is not to let the town do it for the recycler. "If you don't do it yourself, you end up with roof tar and all kinds of things. Our motives are different. They want to get rid of hazardous waste. We want to make a quality paint."

Because paint recycling is so labor intensive, only a handful of companies and cities around the country have tried it. Most of those have simply blended all their collected latex or oil paint into an ugly gray that's not good for much more than covering graffiti.

"The people at Green Paint are different in that they are not just looking for giveaways to housing authorities and departments of public works. They're actually trying to make a profit by selling their paints to commercial painters and, through hardware stores, directly to the consumer," says Barry Connell, a research associate with Dana Duxbury and Associates of Andover, Mass., an environmental consulting firm. The business has also been hailed for its environmental value, as well. This past fall, the Massachusetts Audubon Society awarded Green Paint its highest honor, the Audubon A, for excellence in environmental action.

Right now, companies like Green Paint and Laidlaw are nibbling away at the huge stockpile of old paint in people's basements—estimated to be as high as 14 million gallons in New England alone. Most of the paint industry, which sells some 500 million gallons of new product in the United States each year, still views leftover paint as a problem, says Herbert. But for companies like Green Paint, it's their lifeblood.

—SIMSON L. GARFINKEL

A much smaller company that's relatively new to the paint-recycling business, the Massachusetts-based Green Paint Company, collects more than eight different kinds of paint and other coating products, including exterior oil stains, oil-based primers, urethane-reinforced alkyd floor paint, and "stain kill" primer-sealers. The cans are stored in large cardboard bins in Green Paint's Manchaug factory until a few hundred gallons of a particular type accumulate.

### Green, Not Gray

The material is then removed from its cans, blended in large vats, and tested for color and covering ability. If it doesn't meet industry specifications, it is reformulated with more fluids and chemicals. The product is then recanned and sent to Green Paint's retail distributors.

Laidlaw and Green Paint claim that old paint is not only pretty good stuff—both companies boast that their products are higher quality than the average-grade consumer paint made from virgin materials—but it's also attractively priced: recycled paint costs between one-third and one-half less.

Since most of the raw materials come directly from people's basements, companies like Green Paint have an incentive to go into communities and find all those old cans. As such, they're likely to push

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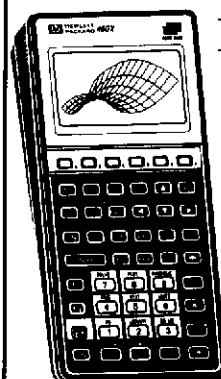
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