

Muhlenberg College Integrated Pest Management Plan

Muhlenberg College strives to provide a safe, comfortable learning environment for our students. Plant Operations is responsible for ensuring that our buildings, grounds, and other areas are managed in accordance with policies and plans put forth by the College. We strive to accomplish this through sustainable and responsible techniques. This plan has been developed to accompany the Pest Management policy.

The Integrated Pest Management Plan will consist of three areas of usage on Campus:

- 1) Turf Areas
- 2) Woody Trees and Shrubs
- 3) Buildings

Most areas on campus will follow the same principles, although some adjustments will be made as circumstance dictates.

The IPM Management Team will consist of the following:

- a) Director of Plant Operations
- b) Assistant Director of Plant operations
- c) Grounds Manager
- d) Custodial Supervisor
- e) Maintenance Supervisor
- f) Sustainability Coordinator

Identification of Pests:

For each pest that has been encountered in the recent past, or has the chance to impact the College in the future, a profile shall be created and maintained. Information maintained should include common name, scientific name, and brief description of symptoms, biology / life cycle, and threshold levels.

Inspection

Muhlenberg College Plant Operations should be aware of which pests are present on campus. They should also be aware of pests that have been a concern or could be based on weather, building condition, etc.

For Turf Areas:

During the growing season, the frequency of scouting shall be a minimum of one time per month. This will increase as weather and / or pest population change to require more frequent monitoring. A record of scouting and any pest populations identified shall be maintained. These results will help to show trends and changes that will determine if control is needed.

For Woody Trees and Shrubs:

Scouting of these plants will occur at least three times per year:

- a) Early spring , prior to bud-break
- b) Late spring ,post bud-break
- c) Early fall before plants go dormant

Each one of these is weather dependent, and can be unpredictable. Scouting will inform the college as to what, if any pests exists, and to what level.

For Buildings:

Employees, primarily housekeeping and mechanical, regularly inspect the interiors of buildings for cleanliness and other issues. When evidence of pests is observed, one or all of the IPM management team shall be notified. Grounds crews will also inspect the exteriors of buildings.

Customers are primary users in their respective buildings, and so are key to observing and identifying problems in their spaces. They shall notify Plant Ops of the pest or problem. Visual inspection by a member of the IPM Management team shall confirm if the problem exists.

Prioritization for the Campus Areas

Priority Areas for Campus and College owned properties:

Muhlenberg College campus consists of the main academic area, several blocks of MILE Properties, and some off-campus acreage.

The location, use, and visibility of these areas will be taken into account when determining the level of service they receive regarding Pest management.

Turf Grass Areas:

Level 1: These are high priority areas and will be managed to minimize reduction in quality. They will receive the most significant attention and resources. These include:

- a) Athletic Fields
- b) Front Circle Lawn area
- c) Chapel Lawn Area
- d) Library Lawn
- e) Brown Quad and surrounding areas
- f) Multi-Cultural and Hillel Properties

Level 2: These are medium priority, and some minor pest problems will be tolerated. They will receive less maintenance, but will still be reviewed regularly so that levels remain low, and do not progress into Level 1 areas. These areas include:

- a) MILE Properties
- b) The Villages areas
- c) Parkway adjacent areas

Level 3: These areas are low priority. Pests will be monitored, but only threats that reach a high level of the threshold will be treated. These areas include:

- a) Rakers Biological Preserve **turf** (off- campus)*
- b) Graver Arboretum **turf** (off-campus)*

*Note that this refers only to the turf at these locations, not the trees and shrubs

Woody Trees and Shrubs:

Level 1: These are high priority areas, and include trees and shrubs on the core campus area, as well as off- campus sites, including:

- a) Academic Row
- b) Seeger's Union
- c) Front Circle lawn
- d) Chapel Lawn
- e) Stadium and adjacent areas
- f) Presidents House, Hoffman House, Everson House, Hillel, Multi- Cultural Center
- g) Prosser Front Entry and Bookstore Entry Area
- h) Graver Arboretum

Level 2: These are medium priority areas. These are less formal areas, but should still be monitored to regulate pests that could progress to Level 1. They include trees and shrubs in the following areas:

- a) MILE Properties
- b) ML Parking Lot
- c) The Villages
- d) Library Terraces
- e) Roberston, South, and East

Level 3: These are low priority trees and shrubs. They consist of largely undeveloped, woodland areas. They are natural and require little, if any maintenance. Monitoring exists to keep out serious or exotic pests that could spread. They include the following areas:

- a) Parkway adjacent woods
- b) Raker Biological Preserve

Buildings:

Building levels are set by level of nuisance to occupant, not by specific building. Most buildings are at a high level due to regular customer use.

Level 1: Stinging or biting insects that pose an immediate health risk or danger to students, faculty, or staff. Any pest observed in food service areas are high priority.

Level 2: These are a high level risk. These are pests that pose a health issue that may not be immediate, but significant. They can be pests that pose a risk to the structural integrity of a building, or are in such large numbers that they negatively impact daily life in those buildings.

Level 3: These are low risk. They can be nuisance pests in low numbers that do not pose a health risk or negatively impact daily life in those areas.

Determining Treatment:

When the scouting or inspection results in found pests, treatment should be decided. If thresholds are met then non-chemical methods must be considered and implemented as appropriate before chemical treatments are applied. They can include the following:

Turf Areas:

- Adjust mowing height
- Adjust mowing frequencies
- Change irrigation timing and/or frequency
- Aerate soil
- Limit pedestrian traffic
- Mechanically remove pest

Woody Trees and Shrubs:

- Prune to remove problem areas
- Mechanically remove pest
- Limit pedestrian traffic
- Increase fertilization/feeding
- Complete removal of plant

Buildings:

- Repair and maintain to limit access for pests
- Remove potential environments for pests
- Clean and store properly to minimize food sources for pests
- Mechanical traps / glue traps

If non-chemical measures have not been successful, then chemical measures may be employed after review of the Pest Profile. Proper selection of pesticides is important, and guidelines shall be followed regarding application, timing, etc.

The unique characteristics of the areas and buildings of Muhlenberg College shall be taken into consideration to decide on the proper treatment. Such characteristics include:

- Building age
- Parking areas and impervious surfaces
- Function and use of the building
- Soil and grades

Chemical Application Protocol:

Safe use of pesticides and chemicals is the goal of this protocol. Muhlenberg College is committed to reducing the use of chemicals. They will be used after thresholds have been surpassed and other methods have failed. This includes using a smaller dose of chemicals as a preventative measure to minimize the potential for more significant applications at a later time. Proper steps must be taken when incorporating chemicals:

- Consult pest profiles for timing.
- Use the lowest recommended rate.
- Spot treat as opposed to blanket treating areas.
- Use a tackifier when needed to enhance contact and reduce runoff
- Try to keep buffer areas between treated and untreated areas
- Read labels, MSDS, etc.
- Use proper PPE

The Muhlenberg College Grounds manager will be licensed through the state of Pennsylvania as a commercial applicator. The appropriate categories shall be included in licensing. Chemical applications may only be applied with approval of one of the members of the IPM Team.

Records of applications shall be kept in accordance with laws put forth by the Dept of Agriculture in Pennsylvania.