

Pest Control

The Division of Safety and Emergency Management has a Pest Control Manager on staff to provide school sites with information regarding Integrated Pest Management and coordinate the treatment of schools with contracted vendors. School site custodians are responsible for the initial identification and treatment of pest problems such as ants, roaches and rodents. The **District Pest Control manual** contains practical information for the control of common pests. Through the quick identification and treatment small problems do not become large ones. Principals can order pest control supplies from District Stores and Distribution.

If a school has a pest problem that cannot be controlled by the custodial staff they should call the Division of Safety and Emergency Management at 305-995-4900 and ask for the Pest Control Manager.

INTRODUCTION

This document has been prepared to answer some of the questions commonly asked by Miami-Dade County Public Schools (M-DCPS) personnel concerning the use of pesticides and the control of various rodents, birds, insects and other pests.

Miami-Dade County Public Schools is committed to providing schools with a pest-managed environment through the implementation of preventive hygienic methods, physical exclusion, and chemical strategies when necessary. IPM emphasizes the use of non-chemical procedures for the management of pests, relying on the use of pesticides only when non-chemical strategies are not effective.

In spite of the most rigorous sanitation and other non-chemical procedures, pest management may sometimes require **carefully selected and conducted pesticide applications**. Remember that these applications should be made in conjunction with, and complementary to, the other appropriate sanitation and exclusion procedures recommended in these guidelines. Each area must be identified and treated with the appropriate control method. A proper blend of chemical and non-chemical treatments should provide the ultimate pest control.

Liquid, aerosol or dust type pesticides, and rodenticide baits shall not to be used in M-DCPS facilities without prior written approval from the M-DCPS Division of Safety and Emergency Management Pest Control Manager. **The entire structure must be vacated during the application of sprays and fogs.** Signs must be posted on all entrances to the structure warning people about the pesticide application and to stay out. **Applications of sprays, fogs and dusts should not be done when school is in session and should be done only by licensed pest control vendors.**

Pest control vendors that are contracted by Principals and Site Administrators must submit copies of all specimen labels, Material Safety Data Sheets (MSDS), detailed methods and equipment intended to be used and sites of intended application to the M-DCPS Pest Control Manager, for approval, prior to applying any pesticides. (See section regarding pest control vendors below)

At no time are rodenticides (rodent poisons) to be used anywhere at M-DCPS facilities without prior written approval for each use from the M-DCPS Division of Safety and Emergency Management Pest Control Manager.

Only approved pesticides and methods should be used by school staff or pest control vendors at M-DCPS facilities.

Chemical control treatments that are applied to surfaces or affect air quality will be applied after school hours with the exception of emergency situations, determined only by a Site Administrator. In the case of emergencies, such as a wasp or flea infestation, treatment will be performed only by a licensed pest control firm and all occupants will be removed from the treatment area.

M-DCPS supervisory and monitoring personnel will be provided training in the following subjects: principles of IPM, preventive pest control measures, pest monitoring, non-chemical control techniques, and the proper application of the approved pesticides and materials available from M-DCPS Stores and Distribution (S&D). The application of these pesticides is a critical component of the District's effective IPM program. In most cases, custodians should be able to effectively reduce pest populations and eliminate the need for an outside vendor. Custodians will receive information in these areas through inservice training and newly employed through an Introductory Custodial course.

This program will be supervised and monitored by the Division of Safety and Emergency Management. Please call Mr. Kenneth Campbell, Pest Control Manager, for consultation about pest problems, pesticide approval and pesticide use. Telephone: (305) 995-4900, Location: 9114, FAX: (305) 995-4924.

PART 1: WHAT IS IPM AND WHAT ARE THE BENEFITS?

1. What is IPM?

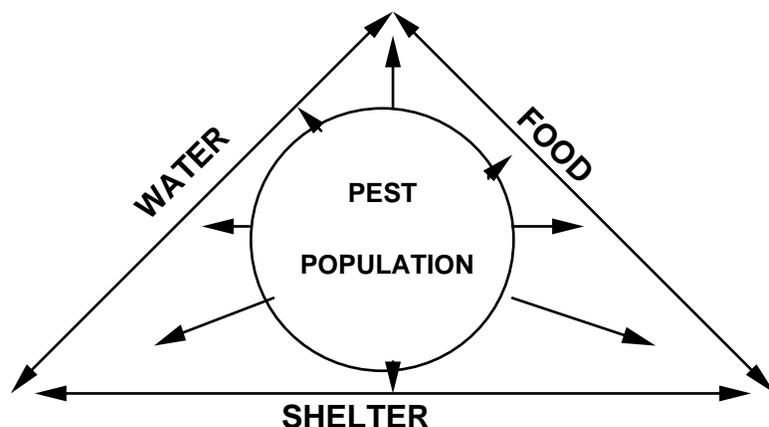
Integrated Pest Management, or **IPM**, is an effective and environmentally sound approach to pest management. It relies on the coordinated use of information about pests and their environment and the best available pest management methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to people, property and the environment.

IPM is a relatively new concept in urban areas. Traditional structural pest control is largely reactive to pest infestations and bases much of its response on the routine, scheduled spraying of pesticides. This spraying is often done in locations (baseboards, floors, in the air, etc.) which are remote from the centers of pest populations, with limited effectiveness in providing adequate control.

Unlike using just a single method or tactic of pest control, an IPM approach to pest management employs a combination of tactics, including sanitation, monitoring, habitat modification, and the judicious use of pesticides when necessary. **Basically, pesticides will be just one of the tools in the pest management toolbox, not the only tool.**

SANITATION IS THE CORNERSTONE OF SUCCESSFUL LONG-TERM PEST CONTROL. PESTICIDES ALONE WILL NOT “GET RID” OF A COCKROACH OR RODENT INFESTATION, ONLY TEMPORARILY REDUCE POPULATIONS. BUILDING OCCUPANTS PROVIDE PEST CONTROL IN THEIR OWN ENVIRONMENTS AND ARE RESPONSIBLE FOR SANITATION AND HOUSE KEEPING IN THE AREAS UNDER THEIR CONTROL. PEST CONTROL COMPANIES CAN ONLY APPLY PESTICIDES AND PROVIDE RECOMMENDATIONS ABOUT EXISTING CONDITIONS WHICH ENCOURAGE PESTS.

The diagram below illustrates that all pests need, food, water and harborage (a suitable place to live):

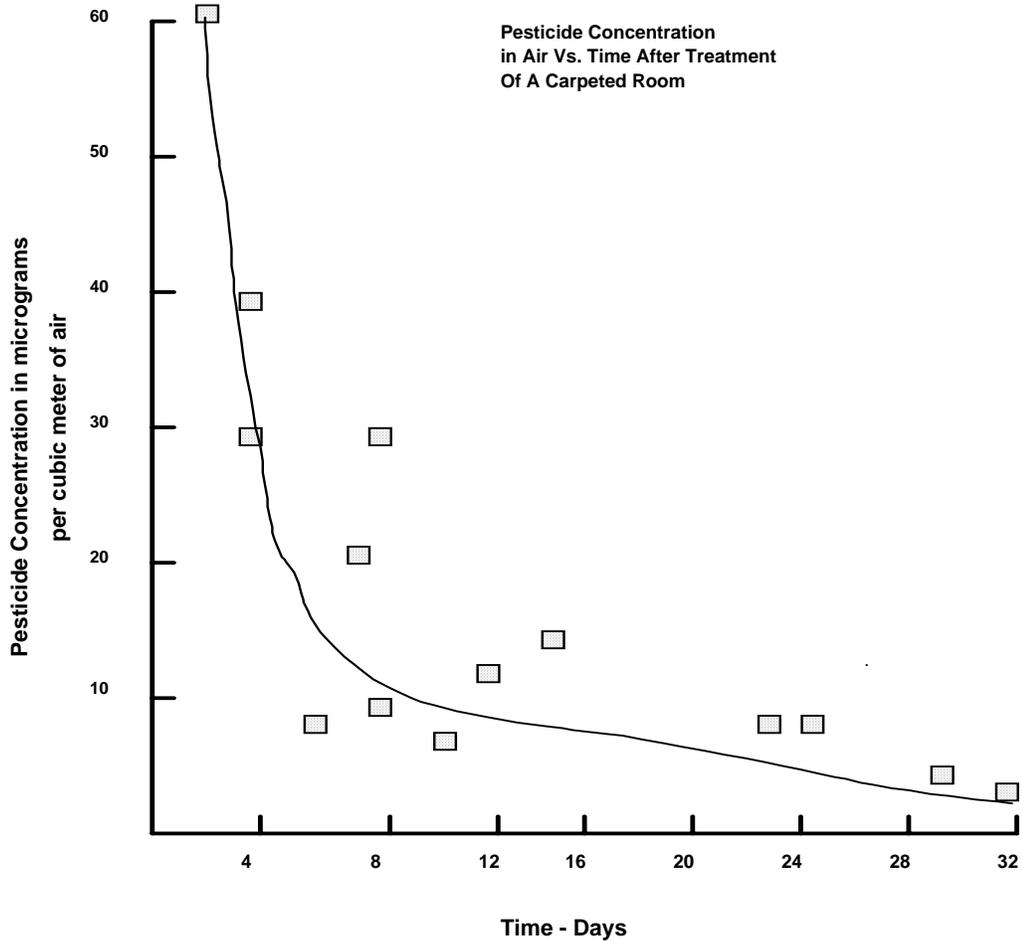


Pests infest an area because they are getting the things they need - food, moisture and shelter. The less of these three things they've got, the fewer pests there will be.

2. What are the benefits of using IPM?

Southeast Florida is an ideal environment for a wide variety of pests. Some of these pests live and reproduce inside structures; however many live outdoors and only occasionally invade the home or workplace. Because almost everyone has problems with pests, most urban areas are sprayed with pesticides. Some pesticide applications are unnecessary and can result in environmental contamination and human exposure to pesticides. Judicious use of pesticides and the implementation of integrated pest management practices is of utmost importance.

The following illustrates the amount of a pesticide detected in the air after spraying a carpeted room for fleas:



The old-fashioned type of pest control consisting of spraying around inside buildings (“Spray and Pray”) is now recognized as ineffective, potentially hazardous, and poses an unacceptable liability and public relations risk. Modern pest control employs numerous methods other than the application of sprays and fogs. These chemicals may still have some importance, but site administrators are now faced with increasing public concern about pesticide misuse, toxic materials in the workplace, and increasingly restrictive pesticide laws. The presence of children, including day care centers, and women of child-bearing age in M-DCPS facilities has further focused public attention on the need for a healthy indoor environment. Safer types of chemicals and application methods other than spraying are continuously being developed, and will be incorporated into this pest control program whenever possible.

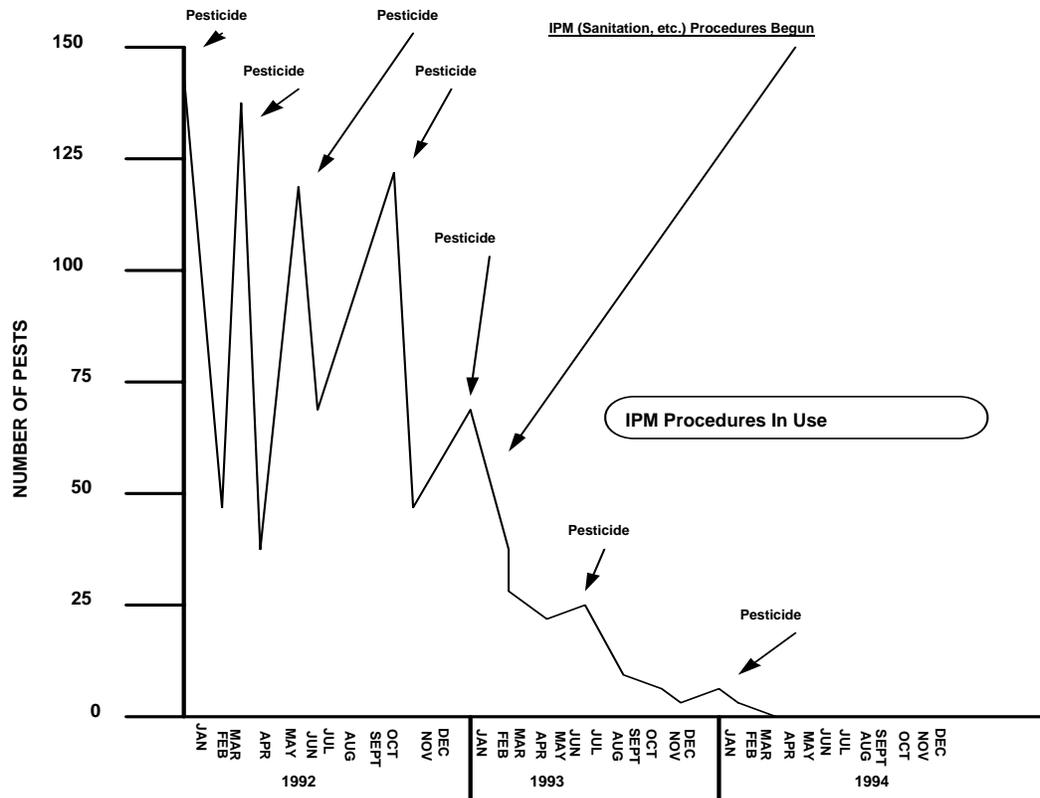
The public's concerns about the health and environmental risks associated with the use of chemicals are increasing, especially when children are involved. As the public becomes more aware of the health and environmental risks pesticides may pose, its interest in seeking the use of equally effective alternative pest control methods increases. Site administrators and other persons who have pest control decision-making responsibilities for school and ancillary sites should become aware of the pest control options available to them. It is in everyone's best interest to reduce exposure to potentially harmful chemicals.

Besides the human health and environmental benefits derived from following the least toxic IPM procedures, it turns out that these methods have been proven to be much more effective in eliminating cockroach and mouse problems than the "spray and pray" only methods.

The following illustrates the effect of improved sanitation on populations of cockroaches and mice in home economics food laboratories compared to months of traditional treatments of spraying, fogging and placement of mouse catching devices alone.

Effect of Implementing IPM procedures on pest populations.

This graph illustrates the response of composite pest populations of rodents and cockroaches to repeated applications of residual insecticides or trapping and rodenticides in home economics food labs from January, 1992 - January, 1993. After each application, the populations rebounded to their original or higher levels. Only after the implementation of organized, routine sanitation and housekeeping procedures in January, 1993, to reduce food, water and shelter available to the pests, was long term control achieved.



(From data collected by the Department of Safety, Environment and Hazards Management)

As illustrated above, pesticide applications were still needed after improved sanitation, harborage reduction (caulking), and waste removal procedures were implemented, but at much less frequency and amounts. Additionally, control of cockroaches was easily maintained using various bait products guided by visual inspection and sticky trap monitoring.

Pest management is a process that involves locating and monitoring pests, establishing thresholds

for action and selecting appropriate pest control methods. To do this, the habits and life cycles of many pests must be understood. Appropriate measures, which may, but not necessarily, include applying pesticides to solve pest problems must be implemented.

One important integrated pest management practice commonly used in buildings is prevention of pest problems. Managing pests through prevention is usually less expensive than trying to control a pest population that has already become established. Furthermore, pest prevention reduces the chance for substantial economic loss or irreversible damage. Prevention avoids some of the disruption associated with control efforts that may be needed after pests become established. Once a pest becomes established, the most common pest management goal is to eliminate it. Elimination of the pest can only be successful if the conditions that originally favored the pest can be modified or pest entry can be eliminated.

PART 2: INSPECTION AND CONTROL TECHNIQUES

1. **Inspection report forms.** Most pest problems in a building are discovered and reported by the building occupants. A log of these specific requests and the action taken to address these problems should be kept at the facility in a "Pest Control File". This file should be a three-ring binder. Pest control firms are required to provide copies of the current "Specimen Label" and **Material Safety Data Sheet (MSDS)** for each pesticide used. If the custodian or other trained DCPS employee applies approved pesticides (see page 6), obtained from Stores & Distribution (S&D), a record of the application should be placed on file. Labels and MSDS's for the approved pesticides are available from Stores and Distribution, Telephone: (305) 995-3000 or the Pest Control Manager, Division of Safety and Emergency Management, Location: 9114, Telephone: (305) 995-4900, FAX: (305)995-4924.
2. **Surface and space sprays.** It must be understood that building occupant requests for "spraying, fogging and fumigation" of general areas cannot be automatically honored in most cases. An inspection must reveal the presence of a pest harborage in order to apply pesticides. Occasionally, it may be necessary to apply liquid "spray" or aerosol "fog". The areas needing treatment should be properly prepared (empty closets, cabinets and storage rooms) for "crack and crevice" application of these materials. If a "fogging" is recommended, even if only one room is to be "fogged", the entire structure must be vacated during the application and until it is determined to be safe to re-enter. In most cases, the contents of closets, desks, cabinets and storage rooms must be removed from the treated areas. Signs must be posted on all entrances to the structure warning people of the pesticide application and to stay out. **Applications of sprays and fogs are not permitted unless approved in writing by the Division of Safety and Emergency Management Pest Control Manager. Surface spraying and air space fogging should only be performed by licensed pest control firms after written approval is obtained.**
3. **General inspection principles.** Four basic questions should be answered by inspection of specific areas where pests have been reported:
 1. What is the pest? More than one type of pest can inhabit an area. A complaint may be received concerning mice and an inspection may also reveal the presence of cockroaches.
 2. Where exactly are the pests living, and can these sites be physically altered, removed or treated with pesticides or traps? Often, pests, such as cockroaches or rodents are seen on desks or on the floor, but they are living inside a desk, cabinet, closet, storage room or above the drop-ceiling tiles.
 3. How are the pests getting in, and can this access be reduced or eliminated.
 4. What are the pests feeding on, where are they getting water, and can this food and

moisture source be reduced or eliminated.

The Site Administrator should inspect the inside and outside areas of their facility regularly to identify problem areas or personnel practices that are contributing to pest infestations. Conditions to look for outside include food wrappers, food scraps and debris around the exterior of buildings, especially in the receiving and dumpster areas. Conditions to look for inside include debris, food and cluttered storage in classrooms, offices, closets, cabinets, storage rooms, work rooms, and custodial rooms.

The Site Administrator should develop a plan to correct any deficiencies found as a result of the inspection. The plan should include a detailed list of deficiencies and the corrective actions proposed to eliminate or alleviate the problems.

The Site Administrator should initiate a request for minor maintenance with the zone mechanic. All openings around pipes that pass through exterior and interior walls and floors, as well as cracks that lead into spaces behind baseboards, cabinets and door frames, should be sealed using appropriate methods. Damaged screens should be repaired or replaced. Weather stripping or rubber door sweeps should be placed on the bottoms of exterior doors that exhibit an opening along the bottom. Damaged or corroded doors should be repaired or replaced. For repairs requiring work beyond the scope of the zone mechanic, a green maintenance request should be submitted.

The Site Administrator should initiate new sanitation methods to insure that food is properly stored in sealed containers; all areas where food is prepared or consumed and the ground around the dumpsters is thoroughly cleaned at the end of each day. **Refuse containers containing food waste should not be left unemptied overnight.**

The Site Administrator should initiate the application of the approved pest control materials. Custodians who have attended the annual mandatory personal safety awareness class, provided by the Division of Safety and Emergency Management, are documented as having received training in the safe use of the approved pesticides, namely cockroach and ant control baits and herbicide.

The following approved pest control materials should be obtained from Stores and Distribution (S&D):

1. **S&D #551-0155** - Large glue boards for catching rats, 24 glue boards per box.
2. **S&D #551-0082** - Small glue boards for catching mice and insects, 72 glue boards per box. **(These small glue boards are not recommended for catching rats.)**
3. **S&D #551-0163** - Wooden snap type rat traps, expanded trigger, 12 traps per box.
4. **S&D #551-0015** - Containerized cockroach bait, 96 bait stations per box.
5. **S&D #551-0007** - Containerized indoor ant bait, 24 bait stations per box.
6. **S&D #551-0104** - Insecticide (Ascend™) for **fire ant control**, granules, each 2-pound container covers 2 acres. **For outdoor use only!**
7. **S&D #553-0296** - Spreader for fire ant bait granules, **Spread evenly over all the grounds at least twice per year (Spring and Fall)**, set the spreader dial on number "4". The special plastic "Flo-Control" plate must be installed inside the bottom of the hopper. Please contact the Pest Control Manager, (305) 995-4900 if this part is missing.
8. **S&D #551-3812** - Herbicide for weed control, 5 packets per box. One packet makes one gallon of finished spray mixture.

For more information about how to use these materials, please refer to the recommendations

contained in the Control Techniques section (pp. 8 - 20) of this Handbook.

Copies of the Labels and MSDS for the above pesticides are available from Stores & Distribution or the Division of Safety and Emergency Management. Pesticides purchased from outside vendors, retail outlets or brought from home should not be used or stored at M-DCPS facilities.

Records of applications of all pesticides and rodent traps must be kept at each facility. The following information must be included on the record:

1. The date of the application.
2. The name of the person who applied the pesticide or trap.
3. The name of the pest being controlled (ants, cockroaches, mice etc.).
4. The name of the pesticide applied or trap placed.
5. The specific location(s) where the pesticide or trap was placed. Use diagrams, if necessary.

A blank pesticide application record is included on page 24 of this handbook. Please make copies for the custodians.

PEST CONTROL TECHNIQUES

This section describes some of the common pest problems in M-DCPS schools and ancillary facilities, and techniques for dealing with them. These statements are intended to be general guidelines, not necessarily as precise specifications. Special circumstances may arise that require alternate or modified approaches. **Please notice that the recommendations for improving sanitation, food waste removal, maintenance and personnel practices are successful for controlling several kinds of pests, especially cockroaches, rodents and ants and are essential for their successful control.**

Please copy and distribute or post the flyer, “Don’t Invite Pests to Your Desks” found on page 23 of this handbook.

Keep records of all pesticide and non-pesticide treatments performed in a “Pest Control Log” at your facility. A sample pesticide application record is located on page 25 of this handbook.

FIRE ANTS (And Other Kinds Of Ants)

The control of ants depends on killing the queen(s) inside the colony or stopping them from laying eggs. Since it is almost impossible to locate and inject each individual colony or nest with a fast acting contact spray, the use of bait is the most effective, economical, and least toxic of the methods currently available. The ants find the bait and take it back to their nests instead of us having to find all the nests.

Outdoor Treatment

Spread the approved fire ant killer bait granules, S&D #551-0104, over all the exterior grounds of your facility using the approved spreader, S&D #553-0296. The fire ant bait not only controls fire ants, but also controls several other kinds of ants. Tests with this product have shown that broadcasting the granules over all the grounds is more effective and less time-consuming than attempting to locate and treat all of the individual ant mounds. **SPOT TREATING**

FOR FIRE ANTS DOESN'T WORK!!

- **The approved ant control granules must be broadcast over all of the exterior grounds routinely, twice per year, in the Spring and Fall in order to be effective.**

Spread the granular bait with the approved fire ant bait spreader. This spreader is specifically designed to spread the granular ant bait at the label directed rate of one (1) pound of granules per acre of ground.

This ant bait will control several species of ants, most of which are coming inside buildings from colonies located outside in the ground, bushes and trees.

The ant control granules should be broadcast over all the grounds twice a year, Spring and Fall.

Inspections of our school sites reveal that at untreated facilities there are between fifty and two hundred ant colonies per acre of ground. That means that at a facility with ten acres of grounds, there are between five hundred (500) and two thousand (2000) ant colonies.

Don't sprinkle the fire ant killer granules on top of individual ant mounds. It doesn't work!

Use the approved spreader available through SECO Supplies, Inc., an approved Dade County Public School vendor, Model # 24-22, Phone Number 305-365-6542, to spread the granules evenly over **all the grounds**, including the athletic or play field. **The approved spreader automatically spreads 1 pound of the granules per acre. The Custodian is not required to measure the granules or the ground over which it is applied.**

Fertilizer spreaders purchased from outside vendors won't work!

After assembling the spreader according to the directions, **set the dial on number "4"**. The dial is at the back of the spreader where the wire cable from the handle is connected. Make sure the "Micro-Flo" plastic plate is in place in the bottom of the inside of the spreader hopper.

If your S&D spreader does not have the plastic plate, contact the M-DCPS Pest Control Manager at (305) 995-4900, to receive a replacement plate through school mail.

*** DO NOT PLACE ANY FIRE ANT KILLER BAIT GRANULES INSIDE OF BUILDINGS!**

You should **spread** the granules **when the students are not present**. Spread the bait granules in the late afternoon. Spread during recesses, teacher work-days and other times when school is not in session.

The ants will pick up the granules within 1 to 4 hours after spreading.

*** USE FRESH BAIT. Bait that has been opened for more than a few weeks becomes stale and unattractive to the ants.**

If it looks as if it's going to rain within four (4) hours, do not spread the granules. Wait for good weather.

Make sure sprinklers do not come on within four (4) after spreading.

Spread the granules evenly over the whole area. Do not try to treat individual ant mounds. The foraging ants will easily find the granules and carry them back to the colony.

Push the spreader fast enough so that the granules are coming out in a fan pattern about 6 feet wide.

Remember, very little of the bait is needed. The label says to spread one (1) pound per acre. That's only about one ounce per 1800 square feet! You will hardly see the bait coming out of the spreader! If there are granules left over in the spreader after you finish spreading, pour the excess granules back into the AWARD bottle using a funnel.

Use fresh bait! Bait remaining in opened containers or spreader for more than three (3) weeks usually is not effective.

For areas that are hard to get to with the spreader, like planters or hedges next to buildings, sprinkle the granules directly from the shaker-top of the container.

In order to maintain a low ant population all year long, you should spread the granules over all the grounds every six months (twice per year), in the Spring and Fall. Each application usually controls 80 to 90 percent of the colonies.

USE THE APPROVED SPREADER - There are too many colonies present to spot treat.

To dispose of the empty fire ant bait containers, puncture the container with a screwdriver or other suitable tool, wrap the container in newspaper or place it in a plastic trash bag and place in the dumpster.

If fire ant mounds are located in sensitive playground areas, these mounds may be treated by licensed pest control vendor by **injection** of materials, such as water mixtures of diatomaceous earth products or carbon dioxide, that have been approved by the Pest Control Manager.

CUSTODIANS AND OTHER M-DCPS EMPLOYEES SHOULD NOT APPLY UNAPPROVED INSECTICIDE SPRAYS OR OTHER PESTICIDES, PURCHASED FROM OUTSIDE VENDORS OR STORES, AT SCHOOL SITES.

Ants (Indoor Treatment)

Ants usually will not enter the interior spaces of your facility unless there is a food or water source. Ants that are seen inside of buildings are usually coming from nests located in the ground, in the trees or in the bushes on the outside of the building. As with cockroaches, to control ants, their location must be known. Ants can usually be spotted by their trail to a food or water source. **Spraying baseboards and other surfaces for ant control is even less effective than for cockroaches. In fact, conventional spraying often increases ant problems.**

Sanitation. Limit the areas where food is permitted to be stored and consumed. As with cockroaches, take away the ant's source of food and they will search elsewhere. Ants love crumbs of food, milk and fruit juice left by students and staff eating at their desks. Ants also like spilled pet food and birdseed scattered around or available inside the pet cages.

For emergency situations when lines of ants are on table or desktops, wipe the table or desktops and legs with detergent to remove or disrupt the chemical trails that the ants are following. This should provide immediate, although temporary relief.

Pesticide. Effective long-term control of ants depends on killing the queen(s) inside the colony. Use the approved containerized ant control bait stations, S & D #551-0007, They are very effective in killing the queens because the foraging ants take the bait back to the colony and feed the queens. These bait stations are as attractive to many kinds of ants as crumbs of food or our students' lunch boxes. Place individual bait stations where ants are seen. The ants will find the bait stations eventually, it may take a day or two. Do not place the bait stations on the surfaces that you just cleaned with detergent.

Place the bait stations where they are out of sight of children.

Follow the trail of ants to a place where they go behind furniture or boxes on the floor or up into the ceiling. Place the ant control bait stations behind file cabinets, inside cabinets, under sinks, and up in the drop ceiling where ants are seen. The bait stations have glue on the label side. Just remove the outer part of the label. The bait station can then be placed on the under side or back side of tables, shelves, counter tops, teacher's desks and in back of sinks.

DO NOT PLACE ANY BAIT STATIONS ON OR UNDER STUDENT'S DESKS OR DINING ROOM TABLES.

The bait stations should be placed when no children are present. Because there are no fumes or odors, you can place the bait stations early in the morning before the children come in, while they are out of the room for lunch, or late in the afternoon after the students leave for the day.

Two or three stations per average size classroom should be enough unless the number of ants is extremely large.

An emergency action which the Custodian may take when there is an ant complaint in a classroom or office, is to wash the surfaces where the ants are seen, such as the desk or table top as well as the furniture legs using detergent.

This action is not intended to control the ants permanently, but will destroy the ant's chemical trail, resulting in temporary relief until the ant bait stations have been placed and begin to work. **Do not place ant control bait stations on surfaces that have been recently cleaned.**

The ants are coming into the room because there is food around for them to eat. The baits work best when there is no other food available for the ants.

USE BAIT THAT IS AS FRESH AS POSSIBLE FOR BEST RESULTS!

Slightly wetting the bait inside the station may increase the attractiveness to the ants.

Most of the ant problems inside buildings are coming in from colonies located outside.

Spread the outdoor granular ant bait, S&D # 551-0104, with the spreader to reduce indoor ant problems.

You should record the location where you put the bait stations. If ants are still present in the same place after a few weeks, replace the old bait station with a new one. The ant bait stations have a red cap so that you can see the bait inside to know whether the bait is used up. If there is bait inside, then the station is still good. Dispose of old bait stations by wrapping in newspaper or placing in a plastic bag and putting in the dumpster.

Cockroaches

Cockroaches, commonly called water bugs or palmetto bugs (you probably have your own name, but it's not printable.), need food. They've been around for millions of years, but that doesn't mean they've figured out a way to live on air or paper alone. If they can't find food, they'll die. If they can't find moisture, they'll die even quicker.

Cockroaches are one of the most adaptable and successful insect groups. Their adaptability has enabled cockroaches to become resistant (immune) to many of the pesticides on the market today. Cockroaches are showing resistance to even the latest fourth generation pyrethroids. This is another reason why it is necessary to find and use as many non-chemical methods as possible; new

pesticide chemistries are not being developed fast enough. These insects can be found somewhere in almost every building, and their existence in your facility revolves around the following fact:

Limiting the storage, preparation and consumption of food to only a few authorized places, greatly reduces pest problems, pesticide usage, and the time required in applying pesticides.

Large Cockroaches. Large cockroaches (American, Australian, brown, and smoky brown) can live outdoors in mulched planting beds, the base of the fronds of palm trees, wood piles, the debris in and around dumpsters, etc. They enter buildings through open doors, spaces under doors, around conduits and water spigots. Cockroaches are often transported into structures inside boxes, bags or other containers brought into the facility by vendors, the staff, students and visitors.

Small Cockroaches. Two types of small cockroaches ("German" and "brown-banded") account for most of the pest complaints and pesticide use inside of our schools and ancillary buildings. These two kinds of cockroaches do not usually live outside. They are transported from structure to structure inside boxes, bags or other containers brought into the facility by vendors, staff, students and visitors.

Controlling Cockroaches

Sanitation. Cleaning up to reduce cockroaches in a school or office environment must focus on the food residue in and around coffee stations, microwave ovens, refrigerators, trash cans used for food waste disposal, desks and cabinets where food is stored or consumed and floor areas around these locations. Building occupants, concerned about cockroaches in their workplace, must understand their own responsibility for storing all food in tightly sealed containers, and for cleaning surfaces on which food is prepared or consumed.

Daily, afternoon trash pickup is recommended. Food waste should be placed only in waste containers with heavy-duty plastic liners. The liners of these containers should be changed with every pickup and the containers themselves should be washed regularly. Before being placed into the dumpster, all trash container liners should be secured by twist-tying or knotting at the top to prevent spillage of food residues into the dumpster.

Pets. Pets, such as birds, guinea pigs, rabbits, gerbils and hamsters, kept in classrooms and other areas of the facility overnight for extended periods of time, contribute greatly to enlarging a pest population. These animals and their food should be removed overnight and the areas around their cages should be thoroughly cleaned at the end of each day. Rodents, cockroaches and ants are attracted to the spilled food and have no trouble entering the cages to eat and drink right out of the pet's bowl and at the bottom of the cage. **If animals are permitted to be kept overnight, they should be kept in containers that are impervious to pests. Pet food should be stored in metal containers with tight-fitting metal lids. Clean up spilled pet food immediately.** Birds are especially troublesome because they scatter the seed out of the cages and are usually not amenable to being kept in glass terrariums.

Housekeeping. In addition to eliminating food residue, reducing clutter is critical for cockroach control. Piled boxes and cartons, rolled carpeting, and any stored paper or cardboard materials are favorite hiding places, particularly in dark, damp locations such as under sinks, in store rooms, closets and custodial closets. Food items should be stored in sealed containers. This includes dry beans, macaroni etc., used for counting or arts and crafts, found in many classrooms. **The preparation and consumption of food should be limited to those authorized areas that can be thoroughly cleaned each day. The posting of signs saying, "NO FOOD OR DRINKS ALLOWED" on doors leading into rooms or areas not authorized for eating has been helpful to remind building occupants of the rules.**

Seal entry points. Eliminate the spaces under and around exterior doors using vermin sweeps, weather stripping, thresholds or, if necessary, replacing the door. **Keep exterior doors closed.** Seal openings around pipes, conduits and other items, such as drier vents and waste pulping machine chutes that penetrate exterior walls.

Pesticides. Containerized **bait** stations for cockroach control are available from S&D (#551-0015). The plastic bait containers should be placed in the dark, concealed, moist spots where the cockroaches are actually living, such as in teacher's desks, inside cabinets, under sinks and inside of storage rooms, workrooms and custodial closets. The bait containers should be placed along edges and in corners. **Do not apply the cockroach bait stations on the floor.** The bait stations should be placed so they are out of sight of children and placed when there are no children in the room. **The most common mistakes in using the containerized bait stations are placing the bait stations too far from the area where the cockroaches are living, not eliminating nearby alternate food, and not using enough bait stations.** For example, place bait containers inside cabinets, closets and storage rooms. At least 2 or 3 bait containers should be placed in each cabinet or closet that has cockroach problems. They can be placed on the under side of shelves or teacher's desktops using double-sided tape. As a rule, the bait stations should be replaced after 3 or 4 months. However, replacement may have to be more frequent at the beginning of the baiting program if cockroaches are very numerous. **Do not place bait stations on, in or under students' desks, even though a cockroach may have been sighted there. If a cockroach infestation is present in a student's desk, clean the desk by an appropriate method, such as vacuuming, washing, pressure washing, etc.**

Never apply pesticides to surfaces of children's desks or dining tables.

Be sure to put on clean rubber gloves before handling the cockroach bait stations.

Make a record of all pesticide applications, showing the name of the applicator, name of the pesticide, location of application, and date of application. Keep the record on file in the pest control log book at your facility.

Sticky Traps. Insect and mouse-size glue boards are available from S&D (#551-0082). These glue boards can be used to help pinpoint the sources of cockroach infestation, or monitor areas where occupants have complained but no infestations can be visually detected. Sticky traps are not intended for control of small cockroaches, but rather to guide and evaluate control efforts and verify infestations as part of the inspection process. In some cases, sticky traps have eliminated infestations of large cockroaches.

Rodents

Rats

Rats dig burrows in planting beds and are attracted to debris, food containers and food scraps on the grounds and in unsecured waste storage containers. **Rat problems originate from outside of the building.** Rats will visit school grounds looking for food and water. If they find it around the dumpsters and grounds, they then will try to find openings and set up nests in the area, sometimes inside buildings. When food and water is available to the rats inside buildings, then they do not have to go outside. The result is one or more populations of rats in several areas of the facility. These rodents usually stay at ground level, but if they gain access to wall voids or vertical pipe chases, they may climb to upper floors. Rat control begins with three fundamental operations that do not involve a pest control contractor. **Sanitation, housekeeping and structural maintenance are generally more important than trapping and poisoning in a rodent control program.**

Sanitation. It is very important to keep the exterior grounds around buildings, fence lines, receiving areas and **dumpster areas clean at all times.** If policing these areas can be done only once per day, it should be done at the end of each day before dark. Food scraps, wrappers and other trash should not be left over night because these animals forage at night. It is very difficult to keep rats off school property, especially if they are breeding on adjacent properties, such as canals, vacant lots etc.. The secret to avoiding rat infestations on M-DCPS property and inside M-DCPS buildings, is to avoid providing the rats (and other animals) with a banquet when they do come to forage. If rat

burrows are observed on the site, rodenticide may be needed. Rodenticides may only be applied by licensed pest control companies, after written approval from the Pest Control Manager.

Eliminate unnecessary storage and debris. Building grounds, receiving areas, dumpster areas, and interior spaces (offices, classrooms, storage rooms, work rooms, etc.) should be kept free of piled materials that rats can use as shelter. Anything soft, such as rolled carpeting, padding, insulation and air conditioning filter material, is particularly attractive to rats, they don't eat this material, but use it for nesting or nest right in it. Cluttered storage provides harborage for pests and prevents the proper cleaning, inspecting and application of pesticides and trapping devices. Even vendors using professional equipment cannot safely and properly treat areas that are dirty and cluttered.

Limit food storage, preparation and consumption to authorized spaces only. Only rooms designed for food storage, preparation, and consumption should be used for these purposes. Consuming food in offices, classrooms and other work and storage areas creates opportunities for rat populations to increase to higher numbers and in more locations than are found in facilities where food and drinks are limited to approved areas. Signs posted on entrances to rooms and other areas saying, "FOOD AND DRINKS NOT PERMITTED" are useful in reminding building occupants of the rules. Although plastic containers with tight-fitting lids are usually sufficient in keeping out cockroaches and ants, they will not deter rats and mice. When rodent activity is observed, all food and feed in offices, classrooms, etc., must be removed, or placed in metal containers with tight-fitting metal lids.

Pets, such as birds, guinea pigs, rabbits, gerbils and hamsters, kept in classrooms and other areas of the facility overnight for extended periods of time, contribute greatly to pest infestations. These pets and their food should be removed overnight and the areas around their cages should be thoroughly cleaned at the end of each day. Rodents, cockroaches and ants are attracted to the spilled food and have no trouble entering the cages to eat and drink right out of the pet's bowl and at the bottom of the cage. **If animals are permitted to be kept overnight, they should be kept in containers that are impervious to pests. Pet food should be stored in metal containers with tight-fitting metal lids.** Birds are specially troublesome because they scatter the seed out of the cages and are usually not amenable to being kept in glass terrariums.

Clean up spilled or scattered pet food immediately.

Eliminate rat access into and through the building. Rats commonly enter buildings through open doors and windows, under doors with greater than one-half inch clearance, holes gnawed through the weather stripping of regular and rolling doors, unscreened vents, holes where utilities enter the building, openings in the masonry. They even get in through unprotected dryer vents in the exterior walls of food service areas. Holes and spaces around pipes that pass through walls, floors and ceilings that provide a 1/2 inch opening can accommodate an adult roof rat. These openings should be sealed using appropriate materials, such as caulking, cement, copper mesh, or screened with sturdy metal screening, such as hardware cloth. If the work is beyond the scope of the zone mechanic, submit green maintenance requisition forms to request this work.

Keep exterior doors closed.

Trapping. Rat-size glue boards and snap traps are available from S&D, #551-0155 and #551-0163. The custodian should use these trapping devices to quickly reduce a rat population. Extreme care must be taken to conceal the traps in order to avoid adverse occupant reaction to seeing dead rodents and contact with the traps. Traps set in classrooms should be placed after the room is vacated and the traps should be picked up before the room is occupied the next day. Place the glue boards or snap traps where droppings are found. Some of the more effective locations to place the traps include the "alley way" behind furniture, equipment and cartons stored on the floor. The "alley way" is the space between the back of a piece of furniture, cabinet, box, etc., and the baseboard. Sometimes an object must be moved away from the wall to make a space big enough for the trap(s).

The glue boards can be folded to form a tent-like structure (See instructions on back of glue board). The glue boards and snap traps can be placed on top of the ceiling tiles against a vertical surface, such as a partition. **The most common mistakes in using the glue boards or snap traps are not placing the traps near enough to the area where the rats are living, not eliminating nearby food, and not using enough glue boards or snap traps.** All trapping devices must be checked each day. The glue boards are already baited with attractant scents, but other food materials, such as peanut butter, raisins, cookies or crackers, can be used.

The approved snap traps and glue boards can be placed inside of cardboard boxes (empty copy paper boxes) that have holes cut in the sides at the bottom corners. These boxes provide camouflage and protection from exposure of students and staff to the traps and glue boards.

Keep records of all rodent trap and glue board placements.

Mice

Mice are not baby rats, they are different animals. Most complaints about rats inside buildings turn out to be mice. Mice may enter a building from the outside, but in many cases, mice are transported into structures inside boxes, bags or other containers brought into the facility by vendors, the staff, students and visitors. Although large numbers of mice can build up in food service areas, trash rooms and custodial closets, small populations can survive practically anywhere. Mice frequently spread through a structure along pipes, cables, ducts and the tops of dropped ceilings. The increased use of raised flooring for electric cables in telecommunications and computer facilities has greatly increased potential harborage in our schools and other facilities.

Seal Entry Points. Eliminate the spaces under and around exterior doors using thresholds, vermin sweeps, weather stripping or, if necessary, replacing the door. **Keep exterior doors closed.** Seal openings around pipes, conduits and other items, such as drier vents and waste pulping machine chutes that penetrate exterior walls. Blocking mouse access routes into occupied spaces by sealing up where utilities enter is a practical control measure for limited areas. Caulk, copper mesh, steel wool, or polyurethane aerosol foam will stop mouse entry in most cases. However, young mice can squeeze through cracks as narrow as one-quarter inch. Large open office areas, rooms in older buildings, and rooms with spaces above the dropped ceilings that extend over several rooms may have so many potential access points that sealing is impractical.

Cleaning and Housekeeping. Sanitation for mouse control is similar to that required for cockroaches and is as effective. All food should be stored in metal containers sealed with metal covers, surfaces and crevices should have no food residue, and piles of materials should be eliminated as much as possible. Strict attention to cleanliness and proper storage is essential for mouse control in food service areas. However, it is often difficult to achieve a level of sanitation that actually makes a difference for a scattered, low-level mouse infestation. The important point to remember is that poor sanitation, storage practices and housekeeping result in high-level mouse infestations in classrooms and offices. In many cases, the harborage areas for the mice are in cluttered, dirty storage rooms, work rooms and custodial closets that are adjacent to the classrooms and offices where the mice are sighted.

Pets. Pets, such as birds, guinea pigs, rabbits, gerbils and hamsters, kept in classrooms and other areas of the facility over night for extended periods of time, contribute greatly to enlarging pest populations. These animals and their food should be removed overnight and the areas around their cages should be thoroughly cleaned at the end of each day. Rodents, cockroaches and ants are attracted to the spilled food and have no trouble entering the cages to eat and drink right out of the pet's bowl and at the bottom of the cage. **If animals are permitted to be kept overnight, they should be kept in containers which are impervious to pests. Pet food should be stored in metal containers with tight-fitting metal lids.** Birds are especially troublesome because they scatter the seed out of the cages and are usually not amenable to being kept in a glass terrarium. **Clean up spilled or scattered pet food immediately.**

Trapping. The mouse-size glue boards and snap traps, available from S&D, #551-0082 is usually the most effective ways to control low-level mouse problems. Extreme care must be taken to conceal the traps in order to avoid adverse occupant reaction to seeing dead rodents and contact with the traps. In some cases, when many traps, are used in a room, the traps should be placed after hours and picked up early the next day before the area is occupied. Place the traps where the droppings are seen. Some of the more effective locations to place the traps include the "alley way" behind furniture, equipment and cartons stored on the floor. The "alley way" is the space between the back of a piece of furniture, cabinet, box, etc., and the baseboard. Sometimes an object must be moved away from the wall to make a space big enough for the trap(s).

The glue boards can be folded to form a box or tent-like structure (See the instructions on the back of the glue board). The glue boards and snap traps can be placed on top of the ceiling tiles against a vertical surface, such as a partition. All trapping devices must be checked each day.

The most common mistakes in using the glue boards or snap traps are not placing the traps near enough to the area where the mice are living, not eliminating nearby food, and not using enough glue boards or snap traps.

All trapping devices must be checked each day. The glue boards are baited with attractant scents, but other food materials, such as raisins, peanut butter, cookies or crackers, can be used. Mice have been trapped by using cotton as bait, since they are looking for nesting material as well as food.

The approved snap traps and glue boards can be placed inside of cardboard boxes (empty copy paper boxes) that have holes cut in the sides at the bottom corners. These boxes provide camouflage and protection from exposure of students and staff to the traps, glue boards and captured animals.

Pigeons

Pigeons like to roost on horizontal surfaces that are protected from the weather. They nest and loaf on window sills, the tops of wall-unit air conditioners, the tops of chill water lines, and other protected ledges.

The long-term solution to this problem is to put up barriers, such as plastic netting, hardware cloth and other numerous materials over the areas they want to stay to physically exclude them. This method can be fairly expensive at some facilities depending on the extent of the roosting places. Pigeons can be excluded from limited areas by the custodian or zone mechanic installing screening or hardware cloth.

A short-term solution is to perform humane trapping to remove the flock. This can be done by a vendor who charges a fee. The site administrator should contact the vendor directly. For information on the vendors who are currently performing this humane removal of pigeons, please contact Purchasing at (305) 995-2348 or Mr. Kenneth Campbell, Pest Control Manager, (305) 995-4900. Trapping generally provides short-term relief and may need to be done more than once each year, however, some trapping jobs have lasted for more than a year or two.

Keeping exterior grounds and exposed hallways clean, as described above for cockroaches, rats and mice is important for pigeons, although these birds also feed at neighboring sites.

Pigeon mites

Pigeon mites sometimes enter rooms around windows and through air conditioners next to where these birds are nesting. Most of the mites which have been found inside of rooms have been non-biting kinds which chew on feathers and other materials in the nest. Occasionally the kind that bites

does come inside the room.

Removing the pigeons as recommended above, and their nests and washing the surface where the nests were located, will eliminate the mites. If mites have been identified inside a room, vacuuming the inside of the window and adjacent walls will physically remove them. Sprays containing pyrethrum or diatomaceous earth will also kill them, but these sprays should **only** be applied by a licensed pest control vendor following written approval by the Pest Control Manager.

Flies

The identification of the type of fly is very important in being able provide effective control. The site administrator may submit specimens of flies (or any other pest) to the Pest Control Manager, Division of Safety and Emergency Management, Location: 9114, Telephone: (305) 995-4900 for identification and assistance. Generally, filth flies (house flies) breed in rotting food and excrement. There are other flies (fungus gnats) which breed in fungus-bearing material, such as the potting soil in plants, and still others (fruit flies) that breed in rotting fruit, bread, and other foods being decomposed by or containing yeast. The breeding areas must be found and cleaned to stop the production of new flies. There are non-chemical methods, such as non-zapping ultra-violet light traps and vacuuming, which are useful for eliminating adult flies.

Do not spray or fog rooms to control flies nor allow a pest control company to do so. Placement of ultra-violet glue board fly traps by a pest control vendor eliminates adult flies more effectively than space spraying while the breeding sources are located. Long-term, effective fly control is based on removing or cleaning the breeding sources, not on repeated fogging or spraying of the adults.

Silverfish

Silverfish are primitive insects that eat materials high in starch. They are found in drawers and cabinets where cereal, sugar, crackers or other food items are not securely stored. Sometimes they are found on shelves and cabinets where books are stored, since they like to eat the sizing used to make the paper and the glue in the bindings. Often silverfish are found in cardboard boxes that contain these items or cloth. It is not known whether the approved cockroach and ant bait stations are effective against silverfish.

Sanitation. As with cockroaches, populations of silverfish can develop in areas that receive little attention and activity, such as closets, storage rooms, stored boxes, science preparation rooms, etc.. These areas should be emptied and cleaned a few times a year. Items that are obsolete, unnecessary and contaminated should be discarded.

Pesticides. After the sanitation recommendations have been implemented, if silverfish are still observed, try the cockroach bait stations. If other pesticides are necessary, a pest control company should apply materials that have been approved by the Pest Control Manager.

Fleas

Fortunately, fleas are not common in school facilities. Those few times that fleas are encountered in classrooms, offices or other work areas, they have been hitchhikers from the home or areas where employees, students or visitors have contact with pets or other animals. The fleas may be carried inside by people from school grounds around buildings that have sub-flooring crawl spaces, such as portables or permanent buildings where dogs and cats may be living. The animals should be removed and the vents and entry points into the sub-flooring crawl spaces of permanent buildings should be screened with hardware cloth and the bottoms of temporary buildings (portables, relocatables, etc.) should be provided with skirts to prevent dogs, cats and other large animals from

entering and living under these structures.

While fleas can bite people, they cannot reproduce on human blood. Unless dogs or cats are present inside the rooms, there are no flea eggs or larvae present. **Do not spray inside of school buildings for fleas.**

Controlling Fleas

The number of fleas inside a structure can be reduced or eliminated temporarily by vacuuming the floors from wall to wall and the seats in that room. **The custodians should use a wet/dry vacuum partially filled with water and detergent. The fleas will die in the detergent and water mixture. Repeated vacuum treatments inside buildings may be necessary until the source is eliminated.**

Licensed pest control companies should be hired to power spray outside grounds and sub-flooring areas of portables or other buildings where animals have been living, using only approved pesticides.

Do not spray or fog the inside of buildings for fleas!

Keep cats and dogs off the school grounds. If the fleas are being tracked inside because of an infestation coming from dogs or cats living under the portables or other buildings, these animals must be removed and **the ground around and under the building should be sprayed by a licensed pest control firm using an approved contact, residual pesticide mixed with an insect growth regulator.**

Discourage the feeding of cats and dogs at school facilities.

If you receive complaints about fleas or other insects biting people at your facility, please contact the Division of Safety and Emergency Management, Pest Control Manager, Location #9114, Telephone (305) 995-4900, FAX: (305) 995-4924. A survey using one or more sampling techniques will be performed to determine if a biting arthropod pest is present and recommendations made based on the results of the survey.

Wasps

The most common wasps are the paper wasps (Polistes), also called the umbrella wasp, because its nest is made of paper-like material and is shaped like an inverted umbrella. The nests can be found under the eaves of portables, under umbrellas of outdoor patio furniture and under the tops of exterior window frames. They build up in great numbers when food is plentiful, mainly flowering trees and shrubs, and sweet food and food containers left in outdoor trash cans and the ground around buildings.

Control strategies

Keep outdoor areas clean, especially patio areas. Empty and wash outdoor trash containers daily, after each use. The custodian may sweep wasp nests down with a broom if the nest is very small, less than an inch in diameter. If the nest is larger than an inch in diameter, a licensed pest control company should be called in to remove the wasps with a vacuum cleaner or using pesticide materials approved by the Pest Control Manager.

Bees

Honey bees which have swarmed onto your facility and landed in a tree or on some part of a building, should be removed from your site by a beekeeper who will capture the swarm, for a fee, without spraying pesticides or harming the bees, if possible. Please contact the Pest Control

Manager, (305)995-4907 for the name(s) of beekeepers currently available.

Keep people out of the area where the swarm has landed until the swarm has been removed.

Occasionally, honey bees are observed flying around school sites that did not swarm, but are visiting the site from a hive that is off the school site. These bees are there because they have found food sources on the property, such as flowering trees, shrubs, sweet food waste in trash cans, spilled soft drinks, or containers from soft drinks.

Site administrators should see that all trash is carefully sealed in plastic bags and placed in the dumpster immediately after lunch. If bees or wasps are visiting the trash cans, then the trash cans must be washed every day until the bees or wasps are no longer visiting these areas.

Spiders

Spiders are rare in offices and classrooms. They are most frequently encountered in rooms that are more or less open to the outside, like air handler rooms, electric meter rooms, and custodial rooms. These rooms sometimes have an unscreened louvered door and unscreened vents that permit the entrance of many insects that are food to spiders, especially if there is exterior lighting that attracts flying insects.

Spiders are not affected by pesticides unless they are sprayed directly. Therefore, spraying or fogging a room will not protect the room from spiders. Physical removal by vacuuming, sweeping, or hosing with water is more effective than spraying. Regular, frequent cleaning of the room and screening the vents and doors will provide a long-term solution for preventing a large buildup of bugs and the spiders that are attracted to them. Spiders are predators of soft-bodied insects (cockroaches, ants, flying insects, etc.). They will congregate in areas where other insects are numerous, such as around electric lights.

Scorpions

Scorpions are rare inside of buildings, but do enter occasionally. Keeping the areas around the outside of the buildings free of weeds, cuttings from trees and shrubs, lumber and thick shrubs will discourage scorpions from coming around the buildings. Keep the crawl spaces under buildings screened and free of lumber and trash.

Scorpions eat insects and walk on tip toes. Spraying inside buildings to prevent scorpions is futile. Keep exterior doors closed. If there are spaces under any exterior doors when they are closed, weather stripping or rubber door sweeps should be installed.

Keep dumpster areas clean. Scorpions like to eat cockroaches and flies.

Termites

If termites are present in your facility, service may be requested by submitting a work order (green maintenance requisition) to M-DCPS Office of Facilities Operations. If swarming (flying) termites appear inside occupied rooms in your facility, vacuuming is the recommended action to take rather than spraying or fogging. Spraying or fogging will not alleviate the problem, and, as noted above, would require complete evacuation of the entire building until the next day. Please save some of the termites and their wings in a dry container or envelope so that identification can be made by maintenance personnel or the Pest Control Manager.

Head Lice (Pediculosis)

Head lice are insects that infest the hair and scalp of people. They may cause the scalp to itch.

Even though head lice are insects, they are treated as a medical problem, not a pest control problem. Head lice cannot live off the scalp of its human host for more than a few hours and the eggs, or nits, are glued to the hair close to the scalp and do not fall off. **Do not spray or fog the inside of buildings for head lice!**

An appropriate "positive" action to take would be to vacuum the floor, seats, coat and hat storage areas and back pack storage areas in the rooms where head lice have been identified.

Please refer to **THE HANDBOOK FOR SCHOOL HEALTH FACILITATORS**, Chapter XIV, pages 81-89 for additional information regarding head lice and recommended actions to be taken by school administrators. The handbook may be obtained from the M-DCPS Department of Comprehensive Health Programs, Telephone: (305) 995-1235.

Wild Animals (Snakes, Raccoons, Opossums, etc.)

Animals, such as snakes, raccoons and opossums, occasionally enter buildings through open exterior doors or other openings and may harbor under portables or other buildings with crawl spaces and unprotected vents. The removal of wild animals from structures should be done by trained, properly equipped personnel. It is recommended that school personnel not attempt to remove or kill the animal.

Vendors who perform humane animal removal, for a fee, are available. For vendor information, please contact the Division of Procurement and Materials Management at (305) 995-2345 or the Pest Control Manager.

Mosquitoes

For mosquito problems, please contact Metro-Dade Mosquito Control Division at (305) 592-1186. They will send a representative who will identify the kind(s) of mosquitoes present, determine if mosquito breeding sites are present, sometimes provide treatment to exterior breeding sites and provide you with a written report of findings and recommendations. **Please request a written inspection report and recommendations from the Metro-Dade Mosquito Control Division representative.**

Some mosquito breeding sites that have been identified on school grounds include catch basins, clogged dry wells, drain tubes and pans for air conditioner condensate, rain gutters and down spouts that do not drain properly because of being clogged with foliage from overhanging trees or because of improper installation. Regular inspection and cleaning of rain gutters, down spouts and air conditioner condensate pans and drain tubes will help reduce mosquito problems.

Please do not bring in sprays or aerosols from home or outside vendors to apply inside buildings for mosquito control. Pesticides may be required for temporary control of mosquitoes in identified breeding sites, until permanent repairs or modifications can be made, if possible. These pesticides are for the control of the larval stage of the insect and have active ingredients that are not harmful to people, namely, naturally occurring bacteria or insect growth regulators (IGRs).

Pest Control Vendors

Pest control vendors may be hired by Principals and Site Administrators to perform pest control, such as for chinch bug or wasp control or for "regular monthly pest control service" in selected areas of the facility.

Prior to applying any pesticides, pest control firms must obtain written approval from the Division of Safety and Emergency Management Control Manager for all materials and methods that will be used at the facility. The required information, including copies of

current labels, MSDS's, licenses and certificates, must be submitted on 8 1/2 by 11-inch (letter-size) format to the Pest Control Manager for approval.

Guidelines for performing pest control and rodent control in schools and ancillary facilities are available from the Pest Control Manager and should be incorporated into the contract documents.

Rodenticides shall not be placed at M-DCPS facilities without prior written approval from the Department Of Safety, Environment and Hazards Management, Pest Control Manager for each intended use.

Contact Information

The Division of Safety and Emergency Management Pest Control Manager is available to provide pesticide training to custodians at school sites, consult with Site Administrators about implementing Integrated Pest Management practices, provide pest control recommendations as needed, and Division of Safety and Emergency Management, Location: 9114, Telephone: (305) 995-4900, FAX: (305) 995-4924.

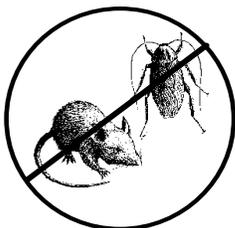
The Principal or Site Administrator should send a memo or use the handy form on page 22 to transmit requests for assistance.

To obtain a "Micro-Flo" plate for the Fire Ant Bait Spreader, please contact Mr. Kenneth Campbell, Pest Control Manager at (305) 995-4900.

For information regarding cleaning procedures, materials, equipment and sanitation audits, please contact Mr. Mike Tuccitto, Coordinator, Department of Plant Operations, Telephone: (305) 835-1050, Location: 9221.

For information regarding procedures for controlling head lice outbreaks, please contact Ms. Wilma Steiner, Supervisor, Department of Comprehensive Health Programs, Telephone: (305) 995-1235.

For information regarding pest problems or pest control procedures in the cafeteria, please contact Mr. Tom Holmberg, Coordinator, Department of Food and Nutrition, (305) 995-3263.



DON'T INVITE PESTS

TO YOUR DESKS!

PEST PREVENTION IS EASY:

- Store, prepare, and consume meals and snacks in designated areas only.
- Store food in sealed containers such as metal tins, plastic containers and bins equipped with tight-fitting lids.
- No food trash at night.
- Rinse drink containers.
- Maintain the office and lounge coffee pot areas in a clean and dry condition. **Clean spills immediately.**
- Empty excess water from indoor plant pot saucers. Don't over water indoor plants.
- Keep your area free of litter and clutter.
- Submit requests to seal cracks, crevices and spaces around windows and exterior doors in your work area.

Please copy, distribute and post this "flyer" as appropriate.

MIAMI-DADE COUNTY PUBLIC SCHOOLS

DEPARTMENT OF SAFETY, ENVIRONMENT & HAZARDS MANAGEMENT

REQUEST FOR ASSISTANCE FOR PEST CONTROL PROBLEMS

Please submit this form to the Pest Control Manager, #9114, Fax: (305) 995-4924
(Retain a copy for your records).

FACILITY: _____ **DATE:** _____

ADDRESS: _____ **TEL #:** _____

PRINCIPAL/SITE ADMINISTRATOR: _____

PERSON MAKING REQUEST: _____

PEST PROBLEM (Rats, Mice, Cockroaches, etc.): _____

SPECIFIC LOCATION(S) WHERE LIVE PEST(S) OR PEST EVIDENCE WAS SEEN (Room #, Office, Closet, etc.):

ACTIONS ALREADY IMPLEMENTED AT YOUR SITE TO CONTROL THE PESTS (sanitation improvements, approved pesticides or traps used, etc.):

MIAMI-DADE COUNTY PUBLIC SCHOOLS

Integrated Pest Management Pest Sighting Log

Facility:

Location of Sighting Bldg. & Rm. # / Loc.	Type of Pest(s) Sighted	Person Reporting the Sighting	Date of Sighting	Date and Nature of Action

- Actions taken should be documented in detailed service report(s) showing procedures used, including pesticide(s) used, where used and how applied. A report of effectiveness should also be included. Did the treatment work or not?

MIAMI-DADE COUNTY PUBLIC SCHOOLS

PEST CONTROL ACTION RECORD

FACILITY: _____

DATE: _____ Facility Administrator (Print): _____

Pest Problem / Location: _____

Non-Pesticide Actions Taken (Cleaning, Caulking etc.): _____

Name of Pesticide Applicator (Print): _____

Job Title of Pesticide Applicator (Print): _____

Pest(s) Treated (Cockroaches, Ants, Mice etc.): _____

Name and Amount of Pesticide(s) or Traps applied: _____

Location(s) Where Pesticide(s) Were Applied (Use Diagrams, If Necessary): _____

- Please place this record into the "Pest Control Log" located in the school office.

PESTICIDE APPLICATION RECORD

FACILITY _____

Date	Applied By	Target Pest	Pesticide Used	Quantity Used	Specific Locations Treated

- Please place this record into the "Pest Control Log" located in the Main Office.