

1.0 Purpose and Applicability

- 1.1 This program is presented to help ensure the proper and safe use of pesticides at the University of Pennsylvania. Ideally, Integrated Pest Management (IPM) principles should be implemented to prevent, or reduce to acceptable levels, pest populations and damage caused by pests.
- 1.2 This policy applies to all University of Pennsylvania employees, students, and contractors.

2.0 Definitions and Scope

- 2.1 Integrated Pest Management (IPM) - A planned program, incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM uses targeted and sustainable (effective, economical, and environmentally sound) methods including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control, and where necessary, the judicious use of least-hazardous pesticides.
- 2.2 Pesticide - Any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests and are specifically labeled for use by the United States Environmental Protection Agency (USEPA). Also, any substance or mixture of substances used as a plant regulator, defoliant, desiccant, disinfectant, or biocide.
- 2.3 General Use Pesticide - A pesticide not classified for restricted use by USEPA.
- 2.4 Direct Supervision - Supervision that includes being at the specific location where pest management work is conducted; providing instruction and control; and maintaining a line-of-sight view of the work performed. Certain circumstances may temporarily remove the line-of-sight view of the application of pesticide from the supervisor such as topographic constraints, vegetation constraints, or building structural constraints. Under those temporary circumstances, the supervisor shall be responsible for the actions of pesticide applicators.
- 2.5 Pesticide Applicator - Any individual who applies pesticides or supervises the use of any pesticide by others.
- 2.6 Certified Pesticide Applicator - Any individual who applies pesticides or supervises the use of pesticides, and who has been authorized to do so by successfully completing a training program approved by USEPA and the Commonwealth of Pennsylvania, followed by formal certification by the Commonwealth of Pennsylvania Department of Agriculture.
- 2.7 Pests - Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

- 2.8 Restricted Use Pesticide - A pesticide that USEPA determines to have the potential to cause unreasonable adverse effects on the environment or human health, when applied, in accordance with its directions for use, and therefore, requires additional regulatory restrictions. The "Restricted Use" classification restricts a product, or its uses, to use by a Certificated Pesticide Applicator or under their direct supervision.
- 2.9 Registered Pesticide Technician - Registered pesticide technicians are those applicators who have received training as required under PA Title 7, sub-section 128.51 of the act. Simply stated, these applicators have completed minimum training requirements under the direction of a Certified Pesticide Applicator with at least one year's certification in the category for which the technician is being trained. They must also be under supervision of a Certified Pesticide Applicator who can be on site within 5-hours if necessary. Registered pesticide technicians must be re-registered with the Pennsylvania Department of Agriculture and receive update training on an annual basis.
- 2.10 Non-Certified Pesticide Applicators - Pesticide applications may be made by an individual who is neither certified nor a registered pesticide technician, if and only if that individual is under the direct supervision of a Certified Pesticide Applicator who is physically present and within sight of the pesticide application being made.

3.0 **Responsibilities**

- 3.1 The ***Office of Environmental Health and Radiation Safety (EHRS)*** is responsible for:
- 3.1.1 Developing and maintaining the Pesticide Application Safety Program.
 - 3.1.2 Providing Pesticide Safety/Hazard Communication training to Penn pesticide applicators.
 - 3.1.3 Periodically auditing pesticide application activities and pesticide storage and mixing areas.
 - 3.1.4 Assisting with selection of and training on proper use of personal protective equipment.
 - 3.1.5 Maintaining Penn's West Philadelphia campus Pennsylvania Department of Agriculture pesticide application business license.
 - 3.1.6 Reviewing product specimen labels and Safety Data Sheets (SDS) of pesticides used at Penn. Includes pesticides applied by Penn affiliates and contracted vendors.
 - 3.1.7 Reviewing and approving of targeted pest abatement projects that may pose elevated risk to the applicators or public.
 - 3.1.8 Obtaining the annual pesticide application insurance certificate from Penn's Office of Risk Management and Insurance and distribution to the certified pesticide applicators.
 - 3.1.9 Annual testing of eye/facewash in pesticide storage and mixing areas.
- 3.2 The ***Morris Arboretum Director of Horticulture*** is responsible for:
- 3.2.1 Maintaining the Morris Arboretum's Pennsylvania Department of Agriculture pesticide application business license.
 - 3.2.2 Coordinating pesticide applicator health and safety training with EHRS.
 - 3.2.3 Maintaining pesticide SDSs and specimen labels at the pesticide storage location.
 - 3.2.4 Coordinating certification of pesticide applicators.
 - 3.2.5 Forwarding copies of applicator certifications to EHRS.
 - 3.2.6 Providing required personal protective equipment and enforcing proper use.

- 3.2.7 Reviewing Pennsylvania's Pesticide Hypersensitivity Registry after each published update and making the required notifications to listed individuals prior to application of pesticides. Confirmation of a notification must be provided to EHRS.
- 3.2.8 Supervision of pesticide applicators and implementation of this program at the Morris Arboretum.

- 3.3 The *New Bolton Center Director of Facilities* is responsible for:
 - 3.3.1 Maintaining New Bolton Center's pesticide application business license with the Pennsylvania Department of Agriculture.
 - 3.3.2 Coordinating required applicator pesticide applicator health and safety training with EHRS.
 - 3.3.3 Maintaining pesticide SDS and specimen labels at the pesticide storage location.
 - 3.3.4 Coordinating certification of pesticide applicators.
 - 3.3.5 Forwarding copies of applicator certifications to EHRS.
 - 3.3.6 Providing required personal protective equipment and enforcing proper use.
 - 3.3.7 Reviewing Pennsylvania's Pesticide Hypersensitivity Registry after each published update and making the required notifications to listed individuals prior to application of pesticides. Confirmation of a notification must be provided to EHRS.
 - 3.3.8 Supervision of pesticide applicators and implementation of this program at New Bolton Center.

- 3.4 *University of Pennsylvania Administrators* who contract with outside pest control companies are responsible for:
 - 3.4.1 Selecting a pest control company that has a valid Pennsylvania Pesticide Application Business License for the particular category of pest that needs to be controlled.
 - 3.4.2 Requiring pest control companies to submit copies of valid Pennsylvania Certified Pesticide Applicator licenses for the individuals who will be applying pesticides at Penn.
 - 3.4.3 Requiring pest control contractor to submit specimen labels and SDS of pesticides that will be applied at Penn and forwarding to EHRS for review and approval.
 - 3.4.4 Notifying pest control company of the requirement to review Pennsylvania's Pesticide Hypersensitivity Registry and making the required notifications to listed individuals prior to application of pesticides. Confirmation of a notification must be provided to EHRS.

- 3.5 *University of Pennsylvania Certified Pesticide Applicators* are responsible for:
 - 3.5.1 Using Integrated Pest Management methods whenever feasible.
 - 3.5.2 Selecting the least hazardous pesticide for a particular application.
 - 3.5.3 Developing Standard Operating Procedures for the safe application of pesticides in a given setting. Examples include public garden or park areas, fence lines, greenhouses, environmental chambers, swimming pool.
 - 3.5.4 Maintaining Pennsylvania Department of Agriculture pesticide applicator certification within the appropriate pesticide application category.
 - 3.5.5 Completing EHRS Pesticide Safety/Hazard Communication training.
 - 3.5.6 Consulting with EHRS if a respirator is desired or required for the application of a pesticide. Respirators may not be worn without prior consultation with EHRS.

- 3.5.7 Completing EHRS Respiratory Protection training, fit testing and obtaining medical clearance to wear a respirator if required.
 - 3.5.8 Reviewing Pennsylvania's Pesticide Hypersensitivity Registry after each published update and making the required notifications to listed individuals prior to application of pesticides. Confirmation of a notification must be provided to EHRS.
 - 3.5.9 Reviewing pesticide specimen labels and SDSs for health and safety information and personal protective equipment requirements.
 - 3.5.10 Using the appropriate personal protective equipment.
 - 3.5.11 Activating the eye/face wash in the storage/mixing area prior to handling pesticides to ensure it is working properly and that stale water is flushed from the system.
 - 3.5.12 Mixing and applying pesticides in strict accordance with label instructions.
 - 3.5.13 Maintaining a log of all pesticide applications as required by the Pennsylvania Pesticide Control Act.
 - 3.5.14 Following the requirements related to restricting access to pesticide application areas and posting the restricted entry interval.
- 3.6 ***Pest Control Contractors*** are responsible for:
- 3.6.1 Using Integrated Pest Management methods whenever feasible.
 - 3.6.2 Providing the Penn contract administrator with the following documents:
 - 3.6.2.1 Copy of Pennsylvania Pesticide Application Business license.
 - 3.6.2.2 Certified Pesticide Applicator licenses for the individuals who will be applying pesticides at Penn.
 - 3.6.2.3 Specimen labels and SDSs of pesticides that will be applied at Penn.
 - 3.6.2.4 Schedule of pesticide application and any information regarding restricted entry interval or other information pertinent to building occupants, etc.
 - 3.6.3 Reviewing Pennsylvania's Pesticide Hypersensitivity Registry after each published update and making the required notifications to listed individuals prior to application of pesticides.
 - 3.6.4 Mixing and applying pesticides in strict accordance with label.
 - 3.6.5 Following the requirements related to restricting access to pesticide application areas and posting the restricted entry interval.
- 3.7 ***The Hospital of the University of Pennsylvania (HUP) Department of Occupational Medicine (OM)*** is responsible for:
- 3.7.1 Implementing the medical surveillance program of employees enrolled in a respiratory protection program.

4.0 **Procedures**

- 4.1 All pest management practices shall employ an Integrated Pest Management approach.
- 4.2 Pesticides will be used only after consideration of the full range of alternatives, based on analysis of safety, public health, environmental effects, effectiveness, and costs.

- 4.3 Facility occupants, students, etc. shall not apply pesticides. Pest-related issues should be reported through the general maintenance request channels with Facilities & Real Estate Services (FRES) or Director of Facilities. FRES or the Facilities Director will contact the pest control vendor on contract to respond.
- 4.4 Pesticides must be applied in strict accordance with the manufacturer's label.
- 4.5 If re-entry intervals are indicated on the pesticides label or any other manufacturer's product information, the re-entry intervals must be effectively communicated to anyone who may be affected.
- 4.6 Pest control contractors shall comply, at a minimum, with the provisions of this plan.
- 4.7 The University must be licensed as a business to apply general or restricted use pesticides. The Pesticide Application Business License must indicate the certification categories in which pesticide applications are made. The University must, at all times, employ an applicator certified for each category in which it intends to make a pesticide application.
- 4.8 Any Penn employee who applies pesticides (general or restricted) in areas accessed by the public, or plants used in research must be a Certified Pesticide Applicator or Registered Pesticide Technician.

5.0 Training

- 5.1 Individuals desiring to attain certification to apply pesticides must pass two written examinations (core and category) and apply for certification with the Pennsylvania Department of Agriculture.
- 5.2 To maintain certification, applicators must attend update training in core and appropriate category-specific topics. If re-certification credit requirements are not met, the applicator's certification will expire, and that applicator (or technicians they supervise) will no longer be permitted to make pesticide applications until the license is reinstated.
- 5.3 Individuals wishing to become Registered Pesticide Technicians must have completed minimum training requirements under the direction of a Certified Pesticide Applicator with at least one year's certification experience in the category of training.
- 5.4 Registered Pesticide Technicians must be re-registered with the Pennsylvania Department of Agriculture and receive update training on an annual basis.
- 5.5 In addition to training/certification requirements required under the Pennsylvania Department of Agriculture, all Penn employees who will apply pesticides must complete Pesticide Safety/Hazard Communication Training administered by EHRS.

6.0 Recordkeeping

- 6.1 The Pennsylvania Pesticide Application Business license for the West Philadelphia campus is maintained by EHRS.
- 6.2 The Pennsylvania Pesticide Application Business license for the Morris Arboretum is maintained by the Director of Horticulture at the Morris Arboretum.
- 6.3 The Pennsylvania Pesticide Application Business license for New Bolton Center is maintained by the Director of Facilities at New Bolton Center.
- 6.4 Applicator certifications shall be kept by applicators in a place where they can be produced in the event of an inspection.
- 6.5 EHRS shall maintain a copy of all certifications.
- 6.6 Registered Technician training records and registrations shall be kept by the Certified Applicator that conducts the respective training.
- 6.7 Pesticide applicators shall maintain a log of all pesticide applications. The log shall include the pesticide name/registration number, date/time of application and amount of pesticide applied. The log shall be maintained for a minimum of three years.

7.0 Key References and Resources

- 7.1 [Penn State Extension - Integrated Pest Management](#)
- 7.2 [Penn State Extension - Pesticide Education](#)
- 7.3 [Penn State Extension – Pesticide Applicator Certification](#)
- 7.4 [Pennsylvania Department of Agriculture – Certification Exam Locations](#)
- 7.5 [Pennsylvania Pesticide Control Act - 7 PA Code, Chapter 128](#)