

What is Integrated Pest Management?

Integrated Pest Management is an effective and environmentally sensitive approach to pest management that relies on a combination of commonsense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interactions with the environment. In conjunction with available pest control methods, this information is used to manage pest damage in an economical manner but with the least possible hazard to persons, property and the environment. IPM programs take advantage of pest management options, including but not limited to, non-chemical alternatives, or the judicious use of pesticides. Understanding pest needs is critical to effective implementation of IPM. Pests seek habitats that provide for basic needs such as food, shelter, air and moisture. The creation of inhospitable environments can help control or prevent pest populations. Good housekeeping is the cornerstone for this process. Examples include removing some of the basic elements needed to survive or blocking access to buildings. Other ways to manage pests involve the use of traps, vacuums, biological controls or pesticides. Before any action is taken, it is essential to understand a pest's survival needs.

Designating Pest Management Roles

The concepts and methods of IPM originated in the agricultural setting. It was later determined that IPM has great value in urban settings, such as school districts. The interaction of the people involved in the school's IPM program and an increased knowledge base are critical to the success or failure of the program. Clear identification and agreement on the respective roles of the people involved and good communication will result in more effective and economical site protection with fewer risks. An effective IPM program requires the collaborative efforts of staff, students, parents, other building occupants and the community.

The Hudson City School District has identified the following persons to carry out the district's Integrated Pest Management program:

The Superintendent of Buildings and Grounds is the designated IPM Coordinator. The responsibilities of the IPM Coordinator are as follows:

- Record all pest sightings by school staff, students, or other persons.
- Record all pesticide applications.
- Ensure that all pesticide applications occur when school is not in session; or when the area may be completely secured against access by school staff, students or other persons.
- Evaluate the school's progress in its IPM program on an annual basis.
- Ensure that federal, state and local pesticide laws and regulations are followed:
 - Labeling requirements
 - Worker protection measures
 - Record-keeping
 - Posting requirements
 - Notification requirements
 - Applicator licensing
 - Hazardous material storage requirements
- Identify suitable IPM methods.
- Acquire accurate identification of pests.
- Oversee pest management contractors or maintenance staff engaged in monitoring and

management of pests.

- Review pesticide use proposals.
- Review and monitor work orders for structural improvements or repairs, and housekeeping and sanitation measures that may be required to reduce or prevent reoccurrence of pest problems.
- Coordinate with other staff to gather and disseminate current information on pest management and pesticide or pest-related health and safety issues.
- Coordinate with Building Principals and District Administration to carry out education and training provisions of the IPM Policy.

The Superintendent of Buildings and Grounds may authorize or deny pesticide use proposals forwarded by operations and maintenance staff. The Superintendent of Buildings and Grounds responds to parental, staff or neighbor complaints regarding pest management policies or procedures. Complaint responses will be done in writing and will describe any follow-up actions deemed necessary to resolve the complaint.

The Building Principals must ensure that all known pest sightings are promptly reported to the Supervisor of Operations and Maintenance or Head Custodian.

The Superintendent of Buildings and Grounds works collaboratively with the operations and maintenance staff to ensure that pest prevention and control measures are implemented within the guidelines of the district's IPM policy. If pesticides are used, the Superintendent of Buildings and Grounds must ensure that all posting and notification provisions are completed.

The Operations and Maintenance Staff are responsible for monitoring and managing pest problems and must report any pest sightings to the Superintendent of Buildings and Grounds. The operations and maintenance staff will perform IPM methods under the supervision of the Superintendent of Buildings and Grounds.

Classroom teachers will incorporate IPM information into curriculum and class projects as well as involve students in the implementation of the school's IPM program.

Students and Staff – The Occupants

Occupants are concerned about the safety of the pest control methods used, about their effectiveness, and about possible adverse health effects. School staff, students and their parents will receive information addressing these concerns and their roles in the school's pest management system. The two most important responsibilities of the students and staff are sanitation and communication. Much of the prevention and reduction of pest infestation at the school site depends on whether or not students and staff clean up food leftovers, food in lockers, gum under desks, paper clutter, etc. In addition, because people at the school site may observe the presence of pests, they should report any evidence of pest activity to their Building Principal or Head Custodian. Other actions may be required of students and staff, or undertaken by them, depending on their interest in the site and the pest management system. The more occupants who "buy in" to this, the better the pest management system will work.

Parents' Special Roles

Parents have the primary responsibility for their children, and they are their children's natural advocates. Parents can greatly assist in the maintenance of an IPM program. Parents' first school pest management responsibility is to learn about IPM practices and follow them at home so that pests are not carried to school in notebooks, lunch boxes, clothing, or in children's hair.

Second, parents should be aware of the current pest management practices in their children's schools. The school will welcome questions by the parents and encourage parents to seek information. Visible interest and concern on the parents' part is a valuable resource and stimulus for the implementation of a school IPM program. Parents may express their views to the Superintendent of Schools, Board of Education, Building Principals, Business Official, Superintendent of Buildings and Grounds, and the school Parent Teacher Organizations.

Applying IPM Strategies

Pest prevention measures can be incorporated into existing structures. Such preventative measures reduce the need for pesticide applications and include sanitation and structural repair, employing physical and mechanical controls. An effective school IPM program establishes procedures that consider the pest control implications of planned new construction or renovation. Design changes, which include pest-resistant structural materials, fixtures and furnishings, can sometimes eliminate pests.

An effective school IPM program must recognize that IPM is a collaborative effort involving the school administration, teachers, students, parents, operations and maintenance staff, other building occupants and pest management operators. Information gathering, communication and coordination of responsibilities are crucial to the success of the IPM program. It is important to note that every school building will experience slightly different combinations of pests. Specific IPM strategies for designated school sites are provided below.

IPM Strategies for Indoor Sites

Typical pests: Mice, rats, cockroaches, ants, flies, wasps, hornets, yellow jackets, spiders, microorganisms, stinging insects, termites and other wood-destroying insects. Although beneficial as predators, wasps, hornets, yellow jackets and spiders can pose public health emergencies and be a disturbance to building occupants.

Entryways

(Doorways, overhead, overhead doors, windows, holes in exterior walls, openings around pipes, electrical fixtures, or ducts)

- Keep doors shut when not in use.
- Place weather stripping on the base of doors providing no greater than ¼ inch of space from the floor.
- Caulk and seal openings in walls.
- Keep vegetation, shrubs, and wood mulch at least one-foot away from structures.

Classrooms and Offices

(Classrooms, laboratories, administrative offices, auditoriums, gymnasiums, and hallways)

- Allow food and beverages only in designated areas.
- If indoor plants are present, keep them healthy. When small insect infestations appear, remove them manually.
- Keep areas as dry as possible by removing standing water and water damaged or wet materials.
- Store animal foods in tightly sealed containers and regularly clean cages. In all areas, remove dust and debris.
- Routinely clean lockers and desks.

- Frequently vacuum carpeted areas.

Food Preparation, Servicing and Storage Areas

(Dining room, main kitchen, teachers' lounge, home economics kitchen, snack/vending areas, food storage rooms)

- Store food and waste in containers that are inaccessible to pests. Containers must have tight lids and be made of plastic or metal. Waste should be removed at the end of each day.
- Place screens on vents and floor drains to prevent cockroaches and other pests from using unscreened ducts or vents as pathways.
- Eliminate pest harborage areas and create inhospitable living conditions for pests by reducing availability of food and water. Remove food debris, sweep up all crumbs, fix dripping faucets and leaks, and dry out wet areas.
- Improve cleaning practices including promptly cleaning food preparation equipment after use and removing grease accumulation from vents, ovens and stoves. Use caulk or paint to seal cracks and crevices.
- Capture rodents by using mechanical or glue traps. (Note: Place traps in areas inaccessible to children. Mechanical traps, including glue boards used in rodent control must be checked daily. Dispose of killed or trapped rodents within 24 hours).

Rooms and Areas with Extensive Plumbing

- Promptly repair leaks and correct other plumbing problems to deny pests access to water.
- Routinely clean floor drains, strainers and grates. Seal pipe chases.
- Keep areas dry. Avoid conditions that allow formation of condensation. Areas that never dry out are conducive to molds and fungi. Increasing ventilation may be necessary.
- Store paper products or cardboard boxes away from moist areas in direct contact with the floor or walls. This practice also allows for ease of inspection.

Maintenance Areas

- After use, promptly clean mops and mop buckets, dry out mop buckets and hang mops vertically on a rack above the floor drain.
- Allow eating only in designated areas.
- Clean trashcans regularly, use plastic liners in trashcans.
- Keep areas as clean and dry as possible and remove debris promptly.

IPM Strategies for Outdoor Sites

Typical pests: Mice and rats. Turf pests: Insects such as beetle grubs or sod web worms, diseases such as brown patch and vertebrates such as moles. Ornamental plant pests, plant diseases and insects such as thrips, aphids, Japanese beetle and bagworms.

Playgrounds, Parking Lots, Athletic Fields, Loading Docks and Refuse Dumpsters

- Regularly clean trash containers and gutters and remove all waste, especially food and paper debris.

- Provide adequate drainage away from the structure and on the grounds.
- Secure lids on trash containers.
- Repair cracks in pavement and sidewalks.

Turf

(Lawns, athletic fields, and playgrounds)

- Maintain healthy turf by selecting a mixture of turf types (certified seed, sod or plugs) best adapted for the area.
- Raise mowing height for turf to enhance its competition with weeds; adjusting cutting height of mower, depending on the grass type; sharpen mower blades and vary mowing patterns to help reduce soil compaction.
- Water turf infrequently, but sufficiently during early morning hours to let turf dry out before nightfall; let soil dry slightly between watering.
- Provide good drainage and periodically scout turf (use a mulching mower or mow often) or compost with other organic material.
- Time fertilizer application appropriately because excessive fertilizer can cause additional problems, including weed and disease outbreaks. Apply lime if necessary. Use aeration to place soil on top of thatch so that microbes from soil can decompose thatch.
- Seed over existing turf in fall or early spring.

Ornamental Shrubs and Trees

- Apply organic fertilizer and nutrients to annuals and perennials during active growth and to shrubs and trees during dormant season or early in the growing season.
- When using fertilizer, use the correct one at the suitable time, water properly and reduce compaction.
- Prune branches to improve plants and prevent access by pests to structures.
- Use the appropriate pest-resistant native variety and properly prune for growth and structure.
- Correctly identify the pest in question. When in doubt send several specimens to your local Cooperation Extension Service for identification. Once the pest is identified, recommendations can be made.
- Select replacement plant material from the many disease-resistant types being developed by plant breeders throughout the country.
- Remove susceptible plants if a plant disease recurs and requires too many resources, such as time, energy, personnel and money. Some ornamental plants, trees and turf are so susceptible to plant diseases that efforts to keep them healthy may be futile.

Applying Pesticides Judiciously

Many different types of pesticides are currently available for use against exterior and structural pests. An appropriate application uses the least toxic and most effective and efficient technique and material. Due to their potentially toxic nature, these materials must be applied by a New York State Certified Applicator in a manner that ensures maximum efficiency, with minimum hazard. Pesticides will be applied only when occupants are not present in areas where they may be exposed to materials applied. Although the EPA registers pesticides for use within the United States, the fact that a particular product is registered does not mean that it is “safe”

under all conditions of use. All pesticides used in the U.S. must be EPA registered and the registration number must be listed on the label. Read and follow the pesticide label directions, know how to apply and handle these chemicals, and try to minimize the exposure to children, adults and other non-target species. The following general recommendations should minimize exposure to people and other non-target species when the application of pesticides is being considered:

- Read and follow all label instructions.
- Routinely scheduled pesticide applications should be avoided whenever possible, unless such application may reasonably be expected to result in an overall reduction in pesticide use when compared with all other practical alternatives.
- Choose a pesticide that is labeled for the specific site, intended for the pest you are trying to control and as target specific as possible, rather than a broad spectrum.
- Use a spot-treated method of application when pesticide treatments are required. Treat only the obviously infested plants in an area. This procedure helps conserve predators and parasites needed to reduce future pest populations and increase the time between pest outbreaks.
- Limit the use of sprays, foggers or volatile formulations. Instead use bait and crack and crevice application when possible. Look for crack and crevice label instructions on how to apply the pesticide. These treatments maximize the exposure of the pest to the pesticide while minimizing pesticide exposure for the occupants.
- Place all pesticides either in locations not accessible to children and non-target species, or in tamper-resistant bait boxes. Outdoors, place bait inside the entrance of an active rodent burrow and then collapse the burrow entrance over the bait to prevent non-target species access. Securely lock or fasten shut the lids of all bait boxes. Place bait in the baffle protected feeding chamber of the box. Never place bait in the runway of the box.
- Apply only when occupants are not present or in areas where they will not be exposed to the material applied. Note any re-entry time limits listed on the label and be aware that some residues can remain long after application.
- Use proper protective clothing or equipment when applying pesticides.
- Properly ventilate areas after pesticide application.
- Notify students, staff and parents of upcoming pesticide application as part of the school pest management policy. Pay particular attention to those individuals that may be at high risk.
- Keep copies of current pesticide labels, consumer information sheets and Material Safety Data Sheets (MSDS) easily accessible.

IPM Training

Any persons applying pesticides on school grounds must be trained and knowledgeable in the principles and practices of Integrated Pest Management. The appropriate staff will be provided regular IPM and hazardous substance training opportunities.

Any district staff or outside contractors who apply pesticides will hold the appropriate certification and training. Pesticide applications may only be performed by individuals currently certified by the DEC as pesticide applicators or by a certified pesticide technician or an apprentice working under the direct on-site supervision of a certified applicator.

Integrated Pest Management Administrative Procedure

The Board of Education recognizes that there is no greater concern than the safety of students, staff, and residents who utilize the facilities and grounds of the Hudson City School District. To

this end, the Board of Education authorizes the limited and prudent use of pesticides and insecticides only when necessary to ensure environmentally safe buildings and grounds.

The following steps are examples of practices that will be followed to reduce exposure to chemicals:

- Observation traps shall be regularly used in problem areas to monitor the situation.
- Elimination of routine spraying/fogging.
- Selection of non-chemical alternatives or the least toxic chemicals for application.
- The use of New York State Certified contractors.
- Elimination of fogging and spraying for head lice.
- Implementation of engineering controls to prevent pests from entering the buildings.
- Removal of all spray pesticides/insecticides from the buildings.

Pesticide Applications not Subject to Prior Notification Requirements

- The application of anti-microbial pesticides and anti-microbial products.
- The use of an aerosol product with a directed spray, in containers of eighteen (18) fluid ounces, or less, when used to protect individuals for an imminent threat from stinging and biting insects, including venomous spiders, bees, wasps and hornets. This section shall not be exempt from notification of the use of any fogger product or aerosol product that discharges to a wide area.
- Any application where the school facilities remain unoccupied for a continuous seventy-two (72) hour period following the application of the pesticide.
- Non-volatile rodenticides in tamper resistant bait stations or in areas inaccessible to children.
- Silica gels and other non-volatile ready-to-use paste, foam or gel formations of insecticides in areas inaccessible to children.
- Non-volatile insecticidal baits in tamper resistant bait stations or in areas inaccessible to children.
- Application of a pesticide classified by the United States Environmental Protection Agency as an exempt material under Section 40 CFR Part 152.25.
- Boric acid and disodium octaborate tetrahydrate.
- The application of a pesticide that the United States Environmental Protection Agency has determined satisfies the EPA reduced risk criteria, including a biopesticide.
- Any emergency application of a pesticide, when necessary, to protect against an imminent threat to human health, provided however, that prior to any such emergency application, the person making the application shall make a good faith effort to supply the written notice required pursuant to this section. Upon making such an emergency application, the persons making the application shall notify the Commissioner of the Department of Health, using a form developed by the Commissioner for such purposes that shall include minimally, the name of the person making the application, the pesticide business registration number or certified applicator number of the person making the application, the location and date of the application, the product name and USEPA registration number of the pesticide applied, and the reason for the application. The Commissioner shall review the form to ensure that the circumstance did warrant an emergency application. The forms shall be kept on file at the NYS Department of Health for three years from the date of application and shall be available to any individual upon request.