

## 8431A - INTEGRATED PEST MANAGEMENT

Integrated Pest Management (IPM) is a pest management system that utilizes all suitable techniques in a total pest management system with the intent of preventing pests from reaching unacceptable levels or to reduce an existing population to an acceptable level. An emphasis is placed on manipulation of the pest environment to the point that it will not support a pest population.

Michigan law requires that certain conditions must be met prior to making a pesticide application (other than sanitizers, germicides, disinfectants, or anti-microbial agents) in schools, public buildings, or health care facilities. These conditions include:

- A. the pesticide applicator must have attended an approved IPM program;
- B. there must be an IPM plan in place for the building.

This IPM plan is intended to reduce the incidence of pest infestation while also reducing the need for chemical pesticide applications. It is also intended to satisfy the requirement for having an IPM plan in place for the building. Note: In a situation where there are multiple buildings, the plan will include a site description and evaluation for EACH building.

### Key Terms

#### Certified

Applicator: A person authorized by the State to use and supervise the use of a restricted use pesticide.

#### Commercial

Applicator: A person or entity that holds themselves out to the public as being in the business of applying pesticides

#### General Use

Pesticide: A pesticide that may be purchased by an individual who is not required to be a certified applicator. A pesticide product that is NOT general-use is a restricted-use product.

Pest: An unwanted insect, rodent, nematode, fungus, weed, or other form of terrestrial or aquatic plant or animal life, or virus, bacteria, or other microorganism.

Pesticide: A substance or mixture of substances intended for preventing, destroying, repelling, or mitigating pests or intended for use as a plant regulator, defoliant, or desiccant. Note that products such as Weed-and-Feed, Roundup, or Raid are pesticides.

#### Ready-to-Use

Pesticide: A pesticide which is applied directly from its original container consistent with label directions, such as an aerosol insecticide or rodent bait box, which does not require mixing or loading prior to application.

Registered

Applicator: A classification of applicators authorized by the State to apply pesticides as a scheduled and required work assignment. Most often, this is a staff employee. Requires supervision by a certified applicator, unless applying only general use pesticides.

## **Administration**

### **Communication – Sighting Log**

Proper implementation of an IPM program requires careful administration. It is important for the building manager and administrative staff to communicate with the pesticide applicator(s) to ensure full implementation of the IPM program. To meet this goal, a Pest Sighting Log and recordkeeping data will be used as part of the communication process. The building manager will ensure that pest sightings are recorded in the log.

### **Applicator Credentials**

A person who applies a pesticide (other than a sanitizer, germicide, disinfectant, or anti-microbial agent) in schools, public buildings, or health care facilities **MUST** have attended an approved IPM training session.

Pesticide applicators that conduct applications for hire (i.e., an outside contractor) must be licensed and certified. However, staff members who have attended an approved IPM training session may use a general-use ready-to-use product without being certified. Note that staff members who use a pesticide product that is **NOT** ready-to-use must be certified. This includes items such as granular Weed-and-Feed or any product that must be mixed prior to use.

A staff member of this facility who has attended an approved IPM training session can apply a general-use ready-to-use pesticide. However, whenever possible, pesticide applications should be conducted by the person responsible for pest control in this facility.

### **Pesticide Applications**

Pesticide applications for non-emergency situations shall be conducted by an appropriately licensed applicator who has attended an approved IPM training program and shall be made in accordance with this IPM plan. Applications must be made in accordance with the pesticide labeling. The applicator shall use personal protective equipment that is appropriate relative to the potential exposure. Minimum personal protective equipment for applications using products that are not ready-to-use includes long pants, protective footwear, gloves that are impervious to the pesticide being applied, and long-sleeve clothing. Short-sleeve clothing may be worn if wash water or waterless soap is immediately available and it is not prohibited by the pesticide label.

### **Pesticide Application Records**

Records shall be maintained on forms provided by the building manager. Records shall contain:

- A. site address and the location of the areas or room(s) where pesticides are applied;
- B. the date of service;
- C. the target pest(s);
- D. an inspection report, including the number of pests found or reported (this information may be found in the sighting log), and the conditions conducive to pest infestation;
- E. pest management recommendations made by the applicator, such as structural or habitat modification;
- F. structural or habitat modifications or other measures that were initiated as a part of the IPM program;
- G. the name, concentration and quantity of pesticide(s) used;
- H. the name of the applicator;
- I. the method and rate of application.

### **Pesticide Use In and Around Schools**

This section contains information regarding parental notification and applications of insecticides, fungicides, and herbicides made in and around school property.

#### **A. Notification**

Within thirty (30) days of the beginning of each school year, the primary administrator for the school district or its designee, shall provide written notification to parents (or guardians) of children attending the school of their right to be informed before any pesticide application is made to the school property. The notice shall be on a form containing statements that pesticides may periodically be applied to school property and that parents (or guardians) have a right to request prior notification of such pesticide applications. The form will also state that in the case of an emergency, pesticides may be applied without prior notice, but that those parents who request notification will be notified of the emergency application after it occurs.

The primary administrator of the school district or his/her designee, shall provide an annual notification satisfying all of the following requirements:

1. be in writing
2. specifying two (2) methods by which advance notice of the application of a pesticide will be given at least forty-eight (48) hours before the application
  - a. The first method shall be by posting at the entrances to the school or day care center. Subject to subdivision.
  - b. The second method shall be one (1) of the following:
    - 1) Posting in a public, common area of the school or day care center, other than an entrance.
    - 2) E-mail
    - 3) A telephone call by which direct contact is made with a parent or guardian of a student of the school or child under the care of the day care center or a message is recorded on an answering machine.
    - 4) Providing students of the school or children under the care of the day care center with a written notice to be delivered to their parents or guardians.
    - 5) Posting on the school's or day care center's website.

Written notification to parents (or guardian) of children attending the school of their right to be informed before any pesticide application to school property. The notice shall be on a form containing statements that pesticides may periodically be applied to school property and that parents (or guardians) have a right to request prior notification of such pesticide applications. The form will also state that in the case of an emergency, pesticides may be applied without prior notice, but that those parents who request notification will be notified of the emergency application after it occurs.

The notification requirements do not apply to common cleaners such as germicides and disinfectants. Notification requirements do not apply to bait or gel pesticide formulation.

Prior notification shall contain the following information:

1. approximate location of the application
2. scheduled day or date of application
3. type of pesticide to be applied
4. the method of application
5. the target pest

Prior notification shall be provided to those parents who request the notification by one (1) of the following means:

1. written notice mailed not less than three (3) days before the application
2. written notice sent home with the child
3. during months when school is not in regular session, a message notification system such as voice mail may be used that parents can access at least one (1) day before the application. If this method is used, parents must be advised of the phone number where the information may be obtained.

**B. Use of Insecticides, Fungicides, and Herbicides**

1. Liquid spray or aerosol insecticide applications shall not be made in a room of a school building unless the room will remain unoccupied for at least four (4) hours UNLESS the product label requires a longer re-entry period.
2. Liquid spray pesticides used for turf or ornamental applications may not be made on school grounds within 100 feet of occupied classrooms during normal school class hours or when persons are using the treatment area.
3. The pesticide applicator shall notify the school's building manager of any re-entry periods that are required by the product label.

## **IPM Program Evaluation**

The program shall be evaluated on a continual basis to determine the program's effectiveness and the need for program modification.

### **Posting**

When making an application of pesticides, other than a general-use ready-to-use pesticide, the applicator shall place the appropriate signs or markers at the primary point or points of entry. It is the responsibility of the building manager (or his/her designated representative) to ensure that the appropriate signs are posted.

#### **A. Indoor Insecticide Applications**

The primary point or points of entry must be posted. If multiple rooms or common areas such – as a cafeteria are treated, the main entry areas to the facility should be posted. If treatment was applied to a limited area (such as a single classroom), then the classroom can be posted. Postings shall remain posted at least forty-eight (48) hours after the most recent application of insecticide. Posting signs will be in compliance with Regulation 637, Rule 11(4). Signs shall be at least two and one-half (2 ½) inches square and shall depict a house surrounding by a cloud. The date shall be placed on the sign. See the rule for additional details on sign requirements.

#### **B. Ornamental or Turf Applications**

The primary point or points of entry must be posted. Postings shall remain at least twenty-four (24) hours. Postings will be in compliance with Regulation 637, Rule 11(2). Signs shall be at least four (4) inches high by five (5) inches wide and shall depict a picture of an adult and child walking a dog on a leash. The illustration shall depict, using a diagonal line across the circle, that this action is prohibited. See the rule for additional details on sign requirements.

## **Pest Management Strategy and Pest Biology**

### **Strategy**

IPM involves use of available methods or strategies to control pests including sanitation, exclusion, reservoir reduction, harborage reduction, and population reduction. These terms are defined below:

- A. Sanitation refers to a reduction of the food and water resources that are attractive to pests. By minimizing the resource of food and water available to the pests, we can greatly reduce the number of pests without the application of pesticides.
- B. Exclusion refers to the use of caulk, mortar, screens or similar materials that can reduce or eliminate the entry of pests into the building.

- C. Reservoir reduction refers to techniques such as removing a pest attraction feature such as a dumpster or mowing a weed field that provides harborage to mice.
- D. Harborage reduction refers to elimination of habitat that provides a home (or harborage) to pests. For example, cleaning old equipment from a storage room will reduce harborage for mice.
- E. Population reduction refers to means of control such as mechanical traps, use of repellents, or use of toxicants to drive away or kill pests. Chemical or biological pesticides may be utilized to reduce pest populations.

When considering what methods to utilize for pest control, the building manager shall consider the impact of human health and environment.

### **Pest Biology Information**

The method used for control shall take into consideration the relationship between pest biology and pest management methods, giving due consideration to the impact on human health and the environment. When chemical controls are necessary, this program will attempt to use products that are least toxic to human health and the environment, while remaining effective in control of the target pest(s).

Some common pests and pest control measures are described below. It is important to identify the pest prior to implementing controls.

#### **A. Pavement Ants**

Ants commonly invade buildings through cracks in cement slab floors and exterior walls. Exclusion through sealing of the cracks is an effective means of control. Exterior perimeter treatments may also provide effective control. If ants still invade the building, baits are an effective means of control.

#### **B. German Cockroaches**

Roaches can carry germs and disease. They prefer areas of high humidity and nearby food. They prefer harborage where they can fit closely. Sanitation and reduction of harborage are important in reducing the incidence of roach infestation. Glue boards may be used to detect the presence of roaches. Where roaches are found, baits can be an effective means of control. Crack and crevice or void treatments may also be used.

#### **C. Mice**

Mice may enter buildings to seek shelter. Exclusion and reservoir reduction are effective means of control. Keep weedy fields mowed. Move dumpsters away from the building. Clean the area of any debris that offers harborage. Use exclusion methods such as screens, caulk, and door sweeps. To eliminate mice present in the building, it is preferable to use mechanical methods such as traps or glue boards. Baits can be an effective tool, but should be used only with extreme caution and should NEVER be used in areas accessible to students.

D. Head Lice

Head Lice do not survive for more than a few hours when away from a host. Due to the biology of lice, insecticidal treatments to the school are NOT effective and should NOT be done. Instead, parents should be informed about the pest biology and given instruction for effective control measures on hosts (children) and garments such as hats that may be shared between students.

E. Flies and Gnats

There are many types of flies and gnats. Proper identification is important to determine the best type of pest control. Proper sanitation can provide effective control for most flies and gnats. Garbage containers should be closed and kept an appropriate distance from the buildings. Insecticides may be appropriate for reducing large populations of adult flies, but sanitation is the preferred means of control.

F. Other Pests

Other pests such as yellow jackets, hornets, and carpenter ants may occur. In all cases, the relationship between the pest biology and effective control measures must be considered.

## Site Evaluation

Each school building is identified. Each building has areas identified in writing and with the attached map. The site evaluation includes recommended types of inspection and monitoring schedules.

A. Kitchens, Break Rooms, Cafeteria, and Home Education Room

Visual inspection with a particular emphasis on cockroach and rodent infestations. Look for droppings, gnawing, harborage, or unsanitary conditions. Monitoring devices such as glue boards may be used. Recommended to monitor on a weekly basis during periods when school is in session and bi-weekly during periods when not in session.



B. Bathrooms, Locker Rooms, Store Rooms, and Closets

Visual inspection. Bathrooms and locker rooms may be attractive to roaches. Look for droppings. Recommended to monitor on a weekly basis during periods when school is in session and bi-weekly during periods when not in session.

C. Classrooms and Hallway

Visual inspection. Recommended to monitor on a weekly basis during periods when school is in session and bi-weekly during periods when not in session.

D. Boiler Room and Maintenance Area

Visual inspection. Monitor for rodents with glue boards or traps. Monitor on bi-weekly basis.

E. Exterior Area

Monitor periodically. Look for entry points into the building. Look for area that can serve as a reservoir for pests as weedy areas or accumulations of debris.

M.C.L. 324.8301 et. seq.

A.C. 285.637.1 et. seq.

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