Pesticide Taints Neighborhood's Drinking Water

FUQUAY-VARINA—Residents of the Pear Meadows subdivision were accustomed to occasional odors and discoloration in their drinking water. They figured that went along with living in the country and getting their water from a well. Then came a rude awakening.

"The first week in February, we came home and found notes attached to our doors," recalls Tammi Fitzgerald, a resident of the neighborhood in southern Wake County. "We were told not to drink our water."

The letter from the state health officials informed residents that a hazardous pesticide had been detected in their water. It warned them not to drink or cook with their water and to limit their bathing to less than five minutes. The news didn't sit well with residents.

"We were shocked," says Keith Elder, one of 38 homeowners in the subdivision near Fuquay-Varina. "There were some people who thought they were being poisoned."

The chemical contaminating the water is called ethylene dibromide, or EDB, a suspected cause of cancer. Tests of the neighborhood's well have detected EDB in concentrations of 1 part per billion—or 20 times the level determined as safe for drinking water by the U.S. Environmental Protection Agency.

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Tammi Fitzgerald and other residents of the Pear Meadows subdivision have relied on bottled water since tests detected a toxic pesticide in their well.

Roger Winstead, The News & Observer

Drinking Water

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"In animal studies, [EDB] has been shown to be an extremely potent carcinogen," says Dr. Ken Rudo, a toxicologist with the state Division of Epidemiology. "In human studies, there has been nothing definitive established. So, it's classified as a probable human carcinogen."

Despite the warnings, Rudo says the levels of EDB found in the neighborhood's water are not acutely poisonous. Instead, the chemical is considered a chronic hazard—that is, one that could cause health problems if residents continue to drink and use the water for long periods of time. But that distinction has done little to allay people's concerns.

"The pesticide problem is something they [agricultural interests] want to ignore—and now it's our problem. Their negligence is our burden."

—KEITH ELDER OF FUQUAY-VARINA
RESIDENT OF NEIGHBORHOOD WITH
CONTAMINATED WELL

"A lot of residents refuse to use the water at all," Elder says. "We run our clothes uptown to wash them. People's everyday routines come to a halt when something like this comes up." Mrs. Fitzgerald has been bathing her daughter with cold water and a sponge, so she won't breathe fumes from the evaporating chemical. "A lot of people might feel like that's being overly protective," she says. "But when you're talking about your own children, what do you do?"

The water problem also has put a damper on real-estate transactions, leaving several homes unoccupied or unfinished. "People who want to sell, can't," Elder says. "People who want to move in, can't. People who want to lock in on new loans, can't—not until the water problems are worked out."

Meanwhile, residents are drinking bottled water. They have hired a lawyer who is negotiating with the town of Fuquay-Varina and Harnett County—both of which have water lines within one-half mile. Residents hope one of the local governments will agree to extend water service to Pear Meadows. They also are trying to find out who is responsible for the contamination.

EDB generally seeps into the groundwater from two sources: pesticide applications and leaking underground gasoline storage tanks. Although the Environmental Protection Agency banned EDB for most pesticide uses in 1983, previously it was widely used as an insecticide and soil fumigant. It also is commonly used as gasoline additive. Rudo, the state toxicologist, says the contamination at Pear Meadows probably resulted from agricultural use or dumping. The land occupied by the neighborhood was once a farm, and investigators so far have identified no other potential contamination sources—such as leaking gasoline tanks.

"The whole area where they built the homes was nothing but a tobacco field," Rudo says. "There wasn't another [contamination] source anywhere. From time to time, we're going to find EDB contamination from pesticide use. But most of the time it's going to be associated with leaking petroleum tanks." (Also see the article, "Contaminated Wells, Odor Problems Sometimes Result from Exterminator Treatments," on pp. 16–18.)

Some environmentalists warn that the Pear Meadows incident is a harbinger for groundwater contamination problems that will result from routine pesticide use by farmers and other applicators across the state. "I think it's a real problem," says Erick Umstead, research director for the Agricultural Resources Center, an environmental group based in Carrboro. "There are a number of pesticides in routine use that are showing up in groundwater. The more we monitor, the more we are going to find."[1]

As evidence, Umstead cites a recent study that found pesticide contamination in 16 percent of the wells tested at 139 farms in Eastern North Carolina from 1989–1992.[2] The study by researchers at the University of North Carolina at Asheville was partially funded by Umstead's group. But state agriculture and environmental officials have harshly criticized the UNC-Asheville study, in part because the researchers have refused to identify the exact locations of all but one of the wells for follow-up tests.

State agriculture officials maintain that routine pesticide applications have rarely caused groundwater contamination in North Carolina. The issue should be resolved, they say, with the completion of a broader study by the state Department of Agriculture and the Department of Environment, Health, and Natural Resources.[3] The two agencies are establishing a statewide system for monitoring groundwater contamination from pesticides in North Carolina. That monitoring program eventually will test water from more than 150 wells in 65 counties, focusing on areas with vulnerable groundwater supplies and large amounts of agricultural production. Preliminary results have found detectable amounts of pesticides in about 6 percent of the 97 wells tested so far.[4] The study is supposed to be completed by April 1995.

The residents of Pear Meadows subdivision, however, don't get much consolation from the state's plans for monitoring and testing groundwater. "I just don't trust the government's ability to regulate these pesticides," Fitzgerald says. "If the world went back to organic gardening, rather than using these pesticides, I think we'd all be a lot better off."

Elder agrees. "The pesticide problem is something they [agricultural interests] want to ignore—and now it's our problem. Their negligence is our burden. I would say that 99 percent of the new subdivisions going up in this area are on current or former farmland. I just want to go up to those people's doors and say, 'Hey, get your water tested for pesticides.'"

—Tom Mather

FOOTNOTES

[1] As quoted by Stuart Leavenworth, "Subdivision's toxic water may indicate wider problem," *The News & Observer,* Raleigh, N.C., April 6, 1994, p. 1A.

[2] See Richard Maas, et al., "An Assessment of Pesticide Contamination of Eastern North Carolina Well Water," Environmental Quality Institute, University of North Carolina at Asheville, Technical Report No. 92-004, May 1992, 34 pp.

[3] For details on study methods and preliminary findings, see Henry Wade, *et al.*, "The Interagency Study of the Impact of Pesticide Use on Groundwater in North Carolina: Study Methods & Interim Status Report," N.C. Pesticide Board, March 31, 1993.

[4] Personal communication from Henry Wade, project coordinator of the Interagency Study of the Impact of Pesticide Use on Groundwater in North Carolina, N.C. Department of Agriculture, June 1994.

O, they tell us there's poison in the well, that someone's been a bit untidy and there's been a small spill. Not a lot, no, just a drop. But there you are mistaken, you know you are. I wonder just how long they knew our well was poisoned but they let us just drink on.

—Natalie Merchant
of 10,000 Maniacs
"Poison in the Well"