

Integrated Pest Management Plan for Radford University's Buildings and Grounds

Effective date: February 1, 2022

1. Introduction

Pests are populations of living organisms (animals, plants, or microorganism) that interfere with use of landscapes, university buildings, and other facilities for human purposes.

Integrated Pest Management (IPM) is an approach that establishes a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

Facilities Management at Radford University has adopted this Integrated Pest Management Plan for buildings and grounds under the University's operational control. The plan outlines procedures to be followed to manage pest populations within the landscape while minimizing impacts to the environment and protecting the health and safety of staff, students, and visitors from pest and pesticide hazards.

Objectives of this IPM plan include:

- Elimination or suppression of significant environmental threats caused by pests to the landscaped areas of campus, to buildings, and to people (non-medical).
- Prevention of loss or damage to plant material, turf, or trees by pests.
- Protection of environmental quality inside and outside buildings.
- Protection of employees that perform pest management tasks or otherwise occupy campus buildings and grounds.
- Routine inspection and monitoring.
- Short- and long-term pest control through a combination of cultural, mechanical, environmental, and chemical techniques.
- Evaluation of pesticides to choose the appropriate chemical for targeted species at correct rates
- Non-chemical pest control strategies are used first where feasible.
- Use of pesticides in targeted locations for targeted species.
- When resorting to pesticides, using least-toxic pesticides, defined as EPA's Toxicity Category 3 and 4, when possible, before using more toxic alternatives (EPA's Toxicity Category 1 and 2). The signal word for Category 3 and 4 pesticides is "Caution".
- Protection of building occupants and campus users by adhering to instructions on label for application rates, occupancy, and reentry requirements.
- Establish IPM Coordinators as Director of Housekeeping Services and Landscape Superintendent
- For cases that do not warrant emergency treatment, prior to applying chemical pesticides, alternative pest control methods will be reviewed by the designated IPM Coordinator and pest control contractor and used if appropriate.

2. Scope

This plan applies to buildings and grounds under Radford University's operational control unless otherwise noted. This plan will be consulted prior to acting on pest management in buildings or on University grounds. Pests include plants or animals that are detrimental to the property, a nuisance to building occupants, or unwanted on the building grounds for other reasons.

Pesticides include, but are not limited to:

- herbicides for controlling weeds and other unwanted vegetation;
- insecticides for controlling a wide variety of insects;
- fungicides used to prevent the growth of molds and mildew;
- and compounds (bait station) used to control pests.

3. Roles and Responsibilities

Integrated Pest Management Team

Name/Title	Responsibilities
Overall responsible parties: IPM Coordinators Director of Housekeeping Services and Landscape Superintendent.	<ol style="list-style-type: none">1. Ensuring that this plan is executed.2. Ensuring that the contracted pest control contractor is furnished a copy of this plan and adheres to the plan procedures.3. Site visits for regular inspections and monitoring as needed for implementation of pest controls.4. Overseeing work performed by the pest control contractor.5. Approving the use of pesticides when they are necessary.6. Following instructions on pesticide label.7. Ensuring that the IPM Plan is available to anyone upon request.8. Evaluating performance and making updates to the plan as necessary.9. Keeping records of pesticide applications in campus buildings and on campus grounds.
Pest control contractor	<ol style="list-style-type: none">1. Adhering to the procedures outlined in this plan.2. Identifying pests during site visits and inspections.3. Reporting the results of site visits and inspections to the responsible party.4. Notifying the overall responsible party when pest action thresholds are reached or exceeded.5. Obtaining approval from the overall responsible party to use pesticides when necessary.6. Provide IPM Coordinators with SDS sheets for all products to be used, along with application records.7. Maintain records of applications as defined in Section V, In and Around Buildings.

On-site staff/ faculty contacts	1. Reporting pest issues in respective occupant spaces to Facilities Management x7800 or facilities@radford.edu
Environmental Health & Safety	1. Ensures that all people of use pest control products follow label directions for proper use, mixing, storage, and disposal. Ensure that university employees are provided the appropriate hazard communication training to include understanding product labels and safety data sheets. 2. Serve as a resource for chemical applications, e.g. cleanup of spills and exposures

4. Standard Operating Procedures and Implementation Strategies

Pest control strategies in and around buildings

The building interior and exterior will be periodically inspected for the presence of pests and preventive measures will be taken to avoid pests. If any pests are detected, integrated (nonchemical) methods will be implemented as the first control step, including sanitation measures, exclusion measures, and the use of traps.

Sanitation: Potential food and water sources available to pests will be evaluated and minimized or eliminated, and is the responsibility of occupants in these spaces: break rooms, offices, dining, residence hall rooms. This can be done by thoroughly cleaning and maintaining food service areas and break rooms, fixing leaking pipes and faucets, and altering landscape features to eliminate standing water.

Exclusion: Cracks, crevices, and holes in the building envelope will be sealed.

Traps: If rodent and rodent nest cannot be located and mechanically eliminate, then chemical baits may be deployed in locked dispensers when necessary, both indoors and out.

The elements of a successful IPM approach to managing pests in and around buildings includes:

- identification of the source of any "problems"
- determination of the threshold for the pest, (i.e., how many is too many? How much damage is acceptable?)
- monitoring of common areas to determine the pest population level and whether or not the threshold is being exceeded
- determination of whether or not pest control is necessary

- identification and implementation of cultural techniques to manage a pest or problem situation when appropriate and effective
- use of pesticides when other options and alternatives are not sufficient to manage a problem to the extent necessary
- selection of pesticides which will minimize disruption to the environment and potential exposure to applicators (as noted in Pesticide Guidelines section of RU IPM Plan)
- communication of findings, intentions, and actions to the IPM Coordinators, Facilities Management, or Environmental Health & Safety.
- evaluation of action; did the course of action followed alleviate the problem?

Pest control strategies on University managed grounds:

The elements of a successful IPM approach to controlling pests on University managed grounds include:

- identification of the source of any "problems"
- determination of the threshold for a pest, (i.e., how many is too many? How much damage to the turf is acceptable?)
- monitoring of the site to determine the pest population level and whether or not the tolerance level is being exceeded
- determination of whether or not pest control is necessary
- identification and implementation of cultural techniques to manage a pest or problem situation when appropriate and effective
- use of pesticides when other options and alternatives are not sufficient to manage a problem to the extent necessary
- selection of pesticides which will minimize disruption to the environment and potential exposure to applicators and others (as noted in Pesticide Guidelines section of this plan)
- communication of findings, intentions, and actions to the IPM Coordinators, Facilities Management, or Environmental Health & Safety.
- evaluation of action; did the course of action followed alleviate the problem?

Pesticide Guidelines

If a combination of cultural, mechanical, and environmental techniques are unable to resolve the pest problem, least toxic pesticides will be used prior to resorting to the use of non-least toxic pesticides.

Least-toxic options include:

- Pesticides in EPA's toxicity category 3 and 4
- Pesticides that do not have the Globally Harmonized System (GHS) Environment Pictogram



Least-toxic options do not include:

- Pesticides determined by the EPA to be possible, probable or known carcinogens, mutagens, teratogens, reproductive toxins, developmental neurotoxins, endocrine disrupters or immune system toxins.
- Pesticide in EPA's toxicity category I or II.

Products that are not regulated as pesticides by the EPA because they primarily contain low-risk ingredients may be considered least toxic options. Some pesticides may be considered least toxic if they are used in self-contained baits and placed in locations that are inaccessible to occupants. Some baits are not considered least toxic.

Non-least toxic pesticides include products designated in EPA's toxicity category 1 and 2. Non-least toxic pesticides may be used under the following circumstances:

1. Alternative, integrated, and least toxic pest control measures have been ineffective and the pest action threshold is still exceeded
2. The emergency action threshold has been exceeded

The use of non-least toxic pesticides for pest control in areas requiring frequent treatment on a permanent basis is an acceptable strategy only in areas with ongoing problems. Non-least toxic pesticides will not be continuously applied in the building and on the site. Integrated and alternative pest control measures will be resumed once the action threshold specified below for the applicable pest is no longer exceeded.

Action thresholds

Thresholds for common pests in and around campus buildings:

Regular treatment includes the use of first non-chemical controls (sanitation, exclusion, etc.), followed by the use of least-toxic control methods if the situation is not resolved, and then non-least toxic control methods if the situation is still not resolved.

Emergency treatment includes the use of the most effective control method as a first step, which may be non-least toxic.

Pest Type	Action thresholds
Ants	<p>Regular treatment will be performed if any ants are noted in the building and their presence is confirmed through monitoring.</p> <p>Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.</p>
Other insects	<p>Regular treatment will be performed if nuisance insects are noted in the building and their presence is confirmed through monitoring.</p> <p>Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.</p>
Cockroaches	<p>Regular treatment will be performed if cockroaches are noted in the building and their presence is confirmed through monitoring.</p> <p>Pesticide application has proven necessary and effective in-residence halls prior to student move-in, in addition to cultural, mechanical, and environmental techniques, to achieve minimum threshold.</p> <p>Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.</p>
Rat, Mouse	<p>Regular treatment will be performed if rats or mice are noted in the building and their presence is confirmed through monitoring.</p>

	Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.
Bed bugs	Emergency treatment may be used if the presence of bed bugs is confirmed in the building.
Other occasional pests	Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.

Thresholds for pests on campus grounds

Regular treatment includes the use of first non-chemical controls (environmental and cultural), followed by the use of least-toxic control methods if the situation is not resolved, and then non-least toxic control methods if the situation is still not resolved.

Emergency treatment includes the use of the most effective control method as a first step, which may be non-least toxic.

Type of Landscape	Tolerance Level
Turf	Some tolerance for most pests and weeds and low tolerance for noxious weeds Regular treatment will be used to maintain healthy turf. Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.
Athletic Turf	Very low tolerance for most pests and weeds. Regular treatment will be used to maintain healthy athletic turf. Emergency treatment may be used in situations when conditions warrant elevated treatment or elevate risk.
Planting Beds and Tree Rings	Some tolerance for most pests and low tolerance for weeds Regular treatment will be used to maintain healthy and attractive mulched beds. Emergency treatment may be used in situations when conditions warrant elevated treatment or that elevate risk.

Crack and Crevice	<p>Very low tolerance for most pests and weeds</p> <p>Regular treatment will be used to maintain pest-free cracks and crevices.</p> <p>Emergency treatment may be used in situations when conditions warrant elevated treatment or elevate risk.</p>
Ornamentals	<p>Visual damage warrants evaluation and appropriate treatment</p> <p>Regular treatment will be used to maintain healthy ornamentals.</p> <p>Emergency treatment may be used in situations of infestation or when multiple conditions warrant elevated treatment or elevate risk.</p>

Occupant Communication plan

If pests are observed in an occupant space, occupants are encouraged to alert Facilities Management to the issues. Facilities Management will respond and inspect the situation and determine whether the regular action threshold or the emergency action threshold has been met and take appropriate action.

At a minimum, the appropriate IPM Coordinator will notify any building occupant or employee who requests notification within the 24 hours prior to the pesticide application. For an emergency application of a pesticide, anyone who requested notification will be notified within the 24 hours after the application with a description of the emergency application.

For pesticides with label posting requirements with specified notifications or a restricted entry interval, the appropriate IPM Coordinator will post a sign at the application site to remain in place for 24 hours prior to application and until the restricted entry interval has expired or the label posting requirement is met. Notifications will include the pesticide name, EPA registration number, treatment location, and date of application, along with reentry time, drying time, or other label posting requirements.

5. Performance measurement and schedule for reassessment

IPM Coordinators are responsible for record keeping of pesticide applications. The following information will be logged.

For pesticides in and around buildings:

- Target Pest(s)

- Regular Treatment or Emergency Treatment
- Pest action threshold observed
- Prevention measures implemented
- Product applied (name)
- Toxicity of the product (the tier level as determined EPA Category)
- Date of product application (if applicable)

For pesticides applied on grounds:

Pesticide businesses are required to keep records of all pesticide applications made by their applicators. Certified Government applicators must maintain similar records to those maintained by licensed businesses. These records must be maintained for a period of two years following the pesticide use. Pesticide businesses must include the following information in their records:

1. Name, address, and telephone number of customer and address or location, if different, of site of application;
2. Name and certification number (or certification number of the supervising certified applicator) of the person making the application;
3. Date of application (day, month, year);
4. Type of plants, crop, animals or sites treated;
5. Principal pests to be controlled;
6. Acreage, area, or number of plants or animals treated;
7. Identification of pesticide used - Brand name or common name of pesticide used;
8. EPA product registration number;
9. Amount of pesticide concentrate and amount of diluents (water, etc.) used, by weight or volume, on the area/sites treated;
10. Type of application equipment used.

*Recordkeeping requirements for commercial applicators not for hire and registered technicians not for hire can be found in 2VAC5-685-200 and 2VAC5-685-210.

* Responsibilities of Commercial Pesticide Applicators and Registered Technicians in Virginia:
<https://www.vdacs.virginia.gov/pdf/responsibilitiescommrt.pdf>

6. Quality Assurance/Quality Control Processes

On an annual basis, the overall responsible party will evaluate performance against the goals specified earlier in this plan. If the goals are not being met, adjustments will be made to this plan in order to facilitate goal achievement, and the pest contractor and occupant contacts will be educated on the adjustments made to the plan.

On an annual basis (October), the Assistant Vice President for Facilities Management will establish a meeting to review performance against established goals which will include IPM Coordinators, sustainability manager, university licensed applicators, and pest control contract administrators.

Public Access to Information

The Radford University IPM Plan will be accessible on the Radford University Facilities Management website.

Facilities Management will maintain records of pest control treatments for at least three (3) years. Information regarding pest management activities will be made available to the public at the Radford University Facilities Management administrative office.