

Colby College Integrated Pest Management Plan

Purpose and Goals

As the first impression for visitors and prospective students, Colby's physical plant is a critical asset for the College. The beauty of the campus' well maintained grounds and buildings, along with academic strengths such the quality of the faculty, are among the most often cited reasons for students who select to enroll at Colby. Equally important is the need to provide a quality environment in which the faculty, staff and students can live, work and learn. We are responsible for ensuring that these strategic assets are protected, maintained and enhanced, and we strive to do so in a sustainable and responsible manner. With those goals in minds, these policies and procedures have been developed.

Policy Statement

Integrated pest management is a decision-making process which Colby College employs in its sustainable approach to controlling insects, weeds, plant pathogens and other pests through the use of biological, physical and chemical means. This methodology minimizes the risk from pesticides to human health and the surrounding environment. The College utilizes a system of regular inspection and maintenance of its grounds and buildings, along with appropriate chemical selection methodologies, to minimize both the quantity and toxicity of chemicals on campus. Colby follows these general principles:

- Conduct regular inspection of plant resources and buildings for early detection of pests and other maladies to limit the scale of treatment.
- Actively engage in preventative measures to reduce chemical use.
- Conduct ongoing evaluation of chemicals used to minimize applications and maximize effectiveness of applications as well as identification of new options.
- Schedule treatments to minimize potential impacts on campus activities.
- Use only knowledgeable and licensed professionals for chemical applications that are deemed necessary.

The Integrated Pest Management Plan consists of three major campus use categories:

- (1) Turf and Grasses
- (2) Trees and Woody ornamentals
- (3) Buildings

All areas follow the same general principles; however, steps taken are adjusted to reflect the unique issues related to each area.

Communication

Communication is paramount to the successful execution of an IPM plan. Both Physical Plant (PPD) and Dining Services have established departmental IPM management teams to oversee implementation of the campus IPM Plan. If any other departments believe they have a need to use pesticides (whether organic or non-organic) they must coordinate with the PPD IPM Management team. The PPD IPM Management team consists of:

- a) Director of Physical Plant
- b) Assistant Director of Grounds and Custodial
- c) Grounds Supervisor
- d) Environmental Programs Manager/Campus Horticulturalist
- e) Physical Plant Administrative Secretary

The Dining Services IPM Management team consists of:

- a) Associate Director of Dining Services
- b) Dining Services Administrative Secretary

The teams will meet on a regular basis as described in the “Annual Management Schedule for IPM” (See Attachment A). In these meetings the IPM plan will be reviewed, pest information profiles will be updated, and new options will be discussed. Information will be passed along to the college community, as appropriate, by use of the general announcements and the PPD websites to inform faculty and staff of when an exterior pesticide application will be made. Re entry signage at appropriate intervals shall be posted prior to the application and used immediately after the application to allow for adsorption of the chemical to the plant or soil surfaces. For interior building treatments, building occupants will be notified at least 24 hours in advance of scheduled treatments, except in the case of stinging insects. In that case, notification will be made to building occupants giving as much notice as possible before treatment. The Physical Plant and Dining Services Departments will each maintain a log book which contains information pertaining to pest problems and how they have been remedied. More detail is provided in section on Record Keeping.

Identification of Pests

For each pest that has been encountered in the recent past, or that has a likelihood of impacting the college in the future, a Pest Profile Sheet will be maintained. Pest information profiles are written and maintained by each department. Pest information includes common name, scientific name, species affected, brief description of symptoms or key diagnostic features, biology/life cycle, favorable environmental

conditions, scouting program, and threshold levels. The profiles are a compilation of existing information and will be reviewed at least annually and updated as new information becomes available.

Pest Scouting/ Inspection Program

Colby College must know which pests are presently on the campus or what pests are of concern based on history, environmental conditions, weather, or building condition.

For turf and grasses in the growing season, the scouting frequency will be a minimum of once per month and will be increased as dictated by weather or when pest populations require closer monitoring. Records of scouting and pest populations (when identified) will be maintained by PPD. Scouting results and pest population trends will help to better determine if a pesticide application is necessary or if specific control options are working satisfactorily.

For woody ornamentals and trees, the scouting program can be broken down into three general time frames. Each of these is dependent upon weather and potential exotic maladies that are unpredictable in both nature and timing. The three times frames are made up of (a) pre-bud break in early spring, (b) bud break in late spring to early summer and (c) early fall before dormancy. The scouting will produce evidence as to what levels of pests, if any, are present as well as whether the pest in question is detrimental to the existing plant inventory on campus.

For buildings the scouting/inspection program includes several components:

- (a) The College contracts with a licensed Pest Control Company to provide regular inspections of campus buildings. During the months of April through October of each year, when potential for pest problems is greater, the company will make weekly visits to camps to respond to customer issues, inspect most susceptible areas, and follow up on previous inspections and/or treatments. During the months of November through March of each year, they will be on campus bi-weekly to perform the same services.
- (b) Employees, particularly those in the custodial and dining services areas, regularly inspect the interior of buildings for cleanliness and possible pest control issues. When evidence of pests is observed, they notify the PPD main office so that the pest control company can follow up. PPD employees, particularly those in the grounds crew, regularly inspect the exterior of buildings noting any evidence of pests. When evidence of pest are observed, they notify the PPD main office so that the pest control company can follow up

- (c) Customers, as primary users of their spaces, are key in identifying potential pest problems. When a customer reports a concern to PPD, the first step is to confirm the nature of the problem. This is most often done by a visual inspection performed by PPD or the pest control company and/or by the use of glue boards or other trapping devices that can help to identify the nature of the pest.

Prioritizing Campus

The campus Landscape Master Plan identifies five character zones as significant to the campus landscape structure. As identified in Attachment B, they include

- Campus Core
- Greensward
- Hillside
- Meadow and Playing Fields
- Woodland

These character zones, as well as other campus concerns, are taken into consideration in establishing priority zones for IPM. Thresholds for each zone are included in the Pest Profile sheets.

Turf and Grasses

Level A is considered a high priority and will be managed to minimize any reduction to their quality. These areas will receive the most significant attention and resources. Level A turf areas include:

- 1) The Campus Core and some immediately surrounding area
- 2) Varsity Athletic fields within the Meadow and Playing Fields zone

Level B is considered a medium priority. Minor pest problems will be acceptable in these areas and will require less maintenance but will need to be regularly reviewed as these zones are potential host locations for problems that can progress into our level A areas. Level B turf areas include:

- 1) The Greensward zone
- 2) Practice athletic fields within the Meadow and Playing Fields zone
- 3) Hillside zone

Level C is considered a low priority. Pest problems will be monitored, but the College will treat only the most serious of pest problems that could cause very serious damage or spread to higher priority zones. Level C turf areas include:

- 1) Meadow areas within the Meadow and Playing Fields zone
- 2) Woodland zone

Woody Ornamentals and Trees

Level A is considered a high priority and includes trees and shrubs in the Campus Core, Greensward and Hillside zones. Since the majority of our adult trees are approximately the same age of maturity in this zone, we need to be very diligent with their maintenance. Other factors such as ledge profile, soil type and heavy foot traffic are limiting aspects to plant health care and put these trees at greater risk to disease and other pests.

Level B is considered a medium priority and includes trees and shrubs in the Meadow and Playing Fields zone. These zones are less formal and will require less maintenance, but they will need to be regularly reviewed as these zones are potential host locations for pest problems that can progress into our level A areas.

Level C is considered a low priority and includes the undeveloped Woodland zones that surround the campus. They are largely natural and require little if any maintenance; however, they bear watching for indicators of extremely serious pest problems or exotics that could cause very serious damage or spread to higher priority zones.

Buildings

Level A areas are considered an immediate risk and include the following:

- (a) Stinging insects or other pests that pose an immediate danger to the health and safety of staff or students.
- (b) Pests in a food service area.

Level B areas are considered a high risk and include the following:

- (a) Pests that pose a health issue to staff or students that may not be immediate, but is significant.
- (b) Pests that pose a risk to the structural integrity of the buildings.
- (c) Nuisance pests that, although they may pose no significant health risk or risk to the building's structural integrity, are evident in such large numbers as to negatively impact daily operations or quality of life.

Level C is considered a lower risk and includes the following

- (a) Nuisance pests in smaller numbers that pose no significant health risk or risk to the building's structural integrity and that do not cause a significant negative impact on the living, learning or working environment.

Selection criteria

When the results of scouting or inspections indicate a pest that meets the threshold for treatment, non-chemical methods must be considered and implemented, as appropriate, before chemical treatments are employed. These include but are not limited to the following:

Turf

- Adjusting mowing heights
- Adjusting mowing frequencies
- Changing frequency irrigation
- Changing timing or duration of irrigation
- Increased fertilization/feeding
- Aeration of soil
- Limiting foot traffic
- Mechanical removal of pest

Woody Ornamentals and Trees

- Pruning
- Mechanical removal of pest
- Limiting foot traffic
- Changing frequency or duration of irrigation
- Increased fertilization/feeding
- Complete removal of dead or dying trees/shrubs
- Complete removal of trees/shrubs with heavy infestations of exotics

Buildings

- Maintenance and repairs to limit access for pests
- Maintenance and repairs to remove potential homes for pests
- Cleaning and proper storage of items that could be a food source for pests
- Mechanical traps
- Glue traps
- Vector fly lights or similar attractants

Each individual area around the Colby College campus has unique characteristics such as proximity to ledge, parking areas containing impervious surfaces, soil types, grades and slopes, building materials, building age, proximity to wetlands or other water sources, and use/function of the area. Consideration must be given to these special site or building characteristics when choosing the appropriate control measure.

If non-chemical measures have not been fully successful, then chemical measures may be employed after review of the Pest Profile Sheet. In selecting a pesticide, Colby uses the following references and guidelines to assist in selecting the most appropriate chemicals for the problem being addressed.

National Organic Program as administered by the U.S. department of Agriculture. (This program is also referenced on MOFGA web site)

The College will give preference to effective chemicals that bear the NOP logo or are approved on “The National List of Allowed and Prohibited Substances”.

Windows Pesticide Screening Tool (WIN-PST) as published by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

The College will compare options for pesticides that are effective on the problem being addressed and select the chemical that has the lower rating in toxicity categories.

In the category of Human toxicity (EATHuman), the College will strive to use only chemicals that are rated as “very low”, “low” or “intermediate”.

Signal Word Labeling as identified by Environmental Protection Agency.

The College will strive to use chemicals that are labeled as “caution”, rather than “warning” or “danger”.

Chemical Application Protocol:

Safe use of pesticides is the focus of our protocol. Colby College is committed to limiting and reducing our use of chemicals. They are used to manage pests after thresholds have been surpassed and other preventative methods have failed. This includes the use of smaller amounts of chemical as a preventative measure to minimize the potential for a more significant curative application at a later date. The following additional safety measures must be incorporated into any chemical application process.

- ✓ Pest information profiles will be consulted to achieve proper timing of chemical applications and proper post treatment of the application area.
- ✓ Lowest recommended rates that achieve control will be used.
- ✓ Spot treatment of pest areas as opposed to blanket applications will be used.
- ✓ When appropriate, use a tackifier (or spreader-sticker) to enhance chemical contact and reduce runoff potential.

- ✓ Untreated buffer areas will be utilized to minimize runoff.
- ✓ Prior to all pesticide applications the following will be reviewed:
 - a. Unique characteristics for the affected area, including those identified previously in this policy, will be analyzed and understood.
 - b. Chemical labels and MSDS will be available, read, and understood.
 - c. Safety issues will be reviewed with the applicator. Proper protective gear will be used.
- ✓ Safe procedures will be used during mixing and application to prevent any spills or exposure to the applicator, the public or the environment. Access to the work area should be restricted to qualified and necessary personnel. Appropriate safety equipment must be available.
- ✓ The chemical storage area will be maintained in the grounds garage at PPD.
- ✓ Supplies for containing a chemical spill must be maintained and available for immediate use by the applicator.
- ✓ Training sessions will be scheduled regularly for appropriate personnel in the areas of chemical awareness and pesticide guidelines.

The Colby College Grounds Supervisor will be licensed with the state of Maine as Commercial Applicator - Category III(a) or III(b). All applicators for Colby College will be licensed with the state of Maine in the appropriate category for which they are treating. When working on campus, contracted pesticide applicators must follow the procedures outlined in this policy. Chemical treatments may only be applied with approval of one of the members of the PPD or Dining Services IPM Management teams.

Recordkeeping

PPD and Dining Services departments will each maintain a log consisting of this Integrated Pest Management Plan and a written record of IPM activities conducted throughout the year. This information will include, at a minimum,

- 1) Pest problems encountered
- 2) Non chemical options implemented
- 3) Chemical options implemented
- 4) MSDS for the chemicals that have been used

Annual Review of IPM plan



In accordance with the Annual Management Schedule for IPM, the PPD and Dining Services IPM management Teams will conduct an annual review of this Integrated Pest Management Plan. The plan will maintained by PPD and will be modified or adjusted as

needed to better accomplish the goals of Integrated Pest Management on campus. The plan, as set forth in this document, is subject to change based upon new information about current programs or pests, as well as the availability of new, more environmentally sensitive products or procedures.

Summary

Colby's physical plant is a significant and critical asset for the College. Colby is committed to being environmentally responsible while still maintaining a healthy and attractive landscape; as well as a quality environment in which the faculty, staff and students can live, work and learn.

Approved:

 Vice President for Administration
 Director of Physical Plant

ATTACHMENT A

Annual Management Schedule for IPM

March

PPD and Dining Services IPM teams meet

-Review Pest profile sheets and update as required

-Review IPM plan and modify as needed

April

PPD IPM team meets

-Review March Activities

-Discuss new alternative chemicals or treatments available

-Discuss campus concerns/plans for spring season

June

PPD IPM team meets

-Discuss results of scouting

-Follow up on April meeting

-Discuss campus concerns/plans for summer season

August

PPD IPM team meets

-Discuss results of scouting

-Follow up on June meeting

-Discuss campus concerns/plans for fall season

October

PPD and Dining services IPM teams meet

-Annual review of yearly activities

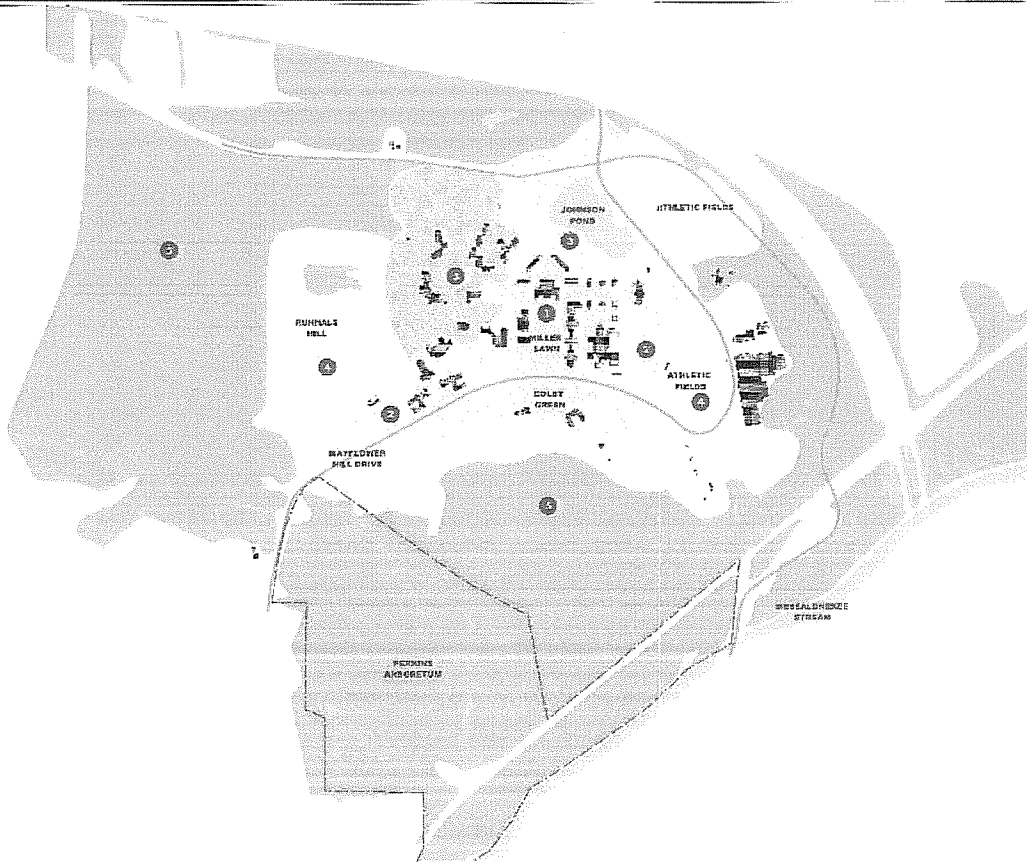
ATTACHMENT B

Landscape Master Plan Character Zones

(Larger plans available at PPD office)

LANDSCAPE MASTER PLAN

LANDSCAPE FRAMEWORK



- ① CAMPUS CORE
- ② GREENSWARD
- ③ HILL-SIDE
- ④ OPEN MEADOW PLAYING FIELDS
- ⑤ WOODLAND

REED HILF BRAND

Scenario: 2004

PROPOSED CHARACTER ZONES

Scale: 1" = 200'

COPY COPY