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## CHEMICAL MANAGEMENT PLAN

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### Section I: Annual Review

The Chemical Management Plan shall be reviewed at least annually by the Chemical Management Officer and the Chemical Management Committee.

### Section II: Chemical Management Policy

The Bangor School Department is committed to minimizing hazardous chemical use and waste and to providing a healthy and safe environment for its students, faculty and staff. In order to achieve these goals, the School Department believes that proper chemical management and training are essential to make students and employees aware of potential hazards related to chemical use.

The Bangor School Department will follow a purchasing policy that restricts the purchase of hazardous chemicals, and purchasing procedures will be followed by all faculty and staff to minimize large quantities of chemicals and/or extremely hazardous chemicals from entering the school. No chemical will be purchased in quantities greater than a two-year supply. (Ch. 161, DOE regulations).

The Bangor School Department will not accept donations of chemicals from outside sources.

The Bangor School Department will make every effort to minimize hazardous chemical use and waste generation in the classroom. Where feasible, the School will minimize chemical waste via microscale chemistry, green chemistry, demonstration labs, video instruction or other forms of non-hazardous or less-hazardous curricula.

The Bangor School Department will follow proper chemical disposal procedures according to the Maine Department of Environmental Protection Hazardous and Universal Waste Regulations, Ch. 850 et. seq .

The Bangor School Department will conduct an annual inventory of all laboratory chemicals and follow storage requirements in accordance with the Department of Education's regulations, Ch 161, Purchase and Storage of Hazardous Chemicals.

The Bangor School Department pledges to discontinue the purchase of mercury and mercury compounds and will phase out mercury from school premises, where feasible, by 2003.

Employees have the responsibility to know and follow the policies and procedures contained in the Laboratory Chemical Management Program, to participate actively in training programs, and to conduct their work activities in a manner which minimizes chemical waste generation.

### Section III: Administrative Positions and Duties

#### A. Superintendent

1. The Superintendent has the ultimate responsibility for chemical management within the school district and must, with other administrators, provide continuing support for district wide chemical management.

#### B. Principal

1. Responsible for chemical management in the school, and monitors school employees' compliance with the Chemical Management Plan.



2. Responsible for phasing out mercury in the school.
3. Principal or Designee will oversee Chemical Storage Areas.
4. Principal or Designee will serve as Chemical Purchasing Agent for School.

**C. Chemical Management Officer (CMO)**

1. Work with administration to set policies concerning procurement and disposal of chemicals.
2. Coordinate requests for acquisition and use of “High Hazard” chemicals.
3. Maintain Material Safety Data Sheets for each chemical purchase.
4. Ensure that employees have received appropriate training, are familiar with the Chemical Management Plan, and other reference material;
5. Stay abreast of the current legal requirements concerning chemical management and hazardous waste management, including appropriate training for handling and shipping hazardous waste.
6. Responsible for coordinating hazardous waste disposal.
7. Coordinate chemical spill clean-ups.
8. Oversee annual inventory of laboratory chemicals.
9. Ensure chemical storage and use is in compliance with school policies and procedures.
10. Review the Laboratory Chemical Management Plan annually.

**D. Chemical Management Committee**

1. Work with the Chemical Management Officer to set policies and procedures for chemical management in the school facilities.
2. Assist the Chemical Management Officer in assessing purchasing requests for “High Hazard” chemicals.
3. Review science on an annual basis to determine faculty progress in minimizing chemical use and waste.
4. Review the Chemical Management Plan annually.

**E. Teacher**

1. Maintain awareness of hazardous waste management regulations and health and safety hazards through participating in training programs and consulting reference materials.
2. Plan and conduct each class exercise with the least toxic alternatives.
3. Submit a list of experiments annually to the Chemical Management Committee noting any lab exercises that use alternative methods.
4. Use good classroom chemical management practices.
5. Teach proper chemical management to students.
6. Do not allow students to enter chemical use areas and storage areas without a teacher present
7. Conduct annual inventory of laboratory chemicals.
8. Conduct a monthly inspection of stored chemicals for signs of leakage, poor storage practices, peeling labels, or any other problems.
9. Ensure that all materials and wastes are labeled, used and disposed of as required.



10. Submit purchasing requests in a timely manner. Obtain MSDS sheets prior to submitting request for a new chemical.
11. Maintain chemical spill clean-up materials in chemical storage areas.
12. Understand and follow the Chemical Management Plan.

**F. Custodian/Maintenance**

1. Maintain awareness of hazardous waste management regulations and health and safety hazards through participating in training programs and consulting reference materials.
2. Clean areas of chemical use and storage areas with caution.
3. Avoid cleaning up spills if he/she does not have the proper training – call for help.
4. Do not allow students to enter chemical use areas and storage areas without a teacher present.
5. Follow instructions regarding the use of cleaning agents.
6. Understand and follow the Chemical Management Plan
7. Submit purchasing requests in a timely manner. Obtain MSDS sheets prior to submitting request for a new chemical

**G. Student Responsibilities**

1. Understand the experimental procedure before working in the laboratory.
2. Know the properties and hazards of the chemicals in use.
3. Comply with all safety rules and regulations including the wearing of protective equipment as instructed.
4. Conduct only the experiments assigned by the instructor.
5. Maintain all chemicals in the laboratory.
6. Work in the laboratory only when assigned and always with a partner.
7. Report chemical accidents and spills to the teacher immediately.
8. Adhere to all rules governing conduct while in the laboratory.

**Section IV: Purchasing Procedures**

Whenever practical, chemicals should be purchased as pre-diluted solutions to minimize mixing and the opportunity for improper labeling and storage.

Faculty/staff will submit chemical purchasing requests to chemical purchasing agent for review. Prior to submitting requests, the faculty will:

1. Review a chemical inventory of his/her classroom.
2. Review the curriculum and the list of High Hazard (Red Flag) and Prohibited Chemicals (Attached).
3. Generate a list of chemicals desired. For all materials not previously purchased, obtain a copy of the MSDS that will be attached to the purchase request.
4. Evaluate each chemical's storage and/or handling requirements.
5. After completing the above steps, generate purchase order requisition, highlighting explicitly any High Hazard materials.



6. The Laboratory Chemical Management Committee will provide assistance to the CMO in assessing these “High Hazard” chemical requests. No exceptions will be allowed for purchasing mercury or mercury containing compounds or chemicals on the Prohibited list.

When feasible, chemicals should be received at the school during summer break. Custodians may only deliver packages to the appropriate classroom; they may not handle or unpack chemicals. Faculty is responsible for handling and unpacking their purchases. All chemicals must be labeled with the date they were received and stored in the proper location.

## Section VI: On-Site Chemical Management

### A. Storage

All school facilities will store chemicals in designated areas only. Such areas will be locked and labeled as chemical storage areas. The principal or designee is responsible for the proper utilization of these areas.

All staff must follow these storage guidelines for all chemical storage areas:

1. Implement the *Flinn* system where chemicals are stored. Do not store chemicals alphabetically.
2. Chemicals shall be stored in appropriate cabinetry. Examples include flammables cabinet meeting NFPA specifications, Fire Marshall approved wooden corrosives cabinets or a secured poisons cabinet for chemicals of moderate toxicity or carcinogens. Cabinet shelves should have a lip.
3. Shelf space shall be kept adequate so that no chemicals are touching or more than three deep.
4. Label all containers with the chemical name, acquisition date, first-use date, and hazard warnings. Original labels should not be removed.
5. Conduct and document monthly inspection of stored chemicals for signs of leakage, poor storage practices, peeling labels, or any other problems.
6. Do not store chemicals on the floor (except gas cylinders) or above eye level.
7. Gas cylinders should be properly secured, segregated according to compatibility, stored away from heat sources, and upright.
8. Do not place food in refrigerators used for chemical storage! This is an OSHA rule.
9. Restrict access to chemical storage areas through signage and secure locks. No student or unauthorized faculty will be allowed in storage area unsupervised.

### B. Inventory

The Bangor School Department will conduct an annual inventory of all chemicals stored in its facilities. Inventories can be submitted using either a computer spreadsheet or hand-written.

Annual inventories must be on file with the Bangor Fire Department.

Any chemicals identified during the inventory as expired, outdated, unlabeled, unknown, or unwanted must be listed for disposal. These chemicals will be identified with an *orange sticker* placed on the container and left in their original shelf location. All chemicals with *orange stickers* will be included in the waste inventory conducted each month. Mercury and mercury-containing compounds encountered during the inventory must also be listed for disposal.

Once a chemical is listed for disposal, refer to the Hazardous Waste Determination Plan to determine if the chemical is waste.



**C. Use**

Faculty, where feasible, will minimize chemical use and waste generated via microscale chemistry, green chemistry, demonstration labs, video instruction or other forms of alternative methods of non-hazardous or less-hazardous curricula.

On an annual basis faculty must review their curricula to identify ways of minimizing chemical use and waste. Faculty must submit a list of their experiments annually to the Laboratory Chemical Management Committee noting any lab exercises that use alternative methods. The Laboratory Chemical Management Committee will review science curricula on an annual basis to determine faculty progress in minimizing chemical use and waste.

**D. Waste Disposal**

The Bangor School Department is a *Small Quantity Generator*.

All schools are on the municipal sewer system, therefore non-hazardous liquid or less than 500 milliliters of neutralized liquid chemicals, that are hazardous solely due to corrosivity, may be disposed of down the drain, with the permission of the sewer district. Non-hazardous or less than 500 milliliters of neutralized liquid chemicals may also be solidified for solid waste disposal (i.e. put in the trash). Custodians must be notified of any chemical put in the trash for disposal

Staff are not allowed to evaporate, neutralize quantities of > 500 milliliters, distill, filter, burn, or pour hazardous waste down the sink.

All chemical wastes destined for hazardous waste disposal must be stored in the designated, signed hazardous waste storage areas. All containers must have the following information on the label:

- ✓ “Hazardous Waste”
- ✓ The contents,
- ✓ The date that waste was first put in and
- ✓ The date the container was filled.

Prior to each semester an inventory of stored wastes (including virgin chemical stock identified as waste) must be completed by faculty and submitted to the CMO. The CMO will coordinate hazardous waste disposal on an as needed basis. If large quantities of chemical wastes are being stored (>15 gal.) or if a container is full, a non-routine hazardous waste pick-up should be scheduled by the CMO within 180 days of filling.

The Director of the Physical Plant is responsible for all hazardous waste manifests and associated paperwork. No waste pick-ups will be scheduled during regular school hours.

**E. Chemical Spill**

In the event of a hazardous chemical spill, faculty must contact the CMO *or other authorized person* before clean up begins. The CMO will assess the nature of the spill using the School’s Emergency Response Contingency Plan to determine appropriate response. Custodians and faculty cannot respond to chemical spills unless appropriate training has been provided. All waste generated from a chemical spill will be treated as hazardous.

In the event of a hazardous chemical spill, hazardous matter, or oil spill, the Bangor School Department must immediately notify the Department of Environmental Protection pursuant to the Act, 38 M.R.S.A. 1318-B1 and 38 M.R.S.A. 550 by calling 1-800-452-4664 for hazardous matter spills and 1-800-482-0777 for oil spills.



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