

# Chemical & Mercury Management Section



## Step 2 -- Green & Healthy Schools Assessment



Chemicals, although sometimes useful, can be very dangerous to you and the environment, especially if they are not handled or stored properly. Chemicals are found in many locations throughout the school, including labs, custodial closets and nurse's offices. The key to chemical safety is proper handling, storage and disposal.

Under a new law, Wisconsin schools are now required to remove all mercury from school facilities and grounds. Effective in 2010, schools are no longer allowed to purchase any equipment or materials that contain mercury. Starting January 1, 2012, schools can no longer store mercury anywhere in the building and are required to remove all traces of mercury from science labs, equipment and machinery.

This section will help identify various chemicals within your school, as well as chemical handling, storage and disposal practices. It will start you thinking about safe handling of chemicals, reducing the amount of chemicals stored in your school and lowering the risk of an accident or spill. This section will also help you identify mercury-containing devices and become familiar with the school's mercury disposal practices.

**School Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

### Conducted By:

*Please include administrators, teachers, school staff, students and parents involved in this assessment.*

**Name:**

**Title and/or Grade Level:**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

### School Population:

Students: \_\_\_\_\_

Staff: \_\_\_\_\_

Teachers and other appropriate staff should complete the following questions for each of these areas/rooms: Science Labs, Art Rooms, Tech Ed Rooms, Custodial Closets and Nurse's Office. Consider compressed gas a chemical. Make a copy of this section for each of the rooms/areas.

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## A. Chemical Inventory

1. How often is an inventory of your chemicals conducted?  
 Once every semester or more frequently  
 Once every year  
 Once every 2 years  
 Less frequently than once every 2 years

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## B. Labeling

1. Are all chemicals labeled with the date of receipt, or preparation?  
 Yes       Some       No
2. Is the chemical name(s) of the substance(s) inside the container clearly identified on the label for all stored chemicals?  
 Yes       No

If no, which chemical containers do not include the accurate chemical name on the container?

3. If the chemical is in solution, is the concentration of the solution clearly identified on the label (molarity or strength) for all stored chemicals?  
 Yes       No

If no, which chemical containers do not include the accurate concentration on the container?

4. Are the labels themselves tightly secured onto all chemical containers and is all writing legible?  
 Yes       No

If no, what type of labeling system do you feel would provide a more secure option?

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## C. Storage

1. Are stored chemicals kept for more than one year?  
 Yes       Sometimes       No
2. Are all chemicals stored in locked storage rooms or storage closets?  
 Yes  
 Some are stored in rooms/closets that do not have locks  
 No

3. If chemicals are not stored in locked storage rooms or closets, where are they stored?
  
4. Who has access to the chemical storage rooms/custodial closets?
  
5. Are chemicals properly stored either by chemical family or according to the Flinn chemical inventory system?  
 Yes       No
  
6. Are Material Safety Data Sheets (MSDS) readily available for all chemicals used in this room/area? *\*Excluding retail chemicals/cleaners which can be purchased for household use (e.g. Windex®, White Out®, etc.)*  
 Yes       No
  
7. Where are the MSDS sheets located?  
 In each room where chemicals are being used  
 In the office  
 In the chemical storage room/closet  
 Other \_\_\_\_\_
  
8. Does your school keep an updated inventory list of the chemicals stored in each chemical storage room/closet?  
 Yes       No
  
9. Does the local fire department know the location of all chemical storage areas in the building?  
 Yes       No
  
10. Are the chemical storage areas identified as a “storage area” using the OSHA diamond identification system?  
 Yes       No

#### D. Disposal

1. Does your school have a disposal list of chemicals classified as hazardous?  
 Yes       No
  
2. Are hazardous chemicals disposed of as outlined by their MSDS sheet?  
 Yes       No

#### E. Purchasing

1. Are chemicals or chemical-based substances purchased in bulk or in small quantities on an as needed basis?  
 All or most chemicals are purchased in bulk  
 Some chemicals are purchased in bulk  
 All or most chemicals are purchased in small quantities as needed

2. Are less hazardous or environmentally friendly chemical substitutions considered when purchasing chemicals?

Yes       No

If yes, which chemicals have been replaced with less hazardous or environmentally friendly alternatives?

**IMPORTANT NOTICE:** Signed in October 2009, Wisconsin Act 44 establishes a ban of the sale of certain mercury containing devices. Beginning November 1, 2010, schools are no longer allowed to purchase any equipment or materials that contain mercury. Starting January 1, 2012, schools can no longer store mercury anywhere in the building and are required to remove all traces of mercury from science labs, equipment and machinery. For more information about mercury in schools, visit: <http://www.mercuryinschools.uwex.edu/>.

**Reminder:** Students should **NOT** handle mercury products while completing this section of the Green & Healthy School Assessment. A teacher, principal or maintenance person should accompany students as they answer the following questions.

### F. Mercury Containing Devices Inventory

1. Use the chart below to locate all mercury containing devices in your school.

Mercury Containing Device		Number or Amount	Where is it being stored?	Is the storage device locked or unlocked?
Elemental mercury				
Mercury compounds				
Mercury thermometer				
Instruments/measuring devices:	Barometer			
	Esophageal dilator			
	Flowmeter			
	Hydrometer			
	Hygrometer/psychrometer			
	Other manometer(s)			
	Pyrometer			
	Sphygmomameter			
Thermostats				
Mercury switches & relays				
Other:				
Other:				
Other:				

2. What mercury containing items are in the nurse's office?

Number or Amount

- Mercury thermometers \_\_\_\_\_
- Blood pressure measuring devices \_\_\_\_\_
- Other \_\_\_\_\_
- None \_\_\_\_\_

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## G. Safety

1. How does your school handle "burned out" fluorescent bulbs?

- Recycled
- Disposed of as hazardous waste
- Thrown in trash
- Other \_\_\_\_\_

If recycled, what does your recycler do with these bulbs?

2. Does your school have a mercury spill kit?

- Yes       No

If yes, where is it located?

3. Does your school have a written procedure for handling mercury spills?

- Yes       No

4. Has staff been trained on the dangers of mercury and how to handle spills?

- Yes       No

5. Is there a designated person trained in spill control procedures for mercury?

- Yes → Who? \_\_\_\_\_
- No

Visit the following website for instructions on how to clean up mercury spills:

<http://dhfs.wisconsin.gov/eh/HlthHaz/fs/HGIgspills.htm>

6. Starting January 1, 2012, schools may no longer store mercury anywhere in the building and are required to remove all traces of mercury from science labs, equipment and machinery. Does your school have a designated person (or persons) responsible for identifying mercury and developing a plan to remove it from the school by January 1, 2012?

- Yes → Who? \_\_\_\_\_
- No

Wisconsin public schools may take advantage of the state hazardous waste contract to manage mercury. This is often much less expensive than hiring an independent contractor. The current (2009-2012) hazardous waste contract can be found on VendorNet at:

<http://vendornet.state.wi.us/vendornet/asp/ContractDetail.asp?SystemContractNumber=2330>

Alternately, schools may hire their own hazardous waste contractor to dispose of mercury waste. A list of licensed hazardous waste transporters is available at:

<http://dnr.wi.gov/org/aw/wm/faclists/>

For more information on mercury in schools, disposal information and exemptions to the new law, please visit: <http://dnr.wi.gov/org/caer/ce/greenschools/NewLaw.htm>

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## H. Curriculum and Community

1. Is chemical safety/handling included in the curriculum?

Yes       No

If yes, in what subject(s) is it included, and at which grade levels?

2. Does your school teach the environmental and health affects of mercury pollution as part of the curriculum?

Yes       No

If yes, in what subject(s) is it included, and at which grade levels?

3. Do all students and staff wear appropriate personal protection equipment when handling chemicals or scientific apparatus?

Yes       No

4. Are classrooms/labs equipped with appropriate safety equipment?

Yes       No

5. Does your community have a chemical collection program to encourage the proper disposal and handling of these items?

Yes       No

If yes, are schools allowed to participate?

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## I. Action Plan

Based on the information you gathered from this assessment, what recommendations do you have for the school to improve its chemical and mercury management program? Use the chart on page 7 to brainstorm and organize ideas for action.

## Chemical and Mercury Management Assessment: Ideas for Action

Based on the information you gathered from the Chemical and Mercury Management Assessment, what action ideas do you have to improve chemical handling, storage and disposal procedures at your school? Use this sheet record your ideas.

Section	General Ideas	Classroom Connections/ Lesson Plan Ideas	Community Involvement/ Activity Ideas	Outside Sources (organizations, community members, professionals)
<b>A. Chemical Inventory B. Labeling</b>				
<b>C. Storage D. Disposal</b>				
<b>E. Purchasing</b>				
<b>F. Mercury Containing Devices Inventory</b>				
<b>G. Safety</b>				
<b>H. Curriculum and Community</b>				