

Nation

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States look harder for mercury

More tests mean more reports of the pollutant

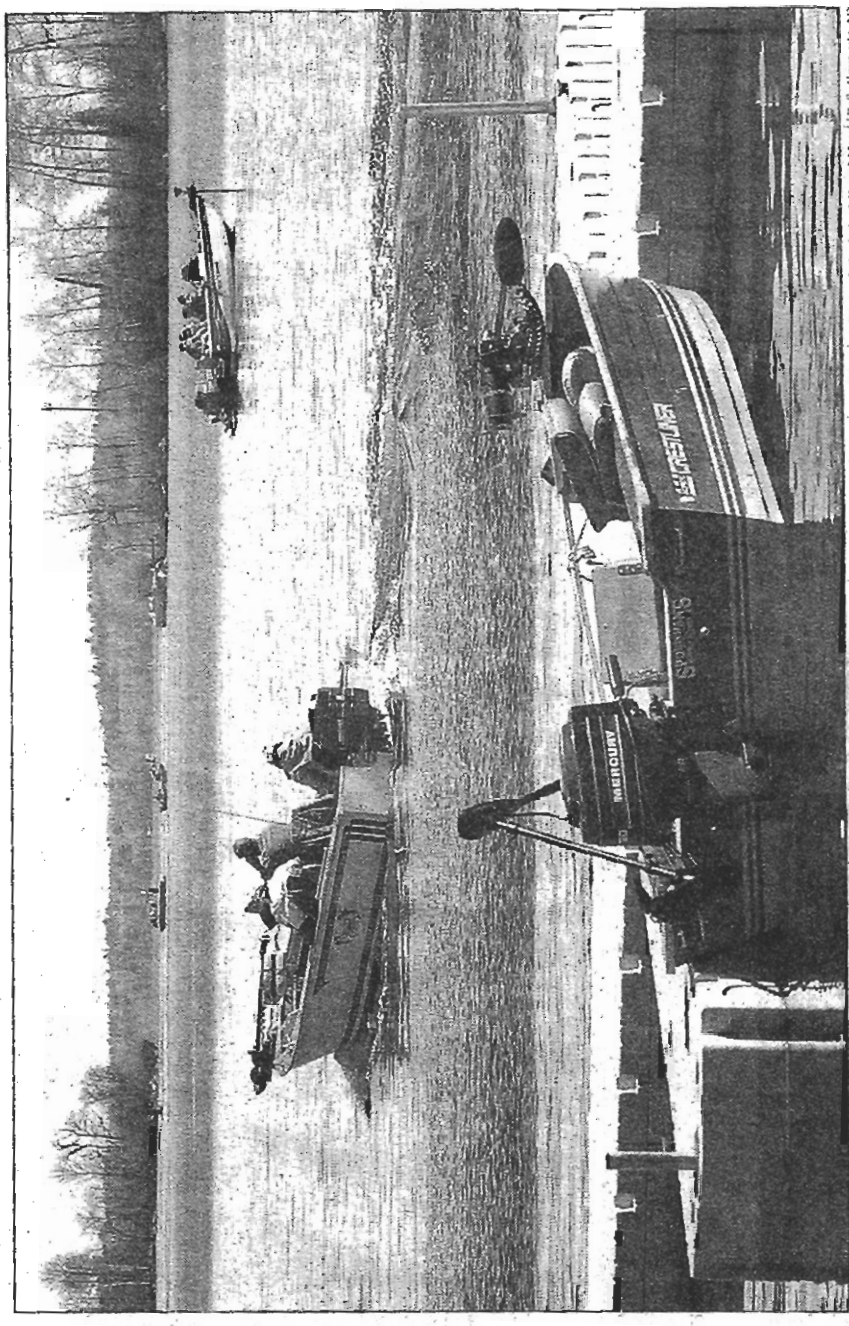
By Traci Watson
USA TODAY

Never before have so many warnings been posted for so many of the nation's rivers, lakes and coastal waters advising people not to eat the fish — and the number of warnings is likely to go up.

The Environmental Protection Agency said Tuesday that 846,000 miles of U.S. rivers and 14 million acres of U.S. lakes are so tainted with mercury and other pollutants that eating their fish could pose health problems for children and during pregnancy.

Federal environmental officials stressed that the numbers don't mean that mercury contamination is worse now than a few years ago. What they do mean is that state officials have been looking harder for such contamination, and the harder they look, the more mercury contamination they find.

"Almost every freshwater body in the world is contaminated with mercury, from sources all over the world," said Johan Vorekamp, a mercury expert at Wesleyan University in Connecticut.



By Mark Sauer, (Virginia, Minn.)/Merced Daily News, via AP

Northern Minnesota: Fishing boats go out on Vermillion Lake in May. The state has issued fish consumption guidelines for the lake.

Not hard to find

The problem hasn't been difficult to document, EPA chief Michael Leavitt said. "More than 85% of the time that you test a water, you'll find some content of mercury," he said.

In addition, states are issuing more warnings that cover every one of their rivers and every one of their lakes, rather than specifying a limited number of rivers and lakes.

Montana and Washington, for example, decided to place mercury warnings on all their rivers in 2003. That accounted for roughly 250,000 of the 300,000 miles of river that gained warnings in 2003.

The EPA has links from its Web site to fish advisory programs in all 50 states at www.epa.gov/waterscience/fish/states.htm. Not all of the states have updated information on their sites, however.

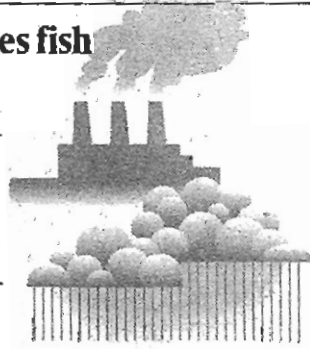
The number of warnings is likely to increase as states continue to test lakes and rivers they've never tested before. And though mercury emissions in the USA are going down, there's no guarantee that mercury pollution in lakes and rivers will do the same.

That's because mercury travels into the USA from around the world. China and other East Asian nations are especially big sources, as is Western Europe. More than 50% of the mercury pollution in the USA comes from outside the country, Leavitt said.

Leavitt declined Tuesday to speculate on when fish in all of the nation's lakes and rivers would be safe for everyone. He

How mercury reaches fish

About 80% of mercury pollution comes from burning coal as fuel for power plants and in incinerating garbage.



Mercury usually travels through the atmosphere as dust particles for up to a year before being carried back to Earth by rain.



The rain ends up in lakes, rivers and streams, carrying mercury with it.



Mercury is ingested by bacteria, which convert it to methylmercury.



The methylmercury increases as it travels up the food chain, from bacteria to tiny shrimp to little fish to big fish.

Sources: USA TODAY research and John Vorekamp, Wesleyan University

By Sam Ward, USA TODAY

said the "good news" is that states are doing more monitoring and that the USA is cutting its own emissions of mercury.

But he said cleaning up America's waters will require global cooperation. "Fish advisories and their discontinuance will be dependent on our capacity to persuade others in the world" to cut their mercury emissions, Leavitt said.

Famous bodies of water

Mercury warnings apply to well-known bodies of water such as Lake Champlain on the New York-Vermont border; San Francisco Bay; Flathead Lake, Montana's second-biggest lake; and Massachusetts' Walden Pond, where Henry David Thoreau lived in the

woods and wrote *Walden*, a book about his experiences.

Environmental officials say U.S. mercury emissions fell from 1990 to 1999. More recent data is not available.

The reductions were the result of new federal rules limiting mercury emissions from incinerators, especially those that burn medical waste and garbage.

There are still some places where mercury does not contaminate the fish. Denise Keehner of the EPA said Tuesday that more and more states are issuing "safe eating guidelines" highlighting lakes and rivers that have no contamination problems.

Contributing: Elizabeth Weise
► **Wide contamination, 1A**

Most people aren't in danger

A new report from the Environmental Protection Agency about the spread of pollution in rivers and lakes across the nation is bad news for the environment — but not a huge danger for most Americans.

That's because the state advisories are for sport-caught fish, not fish bought in supermarkets and sold in restaurants.

Q: What is this new EPA report all about?

A: Every year for the past 12 years, the EPA has released a list of all fish-consumption advisories for sport-caught fish issued by individual states. The list shows which states have at least some fish-consumption advisories in place (only Wyoming and Alaska don't) and whether the advisories are for individual waterways or for all lakes, rivers and streams.

Q: What are "sport-caught fish?"

A: Sport-caught fish are those caught by local fishers in lakes, streams, rivers and creeks. They don't include fish grown commercially in fish farms or caught by commercial fishing boats.

Q: Why are states telling people what fish they should and shouldn't eat?

A: States haven't passed laws about what people can eat; they just make recommendations based on tests for certain potentially dangerous chemicals conducted on fish caught in local waterways.

Ninety-eight percent of all advisories in the USA are based on four chemicals: mercury; PCBs (industrial chemicals that were banned in 1977); DDT (banned starting in 1973); and chlordane (a pesticide banned in 1988).

The recommendations tell residents who are sensitive to such contamination not to eat too many meals that include sport-caught fish. That usually

means no more than two meals a month.

Q: What are the dangers?

A: The biggest on-going issue in most states is methylmercury. That's the biologically active form of mercury, and it's the one that shows up in fish. Methylmercury is a potent toxin that destroys nerve tissue and is especially damaging to developing brains.

Research shows that methylmercury can cause the developing brain to fail to make crucial neural connections, leading to possible lowered intelligence and concentration problems. The EPA recommends that young children and women of childbearing age limit their consumption of foods that may contain mercury, such as fish caught in contaminated lakes and streams.

Q: What about men and women who aren't going to have kids?

A: While you wouldn't want to eat mercury by the spoonful, men and women who aren't going to have children are at much lower risk because it takes much higher doses to damage already completed brains. Most states set one suggested limit for kids and pregnant or breast-feeding women, another for the general population.

Q: How does methylmercury harm a person physically or mentally?

A: Scientists at the Harvard School of Public Health have found that methylmercury contamination can cause heart damage and irreversible impairment to brain function in children, both in the womb and as they grow. Electrical signals in the brains of children exposed to mercury aren't transmitted as quickly as in unexposed children. They also found that mercury appears to weaken the heartbeat.