

Pollution seeping into groundwater

By Tricia Robertson
Staff Writer

Turn on the faucet and out pours the water you can drink. If you're like most people, you don't give much thought to where it comes from.

The fact is, 55 percent of North Carolinians get their drinking water from vast expanses of water-saturated rock or soil known as aquifers. In the eastern half of the state, the percentage is even higher. A lot of counties rely solely on groundwater," said Rick Shiver, a geologist with the state Division of Environmental Management.

Not only in the last 20 years have laws been passed to protect this important source of drinking water. Environmentalists say the efforts aren't enough, while chemical companies and agricultural interests claim that proposed new rules are too stringent.

The odds are that if your water comes from a well, whether individual or a community system, it is likely free of harmful contaminants.

Groundwater is less exposed to pollutants than rivers and other surface sources, but toxic substances are finding their way into groundwater sources.

Landfills, hazardous waste dumps, faulty wastewater treatment systems, underground tanks and industrial spills are among the common polluters.

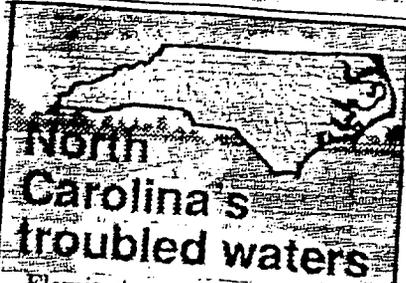
Borden, assistant professor of civil engineering at N.C. State University, said a number of studies indicate that only a small percentage of the nation's groundwater is contaminated. That isn't comforting if your well happens to be polluted.

"The problem is, contamination is where the people are," Borden said.

Often the case, state and federal groundwater standards are lax. "Out of necessity, Shiver said when he went to work for the state in the early 1970s, his department had just started looking at groundwater pollution.

"There wasn't a whole lot of support to pass and implement groundwater quality regulations," Shiver said.

As time wore on, however, attention to groundwater contamination increased and publicity began to draw the attention of lawmakers.



Flemington was one such case. In 1978, New Hanover County's landfill, operated by Waste Industries, was linked to contaminated well water found in the tiny rural community.

The discovery led to a federal lawsuit against the state, the county, the city of Wilmington and a number of private parties, including Waste Industries. That suit,

which is still pending, has cost the defendants more than \$500,000 for water tests and countless more in legal fees.

Flemington "brought some prominence to the problem of groundwater pollution," Shiver said.

In 1973, when it received a permit, the landfill met state specifications.

Regulations designed to prevent another Flemington will require counties to spend \$100,000 an acre or more on lined landfills and, in some cases, systems to treat the runoff.

Recent water tests at the now-abandoned Flemington landfill indicate a much smaller level of pollution than when the contamination was first discovered, but the EPA has not yet determined whether the defendants will have to pay to remove the contents.

Borden said the apparent dissipation is to be expected.

"Over time, if you eliminate the source of pollution, the groundwater will gradually try to clean itself up."

Even the smallest concentrations of some substances can be potentially dangerous, however.

For example, a gallon of trichloroethylene - a common solvent used in dry cleaning and typing correction fluid - can contaminate 1 billion gallons of groundwater, Borden said.

The state adopted a series of groundwater protection laws in 1983. Those regulations, which require that the groundwater beneath industries or landfills be kept pure, are being revised this year.

Among the proposed revisions is the addition of more than 50 substances to the list of monitored contaminants.

Existing groundwater standards are basically the same as state and federal drinking water laws, said Perry Nelson, chief of the groundwater section for Environmental Management.

Nelson explained that drinking water standards apply to the treatment of polluted water to the point that it is suitable for human consumption.

"Groundwater is about as pristine as any of our resources," Nelson said. "If we have an unpolluted source, then we want to keep pollution out of it."

Abiding only by drinking water guidelines, he said, is akin to sanctioning the pollution of aquifers.

Under the proposed regulations, long-term health risks would be taken into consideration in setting maximum contaminant levels. But, Nelson said, the bottom line is: "If we can detect it, then there's too much of it."

The proposed guidelines have drawn opposition from agricultural and industrial groups, Nelson said.

Farmers are worried that the regulations will be so stringent that they will have to cut back on the use of pesticides and fertilizer, making them less competitive than their counterparts in other states.

And companies that produce the chemicals fear the regulations will cost them business. "If farmers aren't using the product, then there is no market for it."

"We don't want to place an obstacle for them," Nelson said. "Yet we have an obligation to protect our resources."

He said the industries' concerns are still being weighed. He did not know whether the opposition would change the scope of the regulations.

Environmental groups see a number of deficiencies in the current

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regulations and are worried that pressure from other interest groups might dilute the revised guidelines.

Joseph Hughes of the Clean Water Fund of North Carolina said one of the biggest problems with groundwater regulations has been the lack of centralization. Various agencies in the departments of Human Resources and of Natural Resources and Community Development have been responsible for enforcing different parts of the groundwater regulations.

Hughes is director of a groundwater research project for the Clean Water Fund, a private, non-profit group. The study, he said, will examine "hundreds of confirmed cases of groundwater pollution."

"What you find is that there is no one agency that deals with the problem of groundwater," he said.

"There is truth to what they say," Shiver agreed.

He said a proposal to consolidate government agencies has been before the General Assembly and could help solve that problem.

Enforcement also was hampered late last year, when the N.C. Court of Appeals ruled that state agencies do not have the authority to determine civil fines. The ruling is being reviewed by the N.C. Supreme Court.

"If it is upheld, we certainly would have less regulatory clout," Nelson said. The division would still be able to revoke permits and require clean-ups, however.

"I think there is a reasonable amount of enforcement authority," Nelson said.

Another deficiency environmental groups see is that to date, most regulations have been adopted only in response to incidences of pollution, and they deal primarily with clean-up efforts rather than prevention.

Shiver agreed that regulations have been slow in coming.

"You've got to convince the public and the lawmakers there's a need for it," Shiver said. Usually, that means waiting for a disaster to happen.

But he thinks the state and the

federal government are coming around.

As an example, he cited new federal regulations on underground storage tanks. Although part of the legislation requires owners to carry insurance to cover clean-up costs in case of a spill, it also sets out minimum standards for all underground storage tanks.

Those regulations apply both to existing and new tanks, with a stipulation that the older tanks, which are most likely to leak, be the first to comply.

"I think we're beginning to make progress on it," Shiver said. "The bottom line is, it is far cheaper to prevent (pollution) than to clean it up."

"My sense of things is the state is making some slow progress," said

Bill Holman, lobbyist for the Sierra Club and the Conservation Council of North Carolina. "But while we are making progress on the regulatory front, there's more groundwater pollution every day."

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