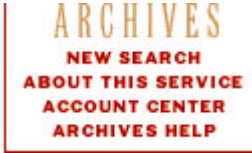


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Contaminant From Gas Is Found in Water

By JOHN RATHER

A GASOLINE additive intended to reduce air pollution, in large-scale use on Long Island for less than 10 years, is rapidly moving through the region's groundwater, penetrating drinking water supplies.

The additive, M.T.B.E., for methyl tertiary butane ether, has been found in the highest concentrations in shallow wells near gas stations and industrial areas where petroleum spilled. It is also being detected in nearly one in five of the deeper public wells that are the Island's principal sources of drinking water.

The Federal Environmental Protection Agency has classified M.T.B.E. as a possible carcinogen and said last month it would ask Congress to stop requiring oil companies to add it to gasoline. The agency acted after growing numbers of reports of M.T.B.E. entering tap water across the country.

Some people whose water has been contaminated have complained of asthma, headaches and nausea. They have also said the additive made tap water smell like turpentine, paint thinner or petroleum.

A list of M.T.B.E. spill sites compiled by the New York State Department of Environmental Conservation, made public by a lawyer who is suing oil companies on behalf of private well owners in New York, showed 198 locations in Nassau and 183 in Suffolk, the highest for any counties in the state.

The new sites expand an inventory of contaminated and toxic sites that pock Long Island, particularly along the South Shore of Nassau and western Suffolk. Because Long Island gets all its drinking water from underground aquifers, it is particularly vulnerable to contaminants seeping into groundwater from above.

The M.T.B.E. revelations follow state findings reported two months ago of pervasive pesticide contamination in private wells on the East End of Long Island, where agricultural chemicals not used for 20 years and their metabolites were discovered in water samples. Most of Long Island's estimated 50,000 private wells are in the East End towns of East Hampton, Southampton, Southold and Riverhead.

A state registry also lists 132 inactive hazardous waste sites concentrated in Nassau and western Suffolk. More than 100 are classified as posing a significant threat to public health or the environment.

Government officials said M.T.B.E. differs from agricultural and other industrial and petroleum chemicals because it is readily soluble in water and moves more swiftly once it has entered groundwater. They said it is also more difficult and expensive to remove from the water.

Small quantities of M.T.B.E., which is designed to enhance engine combustion, appeared in gasoline on Long Island in the late 1970's. The Government mandated increased use in the early 1990's to lower automobile emissions of carbon monoxide and other contaminants in urban areas; the additive now accounts for up to 15 percent of the volume of a gallon of gasoline.

M.T.B.E. is one of hundreds of chemicals that have been found in groundwater in virtually all parts of Long Island. The contaminants, many the result of spills and dumping from 20 to 50 years ago, often travel in underground plumes that extend farther and sink deeper into groundwater as time passes.

While water purveyors, health officials, environmentalists and others differ in their views on the condition of Long Island's groundwater, some argue that M.T.B.E. contamination is further evidence that the supply is in danger.

"The Long Island groundwater system is in immense peril," said Walter Hang, the president of Toxics Targeting, a company in Ithaca that uses state data to plot contamination sites for home and land buyers. "There are literally thousands of leaking underground tanks, landfills that haven't been cleaned up and toxic dumps of every description, and they are all leaking directly into the sole source of drinking water for more than three million people."

Michael A. LoGrande, the chairman and chief executive officer of the Suffolk County Water Authority, the public water supplier for 80 percent of Suffolk residents, said contaminants in water, which are measured in parts per billion, should be kept in perspective.

"The estimates are that we have 100 to 120 trillion gallons of water in Nassau and Suffolk, and that's an extraordinary amount," Mr. LoGrande said. "The water supply is not in peril, but we need to be vigilant."

Mr. LoGrande said that M.T.B.E. in quantities of one to two parts per billion had been found in 80 of the authority's 426 wells. State guidelines say 50 parts per billion is the level at which action is warranted. The guideline is as low as 20 parts per billion in some states.

"I can't say yet that we have seen the peak," Mr. LoGrande said. "We believe now it is probably in the rainfall" as a result of tailpipe emissions.

Rain recharges groundwater supplies throughout Long Island, including in the Pine Barrens, where New York created a 100,000-acre preserve to protect pure groundwater for future use.

More concentrated threats come from spills. The New York State Department of Environmental Conservation has a list of 30,000 petroleum spills in Nassau and Suffolk ranging from very small to "huge," said Mark Lowery, a department spokesman. He said 2,500 to 3,000 spills occurred on the Island each year. Some of the most serious involve leaks or ruptures in underground gasoline storage tanks.

Because of M.T.B.E. and other contaminants, Mr. LoGrande said he expected that remaining wells in the upper glacial aquifer, the aquifer nearest the surface, would be closed in the next decade. "I don't know how they can continue using that," he said. "They are picking up more and more contamination."

Most public supplies are drawn from the Magothy aquifer, the middle of Long Island's three aquifers, which is separated from the Upper Glacial aquifer by clay. The state strictly limits use of the third and deepest aquifer, the Lloyd, to keep it available for the future.

Although New York has not required water monitoring for M.T.B.E., health officials in Suffolk County began testing 10 years ago and were "well aware of the problem right off the bat," said Martin Trent, the chief of the Bureau of Water Resources for the Suffolk health department.

"As more and more of it showed up, we became more and more concerned," Mr. Trent said.

Nassau health officials started testing last year, said a department spokeswoman, Cynthia Brown. She said the Nassau health department now required water companies to test for the additive. "Any discharge of contaminants into the groundwater degrades the water quality and is a concern for regulatory agencies," she said.

The Long Island Water Conference, an association of more than 50 public water supply systems in Nassau and Suffolk, said nearly 20 percent of the 800 public supply wells in the two counties had measurable amounts of M.T.B.E. Only one well, in Montauk, has been closed because of the additive, the conference said.

In one case, a customer complaint about the odor of tap water led to findings of low levels of M.T.B.E. in two of three wells at a pumping station in the Riverhead Water District. The contamination was later traced to a spill at a gasoline station a half a mile away, the conference said.

Paul J. Granger, the conference chairman and the superintendent of the Plainview Water District, said levels found in the districts of conference members were less than five parts per billion, or less than a tenth of the state guideline of 50 parts per billion. At those levels, he said, water companies were not taking steps to remove the additive.

But he said that when the levels reached about eight parts per billion, an odor became detectable at the tap and companies felt compelled to take action. This raises their treatment costs, which eventually will result in higher water rates, he said.

Mr. Granger said that M.T.B.E. removal required carbon filtration as well as an air-stripping treatment at the wellhead that is more extensive than the process now used to remove organic compounds.

Mr. Granger said the conference would consider suing oil companies if extensive treatment was required. "It's not fair for our customers to pay for it," he said.

Lewis J. Saul of Washington, the lawyer for private well owners, said he would seek a court order in State Supreme Court in Manhattan directing oil companies to test wells for M.T.B.E. and pay for remediation and damages. Mr. Saul said the scope of the problem in New York was kept from the public by regulators. "I don't know why they kept this so quiet," he said. "Someone else would have to tell you that."

Officials of the Department of Environmental Conservation denied that the agency withheld information and said the internal list of M.T.B.E. sites obtained by Mr. Saul was raw data that could contain errors and needed evaluation prior to release.

"It's not that we were hiding the data," said Mr. Lowery, the spokesman for the department's Long Island regional office.

Mr. Granger said the department's failure to release the information sooner was part of a more general failure to give water purveyors timely notice of contamination.

"If we knew when they knew, we could take steps sooner to change pumping patterns and prevent problems," Mr. Granger said.

The conference and the Suffolk County Water Authority, the Island's largest public water company, have called for an end to M.T.B.E. use. "They should not play games with it, they should just ban it," said the water authority chairman, Mr. LoGrande.

But Mr. Granger and Mr. LoGrande emphasized that all the water now reaching customers was safe, meeting and often exceeding government standards. A water company news release on Aug. 17 said that worries about M.T.B.E. affecting drinking water were unwarranted.

However, Sarah J. Meyland, a groundwater expert and the executive director of the Citizens Campaign for the Environment, said the assurances from the water conference were "a little like skiers out in the mountains with an avalanche headed in their direction saying they don't have a problem right now."

"The one thing everyone knows about M.T.B.E. is that it moves through the groundwater very quickly," Ms. Meyland said. "We have already found it extensively just by looking for it in the context of known gasoline spills. Now it is going to migrate down to the point where public water supply wells take their water, and that is when the real impact will be felt."

"The groundwater supply in Nassau and Suffolk will continue to show the presence of chemicals that the residents of Long Island released into the environment," she said. "And the M.T.B.E. example simply shows that as other exotic chemicals are looked for, we will find them."

James T. B. Tripp, the general counsel for the Environmental Defense Fund in Manhattan, said careful management of water pumping was crucial to avoid drawing plumes of contamination into public supplies.

"It's not the case that contamination is widespread through the Magothy aquifer, even in Nassau County," said Mr. Tripp, a board member of the Suffolk County Water Authority. "But as clean water gets pumped from the Magothy, it can draw in surrounding waters, and that's why its very important to know where these plumes are."

Mr. Tripp said the locations of major plumes were known. But Mr. Hang of Toxics Targeting said there were "unquestionably hundreds if not thousands of plumes that have not been detected, and they are meandering underground until they penetrate homes, schools, businesses and wells."

Mr. Hang said that although state law mandated cleanups, regulatory agencies were overwhelmed and unable to assure cleanups were carried out. Disputes over responsibility for spills and how cleanup costs should be divided among current and former property owners can also create years of delays.

Sometimes remediation is ineffective or ended before it is complete. A gasoline spill reported in 1992 at a service station on Merrick Road in Valley Stream, thought to have been cleaned up, instead spread to the nearby Clear Stream Elementary School. Discovery of the spreading contamination, which included M.T.B.E., was made in June. The school district has now stopped using a well on school property for watering the grounds.

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