

LEAST TOXIC INTEGRATED PEST MANAGEMENT (IPM) AND PLANT HEALTH CARE (PHC)

Town of Carrboro

IPM Policy Adopted March 2, 1999 (Updated April 2017)

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INTRODUCTION

Slightly edited the introduction to include plant health care. Proactive way to maintain landscape is to keep plants healthy which naturally inhibits pest.

Over the past several decades, new pest management products and new uses for older products have led to the widespread use of pesticides in urban, suburban, and agricultural settings. Many government and public agencies have incorporated routine pesticide use into their public buildings and grounds maintenance programs. In recent years, human health and environmental concerns have produced a heightened sensitivity to pesticide use. Such public concern has created an awareness of the need for alternatives to dependence on pesticides as a sole solution to pest control. Two primary alternative approaches are "Integrated Pest Management" or IPM, and "Plant Health Care" or PHC. Many public and private pest managers are adopting formal IPM policies and implementing PHC management strategies in their landscapes.

Updated the definition of IPM. Policy has the same goals with a more balanced emphasis on true IPM which incorporates 4 components of cultural, biological, physical, and chemical.

DEFINITIONS OF INTEGRATED PEST MANAGEMENT AND PLANT HEALTH CARE

Integrated Pest Management (IPM) is a pest population management system that utilizes site monitoring, predetermined thresholds, and all suitable techniques of pest control (cultural, biological, physical, and chemical), to reduce or manipulate pest populations while providing protection against hazards to humans, domestic animals and earth's environment. IPM is a process rather than any specific actions. It is thoughtful and proactive rather than reactive. IPM

seeks to understand the causes of pest problems, implements long-term solutions, and employs a means of prevention rather than mere treatment of symptoms.

The Town of Carrboro seeks to establish an integrated pest management program which:

- Includes site assessment and a comprehensive listing of pest control methods proposed for use. In order to promote ecological sustainability and to demonstrate a due diligence to the community and to the environment, least toxic methods of control shall strongly be considered before any other means of control are implemented
- Establishes an inspection and monitoring program to identify infested zones, monitor pest levels, and set thresholds at which action should be taken
- Describes procedures for selecting the appropriate pest management technique(s) for the identified pest
- Provides education to employees and facility users in order to facilitate an understanding of the program
- Emphasizes prevention and recommends appropriate changes in facility construction or maintenance to help prevent re-infestation from occurring.

Plant Health Care (PHC) is defined as a process of scheduled preventative maintenance, based on monitoring and the use of cultural and chemical tactics, to enhance plant vitality. The plant and its requirements become the central focus of management activities, rather than responding to symptoms caused by pest presence, physical agents, or nutritional deficiencies. A plant health care practice addresses the basic causes of the reduction in plant health and provides corrective measures to promote plant health. This proactive approach to plant health care is another tool that pest managers can utilize in the landscape in order to promote plant vigor which in turn can help minimize the need for pest control. Healthy plants are typically less likely than unhealthy plants to become infested by pests and infected by disease.

Plant Health Care (PHC) is a new addition to IPM methodology. PHC was not a factor when the original IPM was created. Very proactive system.

GOAL

The goal of the IPM and PHC policy is to develop a systematic course of action to prevent pest infestations, and to manage pests successfully, while minimizing adverse effects on people and the environment. The IPM and PHC policy will be a cornerstone of the Town of Carrboro's pest management program. The purpose of establishing an IPM and PHC program is to assure municipal employees, visitors, and residents that no unacceptable public or environmental health risk is taken to control pests. The adoption of a holistic IPM and PHC program will provide the town with long-term control of pests and invasive weeds as well as maintenance of rights-of-way, landscapes, and parks that have an impact on town employees, residents, and visitors. The Least Toxic IPM Manual will be a working document which provides pest managers with recommended sources of information about pest identification, pest biology, monitoring guidelines, options relative to action thresholds and general pest management procedures. It will also include the guidelines for creating Department IPM plans. The manual will be revised on an ongoing basis as the town gains further experience with IPM and PHC in facing specific pest situations.

POLICY APPLIES TO TOWN PROPERTY

The IPM and PHC policy applies only to town operations and not to those of its residents and businesses. It is hoped that it will serve as an example of how varied pest problems can be controlled with sound IPM and PHC principles that residents and others will follow voluntarily, though they are under no obligation to do so.

POLICY

The Town of Carrboro's IPM and PHC policy and program are a combined comprehensive approach that gives priority to the prevention and management of pests including insects, weeds and plant disease through a constant proactive pest management strategy in combination with the thorough examination of all pest control methods available, starting with the least toxic methods first if feasible. The policy will reduce the environmental health risk to municipal employees, visitors

Updated to follow the complete IPM methodology to include use of chemicals if traditional IPM policies fail. The old policy eliminated all chemicals but was never revisited to evaluate success. Unfortunately, it was never evaluated for success. The 1999 policy has been deemed to be ineffective and need adjustment for proper plant/pest management. Chemical is the absolute last approach but sometimes needed if others fail.

and town residents. The policy will help to protect the environment and result in greater safety of public grounds, buildings and sports fields, reduced exposure to chemical pesticides by those engaged in pest management, and as an example to residents and others. The policy recognizes that there may occasionally be circumstances in which conventional pesticides may be required as a part of the IPM program and/or in the event of an urgent non-routine circumstance. As a matter of policy, the Town of Carrboro will not adopt any method that would pose an unacceptable public health or environmental risk in its pest management practices. The IPM Coordinator will develop a manual that will include a list of active ingredients that may be used by the town, that meet the US Environmental Protection Agency's "minimum risk" criteria and that have been substantially deregulated by the EPA under FIFRA, the federal pesticide law (Section 25(B)). It will also include a procedure for approving the limited use of other pesticides in emergency and/or unusual situations. As an example, weed control will be managed through the IPM and PHC program of practical least toxic weed control strategies to control or suppress weeds. However, if all practical non-chemical control methods fail, the use of pesticides (herbicides) may be deemed necessary. Pesticides shall always be selected through a balanced decision making process that weighs chemical toxicity, efficacy of control, environmental concerns, and the cost effectiveness of control.

Notification of Pesticide Use: The IPM Coordinator may occasionally find it necessary to use pesticides to help control pests populations on Town owned property. Notification of pesticide use shall be posted 72 hours in advance of pesticide applications. Notification forms shall be posted at facility entrances and exits. Notification forms shall also be posted on Town owned grounds 72 hours prior to treatment of any landscape related pests.

Exemptions: Certain relatively low-risk pesticides are exempted from these notification requirements, including antimicrobial cleansers, disinfectants, self-contained baits and crack-and-crevice treatments, and any pesticide products classified by the US Environmental Protection Agency (EPA) as belonging to the US EPA's Toxicity Class IV, "relatively nontoxic" (no signal word required on the product's label).

Emergency Pesticide Use: In the rare event that a non-exempt pesticide must be used for a pest control emergency and there is not adequate time to post notification 72 hours in advance, notification shall be posted as soon as possible after the pesticide application.

Created regular review timeframes and ensured discussion across departments in a responsible manner. Can add new methodologies or eliminate those that are not working.

UPDATING OF IPM PROGRAM

In practice, integrated pest management is continually evolving. The program / policy / manual should reflect such changes and be subject to regular review every fifth year. Quarterly IPM Program meetings for IPM Coordinators shall be held at the Public Works facility in order to foster IPM related communication between IPM coordinators and to help facilitate the sharing of any pest related concerns, program related information, or individual experiences with the general public/staff.

APPLICATORS

The IPM coordinator shall maintain relevant individual North Carolina pesticide application certifications and licenses. Other employees regularly involved in pesticide applications shall be encouraged to become certified as appropriate. Any pesticide application determined to be needed by the IPM Coordinator must be applied at the direction of the Coordinator. Pertinent staff training needs shall be addressed by the IPM Coordinator.

ROLE & FUNCTION

Removed verbage completely eliminating chemical use. Focused on training and education of staff.

Upon adoption of this IPM policy, department heads and supervisors shall receive IPM training in order to become better acquainted with IPM procedures and to gain a better understanding of their role within the IPM plan. Rather than depend on outside assistance for pest control, each department needs to take some responsibility for pest prevention. Each

department or relevant section of town government should have an IPM coordinator, generally the department head or designee.

PARTICIPATION BY TOWN STAFF

Successful implementation of integrated pest management requires that all town employee's work together to identify, control and eliminate pests on town owned properties within their scope of work. For most, this will be no more than an awareness of potential problems, means of prevention, and whom to notify of pest problems around their personal work spaces. Often, employees benefit directly from their efforts by adhering to proper food storage and housekeeping habits to protect their own work environment. All town staff will be given appropriate level of training to acquaint them with basic pest identification and control. Each department or relevant section of town government will designate an IPM coordinator who will consult with the town IPM Coordinator concerning control procedures, prevention and implementation.

IPM COORDINATOR

The Director of Public Works shall designate an IPM Coordinator for the town. The IPM coordinator will assist with and assure that the program functions smoothly. The coordinator will interact directly at the individual department level in pest prevention or control and conduct training sessions for the departments as needed. The IPM coordinator shall:

- Be a licensed and certified pesticide applicator by the North Carolina Department of Agriculture, in a major classification such as Ornamental and Turf.
- Be trained in Plant Health Care methodologies
- Assist each department or relevant section of town government with pest control management within their area and provide contact information for questions regarding pest management.
- Disseminate relevant information to departments and ensure employees can respond appropriately to concerns and questions posed by the general public or, if unable, to forward such concerns and questions to the IPM coordinator for a response.
- Maintain records of pest problems, prevention and control activities.
- Compile a record in the form of an excel workbook, of all successful and unsuccessful pest control methods based on experience, to include cultural, physical, biological, and chemical controls.

The IPM coordinator shall make the IPM control workbook accessible to the North Carolina Department of Agriculture & Consumer Services (NCDA & CS) and NC Cooperative Extension upon request.

- Ensure all department IPM coordinators have pesticide labels and Safety Data Sheets (SDS) available in their departments for all pesticides used; this applies to applications by the town and by private contractors.

For departments with significant public interest in their pest management program, such as the Recreation and Parks Department, organize a group of interested parties to discuss pest problems and their solutions. Meetings may include the general public, town officials or interested town employees.

- **The Town IPM Coordinator will conduct quarterly meetings for key IPM management personnel,** to include pesticide applicator licensed staff and Departmental IPM Coordinators, in order help maintain open communication and to ensure proper record keeping.

RESPONDING TO CONCERNS & QUESTIONS OF THE PUBLIC

The town has been following IPM practices and procedures **for more than two decades,** However, written policy formalizes these practices and instills greater public confidence that the town is, and will continue, to effectively promote proper IPM and PHC practices in the management of its structures, rights-of-ways, landscapes, and parks; helping to minimize risk while promoting environmental sustainability through holistic management practices.

In order for further public understanding of the program, it is imperative that town employees who respond to questions of the general public have an awareness of the IPM policy and program and can appropriately address such questions or refer

the individual to those town employees who can. The town will develop a fact sheet on the program for use in answering basic questions which contains contact information for the IPM Coordinator.

Will complete fact sheet once IPM Policy is complete and formalized. One was not created with the original.

IPM PLANS

Each department or relevant section of town government as determined by the Manager and IPM Coordinator shall have a written IPM plan, which describes the unit's role in the program. Departmental plans shall be prepared in consultation with, and reviewed by, the IPM Coordinator. The departmental plans may be simple and should include general housekeeping requirements and contact information for reporting situations that need attention. A typical plan could include information and/or policies on:

- How snacks and other food are to be contained:
- Whether food is allowed at desks or work stations or only in break rooms
- Ensuring that window screens and windows are tight
- Containment of trash/ frequency of collection
- Policies for employee break areas frequency of cleaning
- Policy for containing and emptying recyclable (cans, bottles, newsprint, mixed paper)
- Responsibilities for seeing that the policies are carried out
- Information on the identification of the various pests likely to be encountered and
- Basic control strategies in an accessible way that will assist staff in their roles in the IPM program
- Contact information for pests that need attention of the IPM coordinator
- Contact information for repairs, such as drips or broken screens

Departments will maintain detailed records of pesticide applications and provide copies of such records to the IPM Coordinator within 5 business days of any pesticide application. Departments will post a notice at major points of entry when pesticides are employed.

Removed use of sticky traps and food lures from list of items. Not to remove them from use but to reduce their importance as the sole option.

LEAST TOXIC IPM MANUAL

The IPM Coordinator shall prepare and be responsible for updating the overall IPM Manual. It shall include:

- The individual department or section IPM plans.
- Identification of each specific pest likely to be encountered
- Description of Monitoring procedures
- Description of routine management procedures for common pests using prevention and least toxic control methods.

These methods include, for example, for buildings: caulking, crack and crevice applications of boric acid baits, improved sanitation, etc.; for landscaping: selecting pest resistant plant species and monitoring soil health. The utilization of cultural controls such as mowing turf at the proper height, mulching root zones to inhibit competition by weeds and to help maintain soil moisture, scheduling proper irrigation applications, and maintaining good sanitation practices around plants are all very important methods of promoting plant health and preventing pests.

- Discussion of procedures should conventional chemical control be necessary. If a situation dictates the use of chemical pesticides, the IPM coordinator will select the most effective and practical least toxic method to control the target pest. If a structural problem arises that requires a licensed structural applicator, the IPM coordinator will select a pest control contractor. Outside contractors must supply the IPM coordinator with a list of control recommendations including chemicals, baits or traps suggested for use. The most effective and practical, least toxic method shall be chosen for pest control.
- Development of site specific policies for each pest problem or type of situation encountered, with updates as necessary based on changing experience. Selection of methods to be used for pest management will be governed by considerations of risk, effectiveness, and practicality.

POLICY: APPLICABLE TO TOWN CONTRACTORS

Pest control contractors who work for the town are required to understand and abide by this policy. Such pest control contractors shall provide the IPM Coordinator with a copy of relevant North Carolina Department of Agriculture and Consumer Services (NCDA & CS) pesticide license, the names of the employees who will be applying any pesticides, a description of the chemical and nonchemical methods proposed to be used, and a final report of what was actually done.

HAZARD CATEGORIES

Removed phasing out chemical pesticides. May be needed for extreme circumstances so dont completely remove the option.

Some factors which are used to categorize the relative hazardous nature or nonhazardous nature of pesticides:

- **Toxicity:** the inherent capacity of a substance to produce an injury or death
- **Hazard:** hazard is a function of toxicity and exposure; the potential threat that injury will result from the use of substance in a given formulation or quantity
- **Risk:** the probability that an outcome may happen

The U.S. EPA groups pesticides into four basic categories based on their capacity to do harm. The categories emphasize "acute" toxicity--the ability to cause harm from a single exposure. Acute effects include damage to eyes, skin rashes, respiratory problems, nerve damage and death. The rankings are, however, influenced by "chronic" exposures, the ability to cause harm from repeated low dose exposures over time. Chronic effects include the ability to cause cancer, damage to organs such as the liver and kidneys, birth defects, genetic mutations, etc.

CATEGORY I

- Environmental Protection Agency (EPA) lists as the most toxic
- "DANGER" product label; some must also say "poison" on label
- Most are classified as "restricted use pesticides" thus requiring a license to purchase, apply and store
- This category of pesticide has not been used by the town since 1987

CATEGORY II

- Environmental Protection Agency (EPA) lists as the next most toxic (moderately toxic)
- "Warning" product label
- This category of pesticide has been minimally employed by the town, less than 1 pint annually, and has never been applied to plant beds

CATEGORIES III & IV LEAST TOXIC CATEGORIES

- "Caution" product label
- The pesticides of this category employed by the town are primarily in the form of glyphosate based products such as "Roundup" herbicide and are typically applied for invasive species control to help promote native species and ecological diversity. Plants such as poison ivy and poison oak, if left untreated in high traffic municipal areas, can pose a health risk to the general public and may be targeted for control as well.

COMMON TO ALL CATEGORIES OF PESTICIDES

- "Keep out of reach of children" must appear on label.
- Departments will post notices when pesticides are employed.

Removed phasing out verbage.

USE OF CONVENTIONAL PESTICIDES / UNUSUAL CIRCUMSTANCES

The town recognizes that circumstances may arise in which cultural, biological, and physical IPM practices may not be practical. If a situation is determined by the IPM Coordinator to be urgent/non-routine and requiring the use of a conventional pesticide to achieve satisfactory levels of control, then the following steps shall be followed:

- The IPM coordinator must receive approval from the Director of Public Works to employ conventional pesticides.
- The Director of Public Works shall inform the Town Manager of his decision to employ conventional pesticides at the time of, or as soon as possible afterwards.
- In the affected area, the IPM coordinator shall make a good faith effort to notify those employees and others who may be affected including the posting of notices at principal points of entry.
- The use of occasional wasp or hornet sprays by employees or contractors who may otherwise be at risk of insect stings shall not be covered by this section, except that reports of such use shall be made to the IPM Coordinator, and persons who may be affected shall be given advance notice if time permits.

ANTIMICROBIALS NOT INCLUDED

Antimicrobials, such as those used for cleaning as sterilizers in public facilities are not covered by this policy.

GENERAL **Removed hot water weed control. Company providing equipment went out of business plus there was a list of problems with application.**

The State of North Carolina's Department of Agriculture & Consumer Services (NCDA & CS) separates pest control administratively, and for types of licenses, into 2 areas:

- **Structural:** All pest control within or to protect a building; includes termite and cockroach control; the NC Structural Pest Committee adopts rules and sets license requirements for such applications. The structural pest control program is administered by the Structural Pest Control Division of the NCDA & CS.
- **Non-Structural:** All other pest control and vegetation management in an outdoor environment, including agriculture and landscaping; the NC Pesticide Board adopts regulations and sets license requirements for such applications, which include "public operator licenses" for town employees. This pesticide program is administered by the Pesticide Section of the NCDA & CS.

Note: Licenses are not interchangeable but apply only to that specific category or class of application

Definitions

"Pesticides" are defined as "anything sold to kill or control or mitigate a pest." Hence they include "insecticides" for use against insects, "herbicides" for use against weeds, "fungicides" for use against plant diseases, and "rodenticides" which kill rats and mice. Such products must be registered by EPA under the Federal pesticide law (The Federal Insecticide, Fungicide and Rodenticide Act, or "FIFRA") and, in North Carolina, by the North Carolina Department of Agriculture and Consumer Services (NCDA & CS) under the NC Pesticide Law before they can be legally sold or used. Each must carry a label which prescribes how the product shall be used. Use inconsistent with the label is a violation of state and federal law.

"Pests" are organisms located where they are not wanted, and which may cause economic, aesthetic, or ecological damage. In this context, "weed" is a social, economic, and legal term, not a biological one.

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