

SECTION 15–ENVIRONMENTAL MANAGEMENT

Abridged Version

The Harper College Environmental Management Plan (EMP) is a complete manual on Environmental Management. The EMP is published in a separate Manual maintained by the Manager of Environmental Health & Safety. For a copy or information regarding environmental compliance call the Manager of EH&S x6923 or Physical Plant x6950.

15.1 Environmental Management Plan (EMP)

15.2 Waste ID & Disposal

15.3 Hazardous Materials Spills/Release

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15.1 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

A. Objective

To describe and implement a comprehensive Environmental Management Plan (EMP).

B. Scope

Harper College will conduct affairs in a manner that safeguards the environmental health and safety of students, faculty, staff and community. The College will also strive to reduce pollutants released to the air, land, water, and properly dispose of all hazardous and non-hazardous waste. Environmental compliance and continuous improvement in waste reduction is our objective in all college operations.

C. References

Federal Environmental Protection Agency (EPA) Code of Federal Regulation Title 40- Protection of Environment and Illinois EPA -Title 35 of the Illinois Administrative Code. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

D. Responsibilities

1. All environmental releases, incidents, or problems at any of the Harper College facilities shall be reported in a timely fashion to the Manager of Environmental Health and Safety or the Director of the Physical Plant. The Manager of Environmental Health and Safety or the Director of Physical Plant will report environmental issues to the relevant agency within the time limits imposed by the agencies.

2. Other Supervisors and Department Heads must be aware of their environmental requirements identified within the EMP and shall provide documentation and or reports when requested by the Manager Environmental Health and Safety.

E. Environmental Management Plan (EMP)

The following is an outline of EMP elements:

- Clean Air Act (CAA)
 - Criteria Pollutants, Attainment and Non-Attainment
 - Chlorofluorocarbons (CFCs)
 - Emissions from Mobile Sources
 - Air Toxics Rules and Hazardous Air Pollutants (HAP's)
 - Emission Reports & Permit
- Clean Water Act (CWA)
 - Spill Prevention, Control and Countermeasures (SPCC) Plan
- Emergency Planning and Community Right-to-Know Act (EPCRA)
 - Planning for response or releases
 - Reporting of releases
- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
 - Integrated Pest Management & Restricted Use Pesticides (RUP's)
 - State certified applicators and operators
- Resource Conservation and Recovery Act (RCRA)
 - Solid and Hazardous Waste Management
 - Generator Status
 - Universal Waste Management – batteries, mercury containing thermostats, pesticides, lights and computer wastes
 - Waste from Labs, Art, Physical Plant
 - Used Oil (except PCB's and cooking oils)
 - Underground Storage Tanks
 - Waste Minimization

- Toxic Substances Control Act (TSCA) –
 - Asbestos Management Procedure

F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Web pages:

EPA's Web site: <http://www.epa.gov>

Illinois EPA's Web site: <http://www.epa.state.il.us/>

15.2 CHEMICAL WASTE ID & DISPOSAL

A. Objective

To properly identify wastes and the proper disposal of wastes.

B. Scope

Waste disposal must be in compliance with *Harper's Environmental Management Plan* (EMP), *Chemical Hygiene Plan* (CHP), and all federal, state and local regulations.

C. References

Harper College *Environmental Management Plan* (EMP) and *Chemical Hygiene Plan* (CHP).
Applicable Federal, State and Local Law and Ordinances, e.g., OSHA, EPA, State Labor Codes.

D. General Information

- The U.S. Environmental Protection Agency regulates hazardous waste under the Resource Conservation and Recovery Act, commonly known as RCRA. Enacted in 1976 and modified in 1978, 1980, and 1984 (by the Hazardous and Solid Waste Amendments) RCRA established a “cradle-to-grave” system for managing hazardous wastes. This means that from the time a hazardous waste is created until it is finally destroyed, a paperwork trail makes sure someone is responsible for safeguarding it. The law also provides specific requirements for those who generate, transport, treat, store, or dispose of hazardous wastes. Training personnel in hazardous waste management and emergency procedures is required under RCRA.
- Other regulations such as the Clean Air Act and the Clean Water Act govern the disposal of waste into the air and the sewer system. Consult the Laboratory Chemical Hygiene Officer for identification, collection, storage and disposal of laboratory wastes. Consult the Manager of Environmental Health & Safety for storage, collection or disposal of chemical waste in other area of the College.

E. Waste Identification

- **Hazardous Waste** regulations require that hazardous waste be accurately identified. Common wastes include:
 - **Spent solvents, acids, bases and oxidizers** used in extractions, cleaning or other processes;
 - **Unused reagents and other chemicals** that are no longer needed, do not meet specifications, are contaminated, have exceeded their storage life or are otherwise unusable in the lab;
 - **Waste oils**; and
 - **Other miscellaneous materials**, including broken thermometers, heavy metal salts, pesticides, paints, etc.
- These wastes may be identified as either “**listed wastes**” (appear on lists of specific chemicals defined as hazardous waste issued by the EPA) or “**characteristic wastes**” (exhibit certain characteristics defined by the EPA including ignitability, corrosivity, reactivity and toxicity. The Laboratory Chemical Hygiene Officer is to determine hazardous waste identification in the laboratories.

F. Nonhazardous and Nonregulated Waste

- Waste that is not regulated by RCRA because it does not exhibit any of the hazardous characteristics (ignitability, corrosivity, reactivity, or toxicity) as defined by the EPA and is not listed as hazardous by the EPA should be segregated from hazardous waste. The common wastes usually not regulated as hazardous include:
 - **Certain salts** such as potassium chloride and sodium carbonate;
 - **Natural Products** such as sugars and amino acids;
 - **Inert materials** such as noncontaminated chromatography resins and gels.
- When safe and allowed by regulation, disposal of nonhazardous waste via the normal trash or sewer (down the drain of laboratory sinks) can substantially reduce disposal costs. This is the kind of waste segregation that makes economic as well as environmental sense. Always check with the Laboratory Chemical Hygiene Officer or the Manager of Environmental Health & Safety prior to disposing any chemical in the normal trash or down the drain in sinks.

G. Storage and Disposal of Hazardous Waste

- Regulations require that hazardous wastes be accumulated and stored in properly managed containers on sufficiently impervious surfaces (free of cracks, gaps, etc.). Hazardous waste may be stored in satellite accumulation areas. Once a satellite accumulation area container is filled, it must be dated and transferred to a main accumulation area. The Manager or Regulatory Compliance will coordinate storage, pick up and disposal by a professional waste hauler. **Disposal of hazardous wastes in sinks, in the normal trash or evaporation into the atmosphere is strictly prohibited by law.**

H. Storage and Disposal of Nonhazardous Waste

- The local municipality regulates the **disposal of nonhazardous waste in the normal trash**. Certain precautions should be observed when disposing of nonhazardous waste. Because custodians, who usually empty the trash containers, are not usually familiar with laboratory operations, no objects that could cause harm to them should be disposed of in those containers. Sharp metal and broken glassware, even though they may be considered nonhazardous trash, should be collected in specially marked containers. Empty chemical bottles should be rinsed and collected into a large cardboard box and clearly labeled "empty chemical bottles" and stored with normal trash for pick up.
- The Metropolitan Water Reclamation District regulates the **disposal of nonhazardous waste into the sewer system** (down the drain of laboratory sinks). Certain chemicals may be permissible for sewer disposal. These include aqueous solutions that readily biodegrade and low-toxicity solutions of inorganic substances. Water-immiscible chemicals and organic solvents should never go down the drain. Water-miscible flammable liquids are prohibited from disposal in the sewer system.

I. Labeling of Waste

- Containers that accumulate and store hazardous waste must be labeled with the following information:
 - The words "Hazardous Waste";
 - The waste type in words (spent non-halogenated solvents, waste oil, solid metal waste, etc.);
 - The date upon which the container became filled.
- All containers must be closed at all times, unless waste is being added or removed. Containers must be in good condition. There may not be severe rusting, dents or other conditions that could cause leaks. Organic waste jugs must have the flame

arrestor in place and in good condition. Containers must be compatible with the hazardous waste stored within them. The use of peanut butter jars and plastic pop bottles is not acceptable. Containers should be inspected to ensure that they are properly labeled, in good condition and meet the criteria described above.

J. Waste Minimization

- Federal law requires generators of hazardous waste to implement measures to limit and reduce the volume and toxicity of hazardous waste. Waste minimization techniques include:
 - Process/equipment adjustment or modification;
 - Toxic material substitution;
 - Waste segregation, separation, concentration; and
 - Recycling.
- Where possible, microchemistry will reduce waste volume and has the added benefit of minimizing health and safety concerns.
- The exercise of prudence in ordering new chemicals will also ensure that excess chemical does not become subject to disposal as hazardous waste. Always check your inventory supplies, prior to purchasing any new chemicals. Only purchase the quantities that are needed. Furthermore, always obtain and review Safety Data Sheets for any new substances. SDSs contain disposal instructions as well as toxicity information that you may want to consider before actually purchasing a new chemical.

K. Training

- Laboratory Instructors should be trained on the Chemical Hygiene Plan including Section 10- Waste Identification and Disposal, Appendix 12- Department of Chemistry Waste Management, Appendix 13- Department of Biology Waste Management and Appendix 9- Spill Clean-up Procedures. Training is conducted to Instructors by the Laboratory Laboratory Chemical Hygiene Officer upon hire.
- Training on waste identification and disposal for other areas of the College, including but not limited to Art and Physical Plant, is given to the Supervisors of each area, by the Manager of Environmental Health & Safety (Sara Gibson x6923).

L. Sources for Additional Information

- Harper's Laboratory *Chemical Hygiene Plan* (CHP) Appendix 1 "Chemistry Department Waste Management SOP" describes the identification, collection, minimization techniques, and disposal procedures for waste accumulated in the Department of Chemistry.
- The Environmental Protection Agency (EPA) has excellent resource material to assist with waste minimization. You may access the EPA Home Page at the following address: <http://www.epa.gov>
- To address questions or concerns contact the Manager of Environmental Health & Safety or the Laboratory Chemical Hygiene Officer for additional information.

15.3 CHEMICAL SPILLS OR RELEASE

A. Objective

Specific information on Laboratory spills and releases (for Biology and Chemistry Laboratories) is maintained in *Section 8 – Laboratory Chemical Hygiene Plan of the EH&S Manual*.

All other spill or release procedures are covered in the *Environmental Management Plan (EMP)* maintained by the Manager of Environmental Health & Safety.

B. Scope

Any chemical spill or release on campus.

C. Procedure

Report ALL chemical spills/ releases immediately to Harper Police 6211.

Harper Police shall:

- 1. Isolate and control the area**
- 2. Call the Palatine Fire Department**
- 3. Notify the Manager, Environmental Health & Safety, if the Manager of EH&S is unavailable notify the Director of Physical Plant.**
- 4. If the spill is required to be cleaned up by an outside contractor, the Mgr. of EH&S or the Dir. of Physical Plant or the Supervisor of Harper Police should call SET Environmental in Wheeling, IL at 1-877-43SPILL or 1-877-437-7455.**