



## We Are Surrounded By Harmful Chemicals

By Kim Helmuth, Science Interchange Reporter

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In 1999, Marin County used almost 56,000 pounds of pesticides, according to data from the California Department of Pesticide Regulation. Surprisingly, less than half of those pesticides were used in agricultural settings. Just about 25,000 pounds of pesticides were used for "structural pest control," to get rid of insects in buildings. And about one fifth of the total pesticides used in the county, and perhaps more, were applied to urban landscapes, parks, and roadways.

Very few people realize just how much we surround ourselves with chemicals everyday. These chemicals can be found in our food, air, water and soil, and in homes, schools and elsewhere in the community. Some of these chemicals have already been shown to interfere with animals' hormone systems (so-called endocrine disruptors), affecting their growth. Some cause tumors in mice and frogs, though their effects on humans are as yet unknown. Several organizations in Marin have been working together to reduce the use of or actually eliminate these potentially hazardous materials from the community.

Marie Kerpan, the director of Sustainable Marin, recently joined the fight. "We have very specific alternatives to propose, instead of what's being used currently," Kerpan said. "It's a much more collaborative approach to provide information and education, about bringing in experts in organic gardening who know what works and what doesn't work in terms of less toxic substances."

The name for some of possible alternatives is Integrated Pest Management, or IPM, which focuses on preventing pests by using well-informed decisions and natural methods. "IPM doesn't have anything to do with pesticides on its surface," said Kerpan. "They may be in the equation somewhere down the line after you go through a whole range of alternatives, finding out which one would be most suitable for the conditions and then making a decision." She said that pesticides may be considered, but in many cases they do not need to be used.

Integrated Pest Management includes and strongly supports the use of a strategy called biological control. Also called biocontrol, the methods include using helpful bugs, parasites and other organisms to fight against unwanted insects.

According to Ginger Souders-Mason, founder of the Pesticide Free Zone Campaign, some local farms already use biological control. She cites the Draper family's organic farm in San Anselmo as an example. The Drapers already use chickens as one method of controlling insects at the larval stage, but are about to add one more animal to their arsenal.

"He is going to be installing bat houses," Souders-Mason says with excitement in her voice. "And he said the farmers who are beginning to bring bats back in are so surprised that a bat can eat tons of insects, and you don't need the pesticides." The bat project is sponsored by the University of California at Davis and the UC Extension program in Marin.

Marin County's Agricultural Commissioner Stacy Carlsen has been an advocate of education and problem solving when it comes to pesticide use. Before you can see results, Carlsen says, "You have to empower people. You have to train them and you have to show them the tools that are available to them."

Last February the Board of Supervisors put a 30-day ban on all pesticide use in high traffic areas in Mill Valley and Corte Madera. One year before that vote, the Healthy Schools Act was passed, which required schools to notify parents when and where any major spraying would occur in or around schools. Last year, a model Integrated Pest Management plan for schools was implemented in Marin County. Every district now should know the least toxic methods of pest management and how to solve pest problems as they occur. Most impressive is that pesticide use in Marin County decreased by 83% in the past two years, according to Carlsen, putting Marin in the top ten for least pesticide use in all of California's 58 counties.

In a recent interview after his report on IPM to the county Board of Supervisors, Carlsen said, "I think the County is an excellent example of showing good leadership on how to do things differently—how to implement change, how to demonstrate, how to show people and how to practice it."

However, Kerpan, Souders-Mason, and other activists say that much remains to be done. Souders-Mason, for one, would like to see pesticide use stop altogether. "We need to learn to live with insects," she said, instead of conducting what she calls an experiment on ourselves.

## RESOURCES

California Department of Pesticide Regulation: [www.cdpr.ca.gov](http://www.cdpr.ca.gov)

University of California Statewide Integrated Pest Management Program:  
[www.ipm.ucdavis.edu/default.html](http://www.ipm.ucdavis.edu/default.html)

Data on county pesticide use: [www.ipm.ucdavis.edu/PUSE/prepared.html](http://www.ipm.ucdavis.edu/PUSE/prepared.html)

Pesticide Free Zone Campaign: [www.pesticidefreezone.org](http://www.pesticidefreezone.org)

Pesticide Action Network: [www.panna.org](http://www.panna.org)