

Integrated Pest Management

Guideline

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Applies To: All University buildings that require pest management services.

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Integrated Pest Management (IPM) is an ecological approach to pest management and is the methodology to be used in University buildings. All available techniques are used to reduce pest populations to acceptable levels while minimizing the potential impact of pesticides upon humans and the environment.

The building manager and pest management professional **must** set attainable objectives for the IPM program. These objectives may include:

- Reducing the transmission of diseases.
- Preventing food contamination.
- Minimizing the potential for structural, equipment, or historical damage.
- Meeting the standards of an accreditation board.

Related IPM Program Documents

- [Personal Protective Equipment Guideline](#)
- [Respiratory Protection Guideline](#)
- [Medical Surveillance Program](#)
 - [Respiratory Protection Program](#)
 - [Cholinesterase Policy](#)

Additional Resources

All reference guidelines, regulations, and other documents are available in [Appendix A](#) of this document.

Deans, Directors, and Department Heads

- Designate and empower individuals who will be responsible for the preparation and implementation of the IPM program.
- Actively support this Guideline within individual units.
- Ensure an environment where principal investigators, supervisors, and other personnel are encouraged to follow this Guideline.

Building Manager

- Building managers that need pest control may contact the Facilities Service Center (734) 647-2059.
- Allow only one pest management company to service the entire building to provide consistent control of pests. Assure coordination of the treatment schedules when the use of one pest management company is not possible.
- Coordinate building maintenance and sanitation to minimize pest entry points and reduce the availability of food, moisture, and harborage.
- Make building occupants aware of the things they can do to help prevent pest problems.
- Establish a logbook, e-mail, or other system to assist building occupants in reporting pest and maintenance issues.
- Determine (along with the pest management professional) how much pest activity can be tolerated before controls are instituted. Some areas may require preventive treatment; some areas may need routine monitoring and treatment as necessary; some areas may be inspected only upon complaint.
- Ensure the pest management professional notifies the public and building occupants of the pesticide applications.

Environment, Health & Safety (EHS)

- Audit the use of pesticides in University of Michigan buildings to assure that applicators are following applicable regulations.
- Follow up on pesticide related complaints; act as a liaison between the University and Michigan Department of Agriculture and Rural Development (MDARD).
- Review and revise this document as needed.

Custodial and Cleaning Services Personnel

- Report pest sightings to the building manager.
- Identify and report doors that are propped open, window screens that have been removed, and other activities that allow pests into the building.
- Identify and correct unsanitary conditions that provide food for a pest population.
- Identify and report areas of the building that have been damaged by moisture; many pests flourish in moist environments.
- Identify and report holes, cracks, and other places where pests are living.
NOTE: Pests like to live in areas containing refuse such as cardboard and paper bags.

Maintenance Personnel

- Perform necessary maintenance services including but not limited to:
- Installation of screens on windows that can be opened.
Installation of weather-stripping and door-closer devices on exterior doors.
- Patch holes, fill gaps, seal cracks, screen vents, and eliminate other pest access points and harborages.
- Identify leaking pipes and plumbing fixtures, leaking roofs, or other sources of moisture, and make the necessary corrections.
- Replace wet building materials and improve ventilation when necessary.

Building Occupants

Building occupants can help by reporting to the Building Manager pest sightings, cleaning problems, and maintenance issues and by identifying and correcting habits that may contribute to a pest problem.

Examples include:

- Open windows only if there is a screen to keep pests out.
- Do not prop open outside doors.
- Rinse food and beverage containers before recycling.
- Store snacks and other food in pest-proof containers.
- Discard food remnants in appropriate waste container.
- Discard old bird seed and other stored grain products.
- Minimize clutter such as used paper bags and corrugated cardboard in your workspace.
- Do not place animal feeders near building.

NOTE: Bird feeders, etc. also attract pests to the buildings.

Pest Management Professionals

Plant Building and Grounds Services provides pest control services in many University of Michigan facilities. All of the pest management professionals can answer general questions regarding pest control on the Ann Arbor campus. For service and follow up calls contact the Facilities Service Center at (734) 647-2059.

The pest management professional **must**:

- Participate in an IPM training program approved by Michigan Department of Agriculture and Rural Development (MDARD).
- Store, transport, mix, apply, and dispose of pesticides, pesticide containers, and pesticide containing according to label directions.
- Participate in the EHS Respiratory Protection Program and the EHS Medical Surveillance Program.
NOTE: Only respirators supplied by EHS may be used. Call (734) 615-2140 for more information about these programs.
- Identify areas that may be sensitive to pesticide use.
- Identify pests.
- Identify and report routes of pest entry.
- Identify and report sanitation and building maintenance deficiencies.
- Coordinate training for pesticide applicators.
- Determine (along with building manager) how much pest activity can be tolerated before controls are instituted. Some areas may require preventive treatment; some areas may need routine monitoring and treatment as necessary; some areas may be inspected upon complaint.
- Select and apply appropriate control methods.
- Select a pest management professional who is certified in appropriate categories and who has participated in an IPM training program approved by MDARD.
NOTE: If a non-University pest control company is selected, it **must** be licensed through the MDARD. Include the IPM guideline in any bid specifications.
- Keep records of pesticide applications.
- Provide building manager with appropriate notification signs; these are available from the Michigan Pest Management Association, PO Box 26546, Fraser, MI, 48026-6546. Phone: (586) 296-9580.
- Applicators are encouraged to conduct self-audits using [Appendix B](#).

Facilities & Operations Plumbing Shop

Apply an approved larvicide in the catch basins during the basin cleanout conducted between March and November. This effort is designed to control the mosquito population.

Setting Threshold Levels

Threshold levels determine when pest management controls should be applied. The threshold levels are set by Building Managers and Pest Management Professionals, which are as follows:

THRESHOLD LEVELS	DEFINTION
Upon Complaint	Some areas such as offices and waiting rooms might be inspected only upon complaint. Appropriate recommendations for cleaning or repair should be made, and when necessary, controls should be implemented.
Monitored Areas	Areas such as food storage and preparation areas and dishwashing areas should be monitored and inspected on a routine basis. Recommendations for cleaning or repair should be made, and controls implemented as necessary.
Preventative Treatments	Certain key areas might require preventative treatment. These areas should first be inspected and recommendations for cleaning or repair should be made.

Pest Management Inspections

Periodic inspection of the facility will help identify conditions that allow pests into the building, provide access to food and water, and provide hiding places or harborages.

Pest Monitoring

Sticky traps and lures can be useful in determining the pest species, location, density, and routes of entry. They may be useful in or around food and animal feed storage rooms, food preparation areas, waste storage and recycling areas, and other areas where pests have been sighted.

Selection of Control Methods

Non-chemical controls are often effective and should be considered in any IPM program. These may include, but are not limited, to structural repair; the installation of air curtains, screening, or electrocution grids; and the use of vacuum cleaners, light traps and live traps, guillotine mouse traps, glue boards, or biological controls.

If necessary, chemical controls are determined by Pest Management Professionals.

Notification

Pest management professionals **must**, upon completion of a pesticide application in a public building, health care facility, or child care facility, inform occupants of the application via email or post a sign (sample below) at the primary point of entry.



Record Keeping

The pest management professional is responsible for maintaining records of the IPM program. These records **must** include:

- Location of pests and/or conditions conducive to pest infestation.
- Date of application.
- Target pest(s).
- Name, quantity, and location of pesticide(s) used.
- Recommendations to the building manager.
- Name of applicator and emergency phone number.

Evaluation

The building manager and pest management professional should jointly periodically review the IPM plan to determine if objectives have been met and revise as needed.

Appendix A: Reference Regulations

- [Natural Resources and Environmental Protection Act \(Act 451, P.A. of 1994\) Part 83, Pesticide Control](#)
- [Michigan Department of Agriculture and Rural Development Regulation 636, Pesticide Applicators](#)
- [Michigan Department of Agriculture and Rural Development Regulation 637, Pesticide Use](#)
- [Michigan Department of Agriculture and Rural Development Regulation 633, Restricted Use Pesticides](#)

Appendix B: Sample of EHS Pesticide Audit Worksheet



EHS Pesticide Audit Work Sheet

Location:	Date:
Pesticide Program Manager:	
Person in Charge:	

Inventory	Yes	NO	N/A
1. Inventory List Submitted to EHS			
2. Current List of Certified Applicators Submitted to EHS			
3. Restricted Use Products			
Inventory Storage Facility			
4. 800 ft. From Well			
5. Large Enough			
6. Method for Locking			
7. Identified as Pesticide Storage			
8. Properly Heated			
9. Floor Drain Contamination Prevention			
10. MSDS is Separate Location			
Inventory Containers and Label			
11. Labels Intact and Legible			
12. Containers in Good Condition			
13. Containers Stored in Orderly Fashion			
14. Stored Away from Food/Feed			
Strategic Operating Plan			
15. Use Inspections and Pest Monitoring before Control Selection			
16. Non-Chemical Controls Implemented			
17. Written Plan for Off Target Drift and Notification (Outdoor use only)			
18. Plan to Hold Excessive Pesticides or Rinstate for Disposal or use as a Diluent			
Impervious Pad (Hand Held Equipment Exempt)			
19. Impervious Pad Provided			
20. Pad Bermed or Sloped			
21. Hold Tanks Above Ground			
22. Back flow Prevention for Hoses and Water Lines			
23. Shut off Valve Where Chemicals are Mixed			
Equipment			
24. In Sound Mechanical Condition			
25. Calibrated Properly			
26. Shut Off Valves Function Properly			
SARA Title III			
27. Name of Person Responsible Given to Proper Authorities			
28. Applicators Aware of Whom to Notify in case of Spill			

Records	Yes	NO	N/A
29. Records Kept (3 yrs. RUP, 1 yr. GUP)			
30. Applicator Records Include: Applicator name, location, date of application, identity and location of target pest, density of target pest, recommendations, amount and concentration of pesticides used, name and EPA registration number of pesticides applied			
Safety			
31. Respirator Use Required			
32. Applicators Current on Medical Surveillance Requirement			
33. Impervious Gloves Provided			
34. Safety Goggles Provided			
35. Spill Kit Available			
36. Contains: 2 Buckets or More, Absorptive Pillow			
37. Operator Wears Long Pants, Long Sleeves, Protective Footwear			
38. Fire Extinguisher Provided			
39. Product Labels and MSDS Available			
40. Hand Washing Facilities Available			
Notification			
41. Application Areas Include Addresses on Notification List			
42. Appropriate Signs Provided			
43. Non-Golf Course Facilities: Lawn Markers for 24 hours, 4"x5" green letters, white background, "Caution" 11/16", "Pesticide App." 9/32", "Keep Off Till Dry" 9/32", "Customer: Please Remove after 24 hrs" 3/32", Picture of No People			
44. Golf Course Broadcast, foliar or space application: Date and time of application, common name of pesticide, areas treated, label re-entry precautions, name of person to be contacted for further information.			
45. Sign for public buildings: Placed at primary point of entry, posted for 24 hours, 2.5"x2.5", black letters, muted background, clouded house symbol, date of application 1/8".			

Comments:	Date C'd

Inspected By: _____ Person-in-Charge: _____ Page _____ of _____

Glossary of Terms

TERM	DEFINITION
Building Manager	The person who is designated as being responsible for the building's pest management program and to whom any reporting and notification is made; the contact person.
Pests	Any unwanted insect, rodent, nematode, fungus, weed, or other animal, plant, or microorganism. This does not include organisms in or on living animals.
Pesticide	Any substance or mixture of substances intended to prevent, destroy, repel, or mitigate pests, or intended for use as a plant regulator, defoliant, or desiccant that limits the unwanted growth of a pest.
Pest Management Professional	A person specializing in the identification, reduction, and prevention of pest populations.
Threshold Levels	An agreed upon level of pest populations at which pest management action should be taken to meet the objectives outlined for the building.

Revision History

REVISION #	DATE	REVISION #	DATE	REVISION #	DATE	REVISION #	DATE
1	1/28/00	3	1/8/13	1	6/29/18		
2	3/11/11	40	1/30/18				