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Thousands of Buildings Lack Required Water Valve, New York Records Show

By ANTHONY DePALMA

As many as 85,000 large residential and commercial buildings in New York City lack special valves on their water connections that could prevent hazardous substances from being sucked into the public water system, according to city records.

In investigating the presence of a chemical, tetrachloroethylene, in the drinking water supply in parts of Queens last week, city officials identified a car wash as having contributed to the contamination at least partly because it did not have the valve installed on one of its water supply lines. The amount of the contaminant was considered too low to pose a serious health problem.

The records also show that about 26,000 buildings in the city represent an especially high risk because factories, gasoline stations or businesses that handle hazardous materials housed in those buildings have not installed the device, called a backflow prevention valve.

State law has required that the device be installed on certain categories of buildings since 1981.

Critics say the city's lax enforcement of the rules on backflow valves endangers the water system and encourages owners to ignore the law. They also say the city does little to ensure that owners have the valves tested once a year to make sure they are not clogged, as required in the state sanitary code

Last year, only 2,085 such tests on the valves were conducted in the city, according to a 2006 report by the Department of Environmental Protection, which operates the city's water system. But fewer than 2,000 violations were issued for the thousands of property owners who failed to conduct the tests, according to the report.

City officials admit that compliance goals set by a city industry task force in 2000 have not been met. But they insist that the city's water supply is safe.

The backflow prevention valves are generally located near water meters inside commercial, industrial and large residential buildings. They are attached to water lines completely separate from wastewater lines that run to the sewers, and are designed to prevent contaminated water within a building's systems from being drawn back into the water mains.

For example, the chemically treated water in a large boiler could flow back into the water supply if water pressure into the building suddenly dropped. The contaminated water then could travel to other buildings.

New buildings generally install the devices during construction. One and two family homes are exempt.

Stewart O'Brien, executive director of the Plumbing Foundation City of New York, an industry group, said the city's failure to rigorously enforce the rules put thousands of New Yorkers at risk.

"These valves are like sprinkler systems in buildings," Mr. O'Brien said. "If you don't have a fire, it's not an issue. In this case, nobody worries about it unless there's an incident."

Some businesses object to the high cost of installing the valves, which can be \$8,000 to \$16,000. For their part, licensed plumbers have a financial interest in seeing the law enforced because they install the valves and perform the yearly inspections.

Emily Lloyd, commissioner of the Department of Environmental Protection, said that historically, the backflow valve program had not been as high a priority for the department for assuring water quality as its testing and monitoring program. "But testing is really the way we assure the public of water quality," she said.

Ms. Lloyd said inspectors regularly test for 280 different substances in the water and conduct more than 300,000 water analyses a year. She also said that the federal [Environmental Protection Agency](#) approved of the city's enforcement record for backflow preventers before it recently exempted the city from requirements to filter its upstate water supply for 10 more years.

Still, Ms. Lloyd said, the law requires that the drinking water system be adequately protected from backflow episodes. And following the recent contamination in Queens, she said, the department will try to increase the number of inspections it does to determine whether buildings are properly equipped.

The [Real Estate Board of New York](#), which represents the owners of many of the largest buildings in the city, has criticized the law requiring the devices as being cumbersome and confusing.

Marolyn Davenport, senior vice president of the board and a former member of a backflow prevention task force established by the city, said the numbers of buildings that have installed valves is probably much higher than city records suggest. But she said unclear reporting requirements might have kept many businesses from completing all the steps necessary to be in compliance with the law.

"People routinely don't get things signed off, but that doesn't mean the valve is not there," Ms. Davenport said.

The chance of contaminated water flowing back into water mains is considered relatively small, though potentially serious.

In one of the few reported cases, a school in Queens had air conditioning coolant back up into the drinking water in 1998.

But the contamination in Queens this month, detected during routine water testing, underscored the potential danger. Tetrachloroethylene is known to cause liver problems and an increased risk of cancer if consumed over a long period.

The city Department of Health and Mental Hygiene did not consider the contamination an immediate health

threat because the amount of the chemical found in the water was minute, and the contamination was expected to last only a few days.

Still, officials told people who were concerned to use bottled water for cooking and drinking until the problem cleared up.

Water samples this week showed no trace of tetrachloroethylene, Ms. Lloyd said. After inspecting hundreds of buildings in the area, officials are focusing on the Cambria Car Wash on Linden Boulevard, which they suspect was at least a partial source of the contamination.

Ms. Lloyd said that the car wash drew water from a contaminated well and from two connections to the city water system, one legal and the other illegal. Somehow, the tainted well water crossed over into the illegal connection, which did not have a backflow preventer, and seeped into the water mains.

The level of tetrachloroethylene in the well was considered low, however, and officials believe some other source, still unidentified, also contributed to the contamination.

Ms. Lloyd said her department was authorized to issue violations and eventually terminate water service to buildings without a backflow prevention device.

But records show that in the past 25 years, the city has shut off the water to only three commercial buildings that did not have the valve installed.

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