

Stevens Institute of Technology IPM Plan

PM Program Introduction

Landscape pests can pose a significant problem to people, property and the environment. Pesticides and herbicides can also pose risks to people, property, and the environment. It is therefore the Policy of Cambridge Floral to incorporate Integrated Pest Management (IPM) procedures for landscape pests.

Pests are populations of living organisms (animals, plants, microorganisms) that can interfere with the day — to -day operations of Stevens Institute of Technology campuses. Strategies for managing pest populations will be influenced by the pest species and whether that species poses a threat to the students, staff, and environment. Pest management plans will be developed for the Stevens Institute of Technology and will include pest management measures.

Pests will be managed to reduce any potential human health hazards to protect against a any threat to public safety, to prevent damage to SIT structure or property, and to enhance the quality of life for students and staff.

The choice of using chemical pesticides will be based on a review of all other known options and a determination that these options are not acceptable or feasible. Selected non-chemical pest management methods will be implemented, whenever possible to provide the desired control. It is the policy of Cambridge Floral to utilize IPM principles to manage pest populations adequately. The full range of alternatives, including no action will be considered. When it is determined that a pesticide or herbicide must be used in order to meet the pest management goals, the least hazardous material will be chosen.

The IPM Coordinator will maintain records of pesticide and herbicide use and will notify the SIT staff of upcoming pesticide treatments. Notices will be posted in designated areas at each site.



IPM Procedure

<u>INSPECTION</u> – Inspection of all grounds will be conducted on a monthly basis by Cambridge Floral personnel. A detailed inspection of the campus will be conducted annually.

<u>IDENTIFICATION</u> – Accurate identification of any pest is a vital part of ensuring that proper control methods will be used.

<u>ACTION</u> – Habitat modifications and sanitation efforts will be the first actions considered (Hand Pruning and/or removal). Application of Organic nontoxic oils and soaps will follow if needed will be the second action considered. Action threshold will be considered before any other actions. Action threshold will reflect how many pests can be tolerated for a specific site. The presence of some pests does not in itself necessarily require action.

<u>EVALUATION</u> – If it is determined that further action is needed then there will be a follow up with an appropriate pesticide approved by the IPM Coordinator.

Outdoor IPM Strategies

Typical Pest:

Turf Pest such as board-leaf and grassy weeds. Insects such as beetle grubs or sod webworms and turf disease.

Ornamental pest such as plant diseases, insects such as trips, aphids, Japanese beetles and bagworms



Turf: Lawns

- Adjust mowing height to 3-3.5"
- Vary mowing patterns to reduce soil compaction
- Do not over or under water turf water in the "A.M."
- Provide good drainage
- Periodically inspect turf for evidence of pest or diseases
- Have soil analyzed to determine fertilizer requirements
- Time fertilizer applications on an appropriate time
- Aerate soil periodically (Spring and Fall)

Ornamental Shrubs and Trees

- Apply fertilizer to annual and perennials during active growing season
- Apply fertilizer to trees and shrubs early in the growth season or during the dormant season
- Prune branches to improve plants and prevent access by pest to structures
- Periodically inspect plants for evidence of pest or disease
- Remove susceptible plants if a plant disease recurs and requires too many resources to keep healthy
- Select replacement plants from among the disease resistant types.

<u>Pesticide/Herbicide Applications</u> In the event that the use of <u>Pesticides/Herbicides in required the IPM</u> coordinator must approve applications

- An appropriate application uses the least toxic and most effective pesticide or herbicide
- Applications will be applied when occupant are not expected to be present for at least 12 hours. A sign will be posted 24 hours before the application.
- Applications will be applied according to label directions
- Proper protective clothing or equipment will be used when applying chemicals.

Recordkeeping

A pest management log will be maintained and will include pesticides used, if any. A copy of the Integrated pest management plan, pest management log and any requests, complaints relating to pest problems will be kept in our office.



Maintenance and Plantings Organic Program

Perform a soil test and analysis when analyzing problems or when renovating landscape areas.

Maintain 2-4 inches of large particle size organic mulch over the surface of soil

Apply organic mulches a few inches from the base of trees and plants and extending at least to the dripline. Where Applicable

Use compost to establish beneficial soil organisms and release nutrients over the long term

Use organic recycled materials onsite by mulching, mulch-mowing, and composting

Sow nitrogen fixing or deeply rooted cover crops to improve soils and limit erosion, then till these in before seed set.

Allow fallen leaves to remain as mulch in landscaped beds and natural areas Apply compost twice per year to landscaped beds

Avoid practices that degrade soil fertility

Keep debris and leaves away from storm drains.

Mechanically aerate and top dress turf soils at least once per year

Nutrient management programs for turf, trees, and shrubs will be based on soil tests and clear indication of need

Base any application of phosphorus on soil test indicating plant need

Use naturally derived fertilizers from organic sources such as blood or bone meal, alfalfa, fishmeal, kelp, and natural minerals that slowly release nutrients over a 1-to-4 month timeframe

Schedule fertilization for site conditions and plant needs.



Use mowing practices, fertilization, aeration, topdressing, and over seeding to control weeds and sustain dense turf

Promote nutrient cycling and deep rooting by mulch mowing at 2-4 inches or as appropriate for grass species

Salvage existing plants for reuse

Recycle used plant containers

Use energy-efficient equipment and power tools (Manual and non-gas powered Equipment)

Maintain vehicles, equipment and power tools in optimal working.

Irrigation/ Water Use

Test and repair irrigation systems at start of each season and by draining at end of season

Set and adjust irrigation schedules as needed to minimize evaporation and overwatering Set and adjust irrigation schedules for seasonal weather conditions and site characteristics.

Monitor and maintain systems for best performance and efficiency

Monitor irrigation regularly for broken heads, leaks, runoff, and uniform distribution, and repair irrigation problems promptly

Use smart controllers and rain shut-off sensors.



Landscape Solutions Organic Program

Landscape Insects Management

Kopa Insecticidal soap Biopesticide soap

Landscape Disease Management

Triact 70 (Oils)

Landscape Weed Management

Fireworxx (Soap)

Landscape Fertilizer

Espoma Holly Tone

Bone Meal



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