

Action Steps for Buildings and Grounds Superintendents

- Cleanup of spills even as small as the amount in a fever thermometer requires training and the right tools. Make sure you know how to contain a spill, how to clean up small spills and when to hire trained professionals. (Refer to “Guidelines for Cleanup of Mercury Spills,” for more information.)
- **Never use a vacuum cleaner, mop or broom to clean up a mercury spill!** Heat from the vacuum’s motor will increase the amount of mercury vapor in the air. Mops and brooms will spread the mercury, making proper cleanup more difficult and costly. The vacuum cleaner, mop or broom will become contaminated and require disposal as hazardous waste. If you do not know the cleanup protocols, do not attempt to clean up a mercury spill because you might spread the contamination.
- Contact your district Board of Cooperative Educational Services (BOCES) or local health department for additional guidance. A quick call for guidance can prevent a minor spill from becoming a big problem. Work with your superintendent to notify the local health department and the New York State Department of Environmental Conservation (NYSDEC) about a spill.
- Learn about proper disposal/recycling of mercury-containing products and cost-effective options. (Schools should NOT throw them out in the trash!) Clothing and other items directly contaminated by mercury must be disposed of as hazardous waste. Elemental mercury and mercury-containing items may be brought to a recycler or included in household hazardous waste collection days if allowed by the sponsoring municipality. If this is not allowed, schools qualify for reduced regulations when these mercury devices are recycled as long as the school generates less than 220 pounds of hazardous waste per month (known as Conditionally Exempt Small Quantity Generators, or CESQGs). (Refer to “Disposal and Recycling Options for Mercury and Mercury-Containing Devices,” for more information.)
- Be part of a team to conduct an inventory of mercury sources in the school. A school-based team might include representatives from buildings and grounds, the school nurse’s office, science classrooms, BOCES, your school’s Parent Teacher Association (PTA) and the school’s health and safety committee.
- An inventory tool has been developed for your use. (See “Facility-Wide Inventory of Mercury and Mercury-Containing Devices.”) Look for mercury-containing items throughout the school. Don’t overlook components in boiler systems, gymnasium lights, medical equipment in the nurse’s office and even older equipment in the cafeteria. Manufacturer and supplier representatives can help identify devices with mercury and non-mercury models. Some will accept returned mercury-containing items.
- When conducting an inventory, make a special effort to search for containers of liquid mercury. They may have been used for demonstrations and might be found in science classrooms or storerooms. Periodically check the mercury-containing items in your inventory. You may locate a cracked device before it becomes a spill.
- Prevent spills by storing items in secure locations until the items can be properly disposed of or recycled. Make sure mercury-containing products are well protected against breakage. Place guards over gymnasium lights. Protect mercury-containing devices (for instance, check wall mounts on a mercury sphygmomanometer to be sure they are secure) until a mercury-free replacement can be installed. Double bag any item containing liquid mercury by placing it in two plastic bags, one inside the other. Securely tape each plastic bag closed and place the item in a covered, non-breakable container such as a plastic bucket. Label the container “Mercury-Containing Devices” and store the container in a locked cabinet or room until it can be properly disposed of or recycled.
- Work with your team to develop a mercury spill response plan. While not required, a spill response plan might fit well as an appendix to your school’s building-level emergency plan.



Contact names and numbers

For health questions or to get more brochures:

New York State Department of Health (NYSDOH)
(800) 458-1158 or e-mail at ceheduc@health.state.ny.us
<http://www.health.state.ny.us/nysdoh/environ/hsees/mercury/index.htm>

For questions about recycling and disposal:

New York State Department of Environmental Conservation (NYSDEC)
Division of Solid and Hazardous Materials
(518) 402-8633
NYSDEC Small Quantity Generator Helpline
(800) 462-6553
www.dec.ny.gov

To report a spill:

NYSDEC Spill Cleanup and Reporting Hotline
(800) 457-7362

For additional information:

NYSDEC Division of Environmental Permits, Pollution Prevention Unit
(518) 402-9469
www.dec.ny.gov

In New York City:

To report a mercury spill in a NYC Public School or to get more information about mercury, call the Department of Education Office of Environmental Health and Safety at (718) 361-3808.

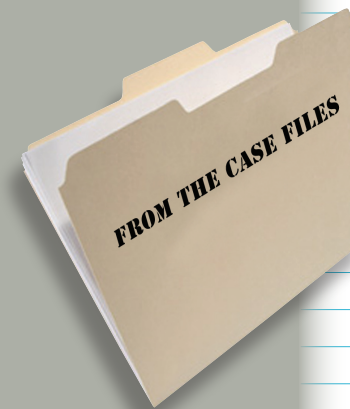
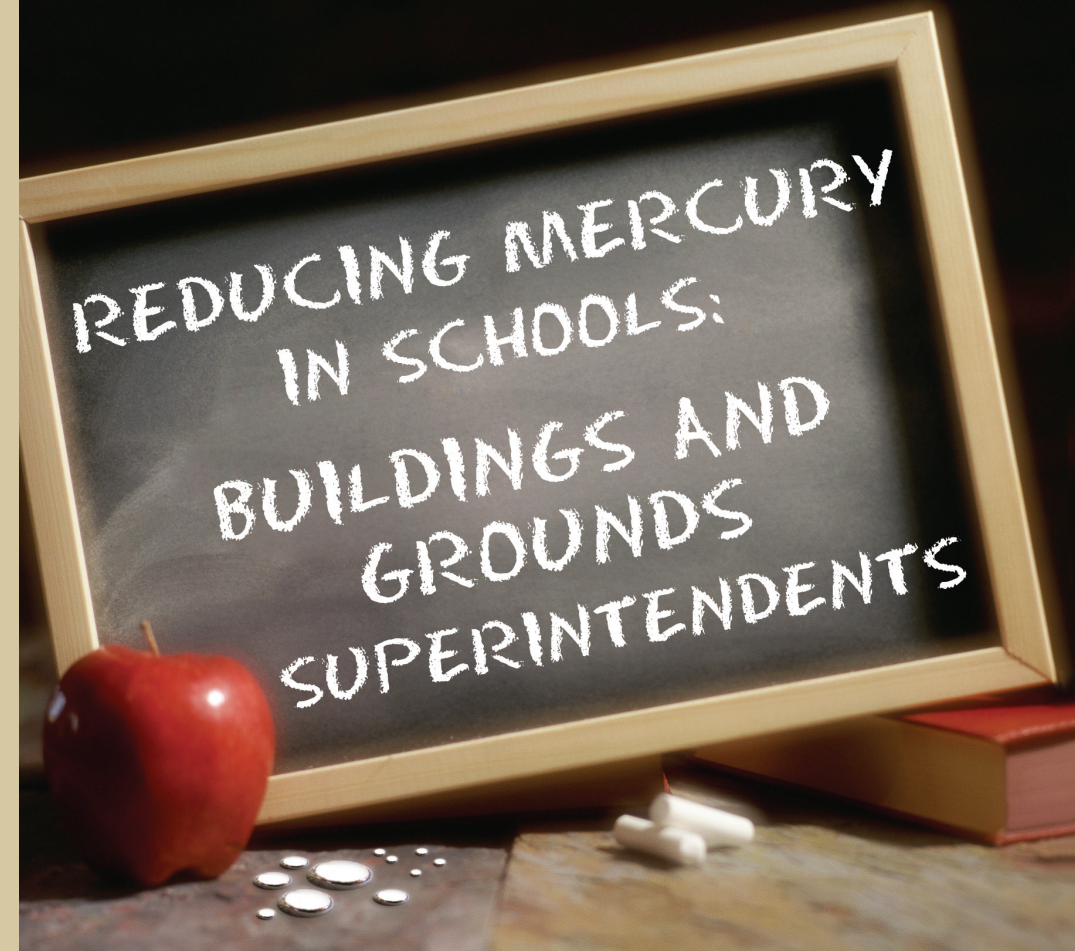
To report a mercury spill in a private NYC school call 3-1-1 and ask to be connected to the Department of Environmental Protection (DEP) HazMat.

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NOTE:

These brochures are intended to provide information and lessons learned. They are not intended to replace school district requirements for training and personal protective equipment.



This is a true story. It could happen in your school or your community.

One winter morning, a substitute fifth grade teacher briefly left a science classroom of 25 students. Upon returning, the teacher found “billions” of silvery beads of mercury on every horizontal surface: desks, chairs, shelves, windowsills, carpeting, backpacks and even on students...



...Someone had taken a jar of liquid mercury from a storage cabinet and several students had tossed mercury at each other and all over the room. Everything in the room was contaminated. The students were evacuated and had to be decontaminated. Many of the students' personal belongings such as clothing, sneakers, backpacks and purses required proper disposal as hazardous waste. Parents were called and asked to bring a change of clothing for their child. The classroom remained closed for about three months while arrangements were made for contractor cleanup and disposal. In all, the mercury cleanup cost \$24,000.

New York State Hazardous Substances Emergency Events Surveillance (HSEES) database, US Agency for Toxic Substances and Disease Registry (ATSDR).

When something is spilled or questions arise about school equipment, buildings and grounds experts are called in. If the spill is mercury, the cleanup can quickly become time-consuming and costly. Mercury spills can be difficult to clean up and can cause health effects in people who are exposed.

Reducing mercury in schools is an important goal for buildings and grounds personnel, science teachers, health and safety committees, school boards, superintendents, principals, school nurses, parents and students. This brochure will help you find mercury sources in your school and avoid potential spills.

What is Mercury?

Mercury is an element that occurs naturally in the earth's surface. The form of mercury that poses an exposure concern in schools is known as elemental mercury, or simply, mercury. Mercury is a silvery, liquid metal that releases mercury vapor into the indoor air at room temperature. It is fascinating to children because it easily breaks up into many smaller droplets.

Mercury is a concern for human health and for the environment. It does not degrade and is not destroyed by burning, which is why proper disposal and recycling are essential.

Mercury Exposure is a Health Concern

Spilled liquid mercury is a health concern. The central nervous system is probably the most sensitive target organ for mercury vapor exposure. Mercury vapors can affect different areas of the brain, resulting in a variety of symptoms. Some symptoms from exposure to high levels of mercury vapor, or from long-term exposure to low levels, can include memory loss, headache, sleeplessness, irritability and tremors. Short-term exposure to high levels can also cause coughing, shortness of breath, chest pain, nausea, vomiting, diarrhea, fever, high blood pressure and skin rashes. Young children's exposure to mercury is of particular concern because their nervous systems are still developing.

Exposure to elemental mercury can occur by breathing mercury vapors, eating or swallowing contaminated food or drinks, or having skin contact with liquid mercury. After a spill, the primary health concern is from breathing in mercury vapors. Since mercury vapor is colorless and odorless, people are not aware that the indoor air contains mercury or that they are breathing mercury vapor. The exposure can last a long time if the spill is not properly cleaned up. Just a few drops of mercury can produce harmful vapor levels in enclosed spaces such as rooms or vehicles.

Mercury Sources in Schools

Instruments containing mercury can be found virtually anywhere on school property – in the nurse's office, science rooms, gymnasiums, art rooms and boiler rooms. Liquid mercury is used in instruments that measure temperature (thermometers), pressure (barometers or sphygmomanometers), humidity (hygrometers), vacuum (laboratory manometers), flow (water meters) and air speed (anemometers). Mercury can also be found in lights (particularly gymnasium and fluorescent lights), thermostats, heating/ventilation and air conditioning (HVAC) systems, plumbing systems, cafeteria equipment, medical devices, regulators, gauges and science room equipment.



Sometimes children or adults who are unaware of the hazard bring mercury into schools as a novelty, for demonstrations or as part of cultural rituals. Contractors, guest speakers, parents, staff or students might bring mercury-containing devices into the school.

The State Health Department recommends that containers of elemental mercury identified by staff or found during an inventory be given the highest priority for removal. Should a spill occur, many individuals could be exposed resulting in health effects, significant cleanup costs and widespread environmental contamination. Legislation banning the purchase or use of elemental mercury in primary and secondary schools in New York State became effective September 4, 2004. Check with the Office of Facilities Planning in the State Education Department (518-474-3906) or, in NYC, the Office of Environmental Health and Safety in the Department of Education (718-361-3808) for the latest information about this and other initiatives for removing mercury from schools.

Brochures in this series

- Mercury and Schools: A Risky Combination
- Reducing Mercury in Schools: Superintendents, Principals, and School Boards
- Reducing Mercury in Schools: Science Teachers
- Reducing Mercury in Schools: Buildings and Grounds Superintendents
- Reducing Mercury in Schools: Health and Safety Committees
- Reducing Mercury in Schools: School Nurses
- Facility-Wide Inventory of Mercury and Mercury-Containing Devices
- Guidelines for Cleanup of Mercury Spills
- Disposal and Recycling Options for Mercury and Mercury-Containing Devices