

Why it's a problem.

Where it is.

What to do.

The Commonwealth of Massachusetts Jane Swift, *Governor* Executive Office of Environmental Affairs Bob Durand, *Secretary* Department of Environmental Protection Lauren A. Liss, *Commissioner*

Getting Mercury Out of Schools

Mercury is poisonous and can cause damage to the nervous system, kidneys, liver and immune system. Typical exposures to mercury come from breathing its fumes during an accidental spill or leak, or by eating fish contaminated with mercury. Children are most at risk to mercury's toxic effects and can suffer potentially serious neurological damage.

When products containing mercury are broken or leak, mercury can evaporate and be inhaled by people in the area. When products containing mercury are thrown in the trash or dumped down the drain, mercury can contaminate lakes, ponds or the ocean. It can concentrate in certain fish, potentially causing harm to people who eat them. Even small amounts of mercury can contaminate the environment. One pound of mercury may be enough to render more than 1,000,000 pounds of fish unsafe to eat.

Items that contain mercury and jars of elemental mercury are a liability for schools. Improper handling of mercury and spill incidents can cause significant financial and legal problems. At a school in Connecticut, the simple act of cleaning out a supply closet resulted in 12 broken mercury laboratory thermometers. The school was evacuated and paid clean-up costs totaling \$6,000. At another school, a broken mercury barometer resulted in clean-up costs totaling \$200,000.

Because of mercury's toxicity, especially to children; its ability to bioconcentrate into fish and its persistence once released into the environment, mercury pollution has been the target of extensive pollution prevention efforts in Massachusetts and the northeast. In June 1998, the New England Governors and the Eastern Canadian (NEG-ECP) Premiers unanimously adopted a comprehensive regional Mercury Action Plan (http:// www.cmp.ca/press-neg.htm) calling for the virtual elimination of anthropogenic mercury releases. Interim mercury reduction goals of 50% by 2003 and 75% by 2010 were also established. Massachusetts played an important role in developing the NEG-ECP Mercury Action Plan and has adopted its own state-wide Zero Mercury Strategy. Reducing the use of mercury in products and getting mercury out of schools are priorities of both the regional and state plans.

Where are items containing mercury in schools commonly found?

- Medical offices
- Chemistry, Physics and Biology classrooms and laboratories
- School buildings and maintenance areas
- Heating, ventilation and air conditioning shops/laboratories in vocational-technical schools

Do you work with any of these items that may contain mercury?

- · Fever, laboratory, candy or oven thermometers
- Thermostats
- Blood pressure devices
- Mercury Switches
- Relays
- · Gauges: manometers, barometers, vacuum gauges
- Laboratory chemicals
- Thermostat probes
- Fluorescent lamps
- Mercury vapor lamps
- Metal halide lamps
- High pressure sodium lamps

If you do, take note. It is unsafe and, in many cases illegal, to dispose of mercury products in the trash, down drains or outdoors. Many products containing mercury must be handled as universal waste (a special designation of hazardous waste) or, in certain cases, hazardous waste. As municipal entities, schools may take advantage of state purchasing contracts with certain vendors that provide mercury recycling and disposal services at a negotiated rate. For information on these state contracts, see the Massachusetts Operational Services Division (OSD) publication "A Guide to Massachusetts State **Contracts for Hazardous Material Collection and** Management." A copy can be downloaded from www.state.ma.us/osd/enviro/material.htm, or contact Marcia Deegler at 617-720-3356 or Marcia.Deegler@osd.state.ma.us.

How to Use this Guidance

This Guidance was prepared while working with many Massachusetts schools to remove items that contain mercury and to find suitable alternatives. This piece itself is a stand- alone informational piece written for the Superintendent, Principal or Business Manager of a school or school system. The following fact sheets may accompany this piece:

- Mercury in Science Laboratories and Classrooms
- Mercury in School Buildings and Maintenance
 Areas
- Mercury in the Medical Office
- Mercury in Heating, Ventilation and Air Conditioning Laboratories in Vocational Schools
- Establishing a Hazardous and Universal Waste Collection Area
- Sample Mercury-Free Purchasing Policy and Resolution

The fact sheets are also stand-alone informational pieces and are intended to be distributed to the appropriate personnel within the school or school system.

For example, "Establishing a Hazardous and Universal Waste Collection Area" may be most appropriate for the science chairperson or the facilities manager or both if a school needs two or more collection areas to be set up. "Mercury in the Medical Office" may be most useful to the nurse.

Additional Information:

Toxics Use Reduction Case study on Burlington, Mass. schools by the Mass. Office of Technical Assistance http://www.mass.gov/ota/cases/burlington.htm

Massachusetts Fish Consumption Advisories from the Mass. Department of Public Health http://www.mass.gov/dph/beha/fishlist.htm http://www.mass.gov/dph/beha/mercury/merchp.htm

Regional Mercury Projects on the website of the Northeast Waste Management Officials' Association http://www.newmoa.org/prevention/mercury/schools

"Mercury in Massachusetts: An Evaluation of Sources, Emissions, Impacts and Controls," Mass. Dept. of Environmental Protection http://www.mass.gov/dep/files/mercury/hgtoc.htm

Burlington, Mass. Board of Health http://208.58.133.9/health/Mercury.htm

Contact the Massachusetts Mercury Hotline at 1-800-866-9MERCURY (1-866-963-7287).