



**House
Legislative
Analysis
Section**

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BAN MERCURY THERMOMETERS

House Bill 4599 as enrolled
Public Act 578 of 2002
Second Analysis (10-10-02)

Sponsor: Rep. Jack Minore
House Committee: Commerce
**Senate Committee: Natural Resources
and Environmental Affairs**

THE APPARENT PROBLEM:

According to the federal Environmental Protection Agency,

Mercury is a toxic substance that can harm both humans and wildlife. Many different products, including thermometers, contain mercury. When these products break, the mercury can evaporate, creating a risk of dangerous exposures to mercury vapor in indoor air. Moreover, mercury that volatilizes when products break in the home or in the waste disposal system enter the environment and can be deposited in lakes and rivers, where it can be transformed into highly toxic methylmercury. Very small deposits of mercury can do significant damage. One gram of mercury per year is enough to contaminate all the fish in a lake with [a] surface area of 20 acres.

A representative of the Ecology Center in Ann Arbor testified before the House Commerce Committee that "mercury attacks the central nervous system and can cause tremors, impaired vision and hearing, developmental deficits during fetal development, attention deficit, and developmental delays during childhood." Fetuses and children under six are said to be especially vulnerable. The contamination of lakes and fish by mercury is said to be an important public health problem.

As mentioned, one source of mercury is the mercury thermometer. (Other product sources include batteries, automobile switches, and fluorescent bulbs. Coal-fired electric utilities, municipal waste combusters, and medical waste incinerators are said to be the principal sources of mercury in the air.) Environmentalists say that mercury thermometers are responsible for ten percent of the mercury in the municipal waste stream. Moreover, they say, in one recent year, poison control centers received 18,000 calls from people who had broken a mercury fever thermometer in the home. While health officials say

that breaking a thermometer is not likely to threaten an individual's health, they report that there have been cases of serious illness and even death related to the exposure to mercury from fever thermometers; young children are said to be most susceptible. The EPA has said, "Clearly, thermometers are not the major source of mercury to the environment, but they are a meaningful small source that can be relatively easily reduced". Environmentally safer and affordable alternatives to mercury fever thermometers are readily available, including digital electronic thermometers.

As a result, a number of states have banned or limited the sale of mercury thermometers, including California, Oregon, Rhode Island, Maine, Maryland, Indiana, Minnesota, and New Hampshire. Some local units of government across the country have issued bans as well, including Ann Arbor. A recent report from the American Academy of Pediatrics called for the end to the use of mercury-containing thermometers, according to an AAP press release. Reportedly, the EPA and the American Hospital Association have signed a memorandum of understanding agreeing to try to eliminate mercury from health care, and some national retail chains have stopped selling mercury thermometers. Legislation has been introduced that would ban the sale (with some exceptions) of mercury thermometers in Michigan.

THE CONTENT OF THE BILL:

The bill would amend Part 172 of the Natural Resources and Environmental Protection Act (NREPA) to prohibit, beginning January 1, 2003, a person from selling, offering to sell, or offering for promotional purposes a mercury thermometer in the state or for use in the state, except in certain specified circumstances.

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The bill would permit a mercury thermometer to be sold or offered when its use was required by state or federal statute, regulation, or administrative rule or for pharmaceutical research purposes. The bill would permit the sale or offering of mercury fever thermometers by prescription. A manufacturer of mercury fever thermometers would be required to supply with each thermometer sold by prescription clear instructions on the careful handling of the thermometer to avoid breakage and on proper cleanup should the thermometer break.

The bill's provisions would be enforced by the Department of Environmental Quality. A violation would be a misdemeanor punishable by imprisonment for not more than 60 days or a fine of not more than \$1,000, or both, plus the costs of prosecution.

The term "mercury thermometer" would be defined to mean a product or component, other than a dry cell battery, of a product used for measuring temperature that contains mercury or a mercury compound intentionally added to the product or component. A "mercury fever thermometer" would be defined as a mercury thermometer used for measuring body temperature.

MCL 324.17201

BACKGROUND INFORMATION:

The web site of the federal Environmental Protection Agency contains a great deal of information on mercury generally and on mercury thermometers. The address is www.epa.gov.

FISCAL IMPLICATIONS:

The House Fiscal Agency reports that the bill would result in increased costs to the Department of Environmental Quality. The actual budget impact would depend on the number of inspectors added. The \$1,000 fine for violations would go to local government to support public libraries. (HFA fiscal note dated 2-11-02)

ARGUMENTS:

For:

Proponents say that the bill represents a small but significant step in reducing the threat to the environment and public health from mercury. Michigan would join the list of states (and local jurisdictions) prohibiting or limiting the sale of

mercury thermometers. While the obvious benefit from banning mercury thermometers is to individual households, there will also be some benefit to society at large. The federal EPA notes that when mercury thermometers break or are disposed of, say in incinerators, mercury enters the environment. The agency has said that "combustion of various mercury-containing products in municipal solid waste is the second largest source of mercury to the environment [and] the fourth largest source . . . is combustion of medical wastes. These two categories together account for nearly one-third of the mercury released to the atmosphere". Federal officials say mercury thermometers contribute 17 tons of mercury each year to the municipal solid waste stream. And each year thousands of people break mercury thermometers in their homes. There are a number of suitable alternatives to mercury fever thermometers; indeed, some retailers have already stopped carrying the mercury thermometer. The bill takes a prospective approach; it does not anticipate removing existing mercury thermometers but prohibiting future sales. It should be also noted that the bill allows for special circumstances when such thermometers may be necessary.

Analyst: C. Couch

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.