

Integrated Pest Management Plan

FUNCTIONAL POLICY STATEMENT

Anne Arundel County Public Schools (AACPS) is committed to providing schools with pest-free environments through the implementation of preventive hygiene methods and chemical strategies when necessary. **Beginning in 1989** AACPS shifted from chemical spraying to control pests and adopted a pest prevention program known as the **Integrated Pest Management** (IPM). This method emphasizes the use of non-chemical prevention techniques, spraying only when urgently required. Its foundation is an inspection program designed to find and remove the sources of pest food and water. Non-chemical traps are used to determine the presence of pests, their population, and species. When the population is determined to be excessive, their habitat or means of entrance is sought in order to seal it. By denying a source of food and entrance, pests are controlled. If these actions do not work and the infestation persists, applications of non-toxic (boric acid) or least toxic chemicals are made.

IPM has produced the following benefits:

- Increased cleanliness of facilities.
- Reduction of possible adverse effect on sensitized school occupants.
- Emphasis on prevention instead of correction.
- Less reliance on outside vendor/contractor services for chemical pest control.

INTEGRATED PEST MANAGEMENT GOAL

To provide a safe and healthy learning and working environment which is conducive to effective staff productivity and student learning by managing pests and their environments so as to balance costs and benefits with human health and environmental quality.

OBJECTIVE

Pests and pesticides can pose significant problems and risks to people, property, and the environment. The objective of *AACPS* is to incorporate *Integrated Pest Management (IPM)* procedures for control of **structural and landscape** pests. These practices will: minimize the amount and toxicity of pesticides used in the schools, eliminate unnecessary pesticide spraying, provide education to school based staff, improve sanitation, utilize licensed pesticide applicators when necessary and **provide universal notification** to all parents, guardians and staff in both **elementary** and **secondary schools**, whenever a chemical pesticide application is scheduled.

RULES AND REGULATIONS

When it is determined that a pesticide must be used in order to meet important management goals, the least hazardous material adequate to control the pest will be chosen and label directions shall be

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followed. The application of pesticides is subject to the following Federal, State and Local rules and provisions: the Federal Insecticide, Fungicide, and Rodenticide Act, the Environmental Protection Agency, the Occupational Safety and Health Administration, the Superfund Amendments and Reauthorization Act, the Resources Conservation and Recovery Act, the Hazardous Materials Transportation Uniform Safety Act, the Endangered Species Act, and State of Maryland COMAR regulations, Anne Arundel County regulations and AACPS school district policies and procedures.

DEFINITIONS

Action Threshold Level means the level of pest populations at which pest control action will be taken to prevent pests in an area from causing unacceptable injury or harm and may be based on aesthetic, health or economic considerations.

Contact Person means an individual knowledgeable about Integrated Pest Management and designated by the county board to carry out all rules, regulations and policies

Emergency means the sudden need to mitigate or eliminate a pest that threatens the health or safety of a student or staff member.

Integrated Pest Management (IPM) is the decision making process and managed pest control program in which methods are integrated and used to keep pests from causing economic, health related, or aesthetic injury through the utilization of site or pest inspections, pest population monitoring, evaluating the need for control, and the use of one or more pest control methods including sanitation, structural repair, non-chemical methods and when nontoxic options are unreasonable or have been exhausted, pesticides in order to: minimize the use of pesticides and minimize the risk to human health and the environment associated with pesticide applications.

Integrated Pest Management Program Manager means the individual who oversees the day - to- day operation of the Integrated Pest Management Program. Duties include; responding to complaints, scheduling site visits, maintaining records, educating staff, maintaining equipment, identifying pests, setting pest thresholds contracting licensed pesticide applicators, and supervising junior level IPM technicians.

Pests are populations of living organisms (animals, plants, or microorganisms) that interfere with use of the school site for human purposes. Strategies for managing pest populations will be influenced by the pest species and whether that species poses a threat to people, property, or the environment.

Pesticides are chemicals used to control pests and include insecticides, herbicides, rotenticides and fungicides.

Universal Notification means the written notification to all staff, parents and guardians

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of an upcoming pesticide application.

ROLES AND RESPONSIBILITIES

- The Integrated Pest Management Program will require the assistance and cooperation of the administration, staff and students. AACPS has appointed the **Environmental Issues Program Manager as the Contact Person- (Appendix A)-** to serve as a liaison between the administration and pest control program in order to provide oversight, consistency in the pest control program and ensure the provisions of the IPM system are fulfilled. The Contact Person will advise the administration, staff, parents and guardians and staff as necessary of IPM program changes and new laws and regulations affecting the IPM program.
- The **Contact Person** will discuss the IPM system and problem areas identified through the inspection and monitoring process. The Contact Person also serves as the liaison between school administration and parents, guardians, students and staff to address questions and concerns regarding the IPM system and pest control practices. The Contact Person will make recommendations to correct problem areas.
- **Students and staff** will cooperate with the provisions of the IPM system by ensuring that areas requiring maintenance or repair, sanitation problems and pest problems or sightings are documented. Students and staff need to ensure good sanitation practices are followed.
- **The Integrated Pest Management Program Manager** oversees the day - to - day operation of the Integrated Pest Management Program. Duties include; responding to complaints, scheduling site visits, maintaining records, educating staff, maintaining equipment, identifying pests, setting pest thresholds, contracting licensed pesticide applicators, and supervising junior level IPM technicians

INTEGRATED PEST MANAGEMENT PROCEDURES

IPM procedures will determine when to control pests, and identify conditions contributing to pest problems through the use of monitoring and thorough inspections conducted at regular intervals. Problem areas will be identified where alternative pest control technologies can be incorporated in order to eliminate routine pesticide applications. The necessity for pest control, if warranted, will be evaluated based on information obtained from inspections and monitoring. Actions will be based on action threshold levels that are established based on the site and pest. When pest control procedures are warranted the utilization of one or more pest control methods including sanitation, structural repair, nonchemical methods and pesticides will be used.

IPM practitioners shall depend on current, comprehensive information on the pest and its environment and the best available pest control methods. By applying IPM principles, unacceptable levels of pest activity and damage will be prevented by the most economical

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means while minimizing the risk to human health and the environment associated with pesticide applications.

The choice of using pesticides will be based on a review of all other available options and a determination that these options are unreasonable or have been exhausted, in order to minimize the use of pesticides.

When it is determined that a pesticide must be used in order to meet vital pest management goals, the least hazardous pesticide will be selected. The application of such pesticides are subject to the AACPS's policies and procedures and all applicable state, federal and local regulations including the Maryland Pesticide Applicators Law and Regulations, and the Federal Insecticide, Fungicide, and Rodenticide Act.

AACPS INTEGRATED PEST MANAGEMENT STRATEGIES

IPM strategies will be used to determine when to control pests and whether to use mechanical, physical, chemical, or biological means. IPM practitioners depend on current, comprehensive information on the pest and its environment and the best available pest control methods. Applying IPM principles prevents unacceptable levels of pest activity and damage to occur by combining the most economical means of control with the least possible hazard to people, property, and the environment.

The decision to use a pesticide will be based on a review of all other available options and a determination that these options are not acceptable or are not feasible. Cost or staffing considerations alone will not be adequate justification for use of chemical control agents, and select non-chemical pest management methods will be implemented whenever possible to provide the desired control. It is the practice of AACPS to utilize IPM principles to manage pest populations adequately. The full range of alternatives, including no action, will be considered.

INTEGRATED PEST MANAGEMENT STRATEGIES INCLUDE:

- Inspection / Monitoring
- Sanitation / Structural repairs
- Pest control without pesticides, i.e. vacuuming, overseeding
- Pest Control with pesticides
- Record Keeping/ MSDS
- Notification
- Education / Communication
- Annual Program Evaluation / Quality Assurance

AACPS IPM NOTIFICATION PROCEDURES AND PROGRAM PRACTICES

INSPECTION AND MONITORING

- IPM personnel shall perform monthly inspections of all school kitchens, including store rooms and garbage can wash rooms. Zone monitors shall be placed monthly and a written inspection is presented to the kitchen staff. Additionally, home economic areas shall be inspected in secondary schools.

EDUCATION

- Staff, students, pest managers, and the public shall be educated about potential school pest problems and the IPM policies and procedures to be used to achieve the desired pest management objectives and will be informed of their role in meeting these objectives.
- IPM staff shall be trained and attend continued education courses relating to potential school pest problems and IPM practices and procedures to be used to achieve the desired pest management objectives.
- The Integrated Pest Management Manager shall develop training materials and educate Food and Nutrition Services Personnel and Custodial staff on pest prevention techniques, including sanitation, source control and maintaining good structural repair -(**Appendix D**).

RECORD KEEPING

- Records of pesticide use shall be maintained on site to meet the requirements of the state regulatory agency and AACPS. In addition, pest surveillance data sheets that records the number of pests or other indicators of pest populations shall be maintained to verify the need for treatments. Records of pesticide use shall be provided to the school by the licensee, permittee or certified applicator at the time of the pesticide application and shall be maintained for 2 years. Records must be current and accurate. The Contact Person shall maintain documentation of all communications to parents, guardians, students and staff regarding IPM and pesticide use.

MATERIAL SAFETY DATA SHEETS (MSDS) AND LABELS

The Environmental Issues Program Manager shall maintain the Material Safety Data Sheets (MSDS) and labels for the chemical(s) being applied. Questions about or requests for copies of these documents may be obtained by calling 410-360-0138. The MSDS shall be used in the notification letter to describe the potential health effects of a pesticide (**Appendix C**).

NOTIFICATIONS

AACPS shall provide the following notifications as appropriate and include specific information as required by Maryland Law.

BEGINNING OF THE SCHOOL YEAR & NEW STAFF/STUDENT NOTIFICATIONS

At the beginning of each school year, AACPS will issue a notice in the *Home School Connection* that provides specific details about; the Integrated Pest Management Policy and Program, specific chemicals that may be used in or on school property during the school year, the name and phone number of the Contact Person and information regarding material safety data sheets and labels, written universal notification and school specific pesticide application notification lists. **Each new staff or student** shall be provided a copy of the Home School Connection -(Appendix B).

UNIVERSAL NOTIFICATION

AACPS shall practice universal notification in all elementary and secondary schools. AACPS shall notify all school staff, students, parents and guardians prior to pesticide applications made in school buildings or on school grounds in accordance with Maryland regulations. Notices shall be posted in designated areas at school and sent home to parents and guardians of elementary and secondary school students and individuals who wish to be informed in advance of pesticide applications and who are on the pesticide notification list.

The Environmental Issues Program Manager is responsible for notifying the school administration of an upcoming pesticide application. The Environmental Issues Program Manager provides the applicable school(s) principal(s) with:

1. a **memorandum** which explains the need for the notification, and
2. a **notification letter** addressed to all staff, parents and guardians. Staff letters will be placed in staff mailboxes and parents/guardian letters shall be sent home via the student. It is the responsibility of the individual school to photocopy the notification letter and distribute the written copies of the forthcoming pesticide application to all school-based staff and all parents and guardians via the students at least **twenty-four (24) hours** in advance of the application -(Appendix E).

PESTICIDE NOTIFICATION LIST

Maryland law allows parents and guardians of children and staff in middle and high schools the opportunity to be placed on a **separate, pesticide application notification list and to be individually notified of an upcoming pesticide application.**

The student's Emergency Information Card will be used to transmit this request to the school. The school-based health staff shall record and maintain these lists and conduct the individual notification.

SPACE SPRAYING NOTIFICATION

In the event a space spraying is necessary to eradicate pests located within a building, written universal notification shall be given at least **one week** in advance.

EMERGENCY APPLICATIONS NOTIFICATION

In the event an emergency pesticide application is necessary, for example; infestation of bees, wasps, biting spiders, etc., written notifications will be issued within **twenty-four (24) hours after** the application or the next school day.

BAIT STATION NOTIFICATION

In the event a bait station is used in the school, a sign shall be **posted** on the door of the room in which a bait station is placed **-(Appendix F)**.

PESTICIDE PURCHASE, STORAGE AND DISPOSAL

Pesticide purchases shall be limited to the amount authorized for use during the year. Pesticides shall be stored and disposed of in accordance with the EPA-registered label directions and state regulations. Pesticides must not be accessible to students or unauthorized personnel. Pesticides shall be stored in locked and posted storage closets or trailers at the Maintenance and Operations Divisions' headquarters building. Disposal of unwanted or unnecessary pesticides is contracted with a hazardous waste removal contractor and disposed of according to federal, state and local regulations

PESTICIDE APPLICATIONS

AACPS' policy states that pesticides may be used after it is determined that non-toxic options are unreasonable or have been exhausted. The **least hazardous pesticide** shall be selected and the method and time of application will be based on the goal to minimize the potential for exposure of students and staff to the pesticide. Pesticide applications made in or on school property will be conducted by an individual certified as a pest control applicator or by a registered employee working under the supervision of a certified applicator. Applicators will be trained in the principles and practices of IPM and the use of pesticides. They will follow state and federal pesticide regulations and label precautions and comply with AACPS IPM Plan.

Pesticide applications conducted inside the school shall be scheduled when classrooms are vacant, after hours and if possible on weekends. Whenever possible, pesticide applications made on school grounds shall be applied as weather and wind conditions (<5-10 mph) permit, after hours or on weekends and after reviewing field use schedules.

LICENSED PESTICIDE APPLICATORS

Only State of Maryland licensed pesticide applicators with a working knowledge of the principles and practices of IPM, and who use only pesticides approved by AACPS shall be utilized. Contractors must follow regulations and label precautions. Applicators must comply with AACPS' IPM Plan including having Material Safety Data Sheets, labels, posting of areas to be treated and adhering to the notification timeframes - (Appendix A).

PEST MANAGEMENT PLANS

Pest management plans shall be developed and approved by the Integrated Pest Manager / Specialist for the site and shall include any purposed pest management measures.

PROGRAM EVALUATION

The Contact Person and the Integrated Pest Management Manager shall determine the effectiveness of the IPM Plan by conducting an **annual review** of the IPM system and its program objectives. This shall include: the review of inspection reports, sanitation reports, and other records to establish current conditions; the progress of the program against pest problems and conditions; updating chemical lists; reviewing the effectiveness of action thresholds, and identifying problem areas in the IPM Plan that may need to be modified or changed. This report shall be submitted to the Associate Superintendent for Facilities Management during the summer school break each year.

OVERVIEW OF GROUNDS'/ ATHLETIC GROUNDS DEPARTMENTS'

INTEGRATED PEST MANAGEMENT NOTIFICATION PROCEDURES AND PROGRAM PRACTICES

NOTIFICATION PROCEDURES

Outdoor pesticide application notifications will be provided according to the notification procedures detailed within this document.

INTEGRATED PEST MANAGEMENT PRACTICES

The Maryland Department of Agriculture is required to develop and release its uniform standards and criteria for implementing integrated pest management practices school grounds by March 15, 2001. Until that time, AACPS will practice the following procedures.

Whenever necessary, AACPS' Grounds and Athletic Grounds Departments rely almost exclusively on herbicides for controlling unwanted vegetation and lesser amounts of insecticides for heavy pest infestations on ornamental and turf areas such as athletic fields.

Recommended pesticides will not harm the environment or humans if applied according to directions, and if proper precautions are taken. Because these chemicals are being applied in a public school environment, pesticides with the least possible toxicity are used. **All** pesticides used in the AACPS Grounds/Athletic Grounds programs are in the "**General Use**" category, however, even relatively safe pesticides can cause serious damage and personal injury if not properly handled, mixed, and applied. For this reason, training sessions are conducted by a certified pesticide applicator to ensure that all employees who work with pesticides are competent in handling, applying, and first aid and safety techniques. Employees satisfactorily completing the training course are registered with the Department of Agriculture for Public Agency Pesticide Application for AACPS in the areas of turf, ornamental plant, industrial weed, and right of way pesticide application.

Currently, our pesticide program concentrates on spraying unwanted vegetative growth on sidewalks, fence lines, and along curbs and gutters at 120 locations, and controlling weeds and insects at 12 high school stadium fields.

As a public agency, AACPS has a responsibility to the public to apply chemicals as infrequently as is necessary to safeguard those who use athletic fields in community events and for children who are in school setting for much longer periods. The use of "General Use" pesticides on public grounds greatly reduces risk to the applicator and the property user, but even these can result in injury and property damage if handled with total disregard for the potential of injury.

A major concern is protection from direct contact with pesticides mists, vapors, dusts during measuring, mixing and application. Wearing protective clothing is required. Application of

pesticides must be in a manner that minimizes drift of pesticide spray into sensitive areas such as playgrounds, non-target ornamental plantings, wildlife, and fish habitats.

Integrated Pest Management (IPM) is becoming a reality throughout the industry because of public scrutiny and perception that pesticides are dangerous to the environment and humans. IPM definitely has an overall benefit in our program.

Cultural practices that provide a dense, vigorous, competitive turf is the best protection of weeds and insects; however, chemical application will still be utilized as needed in our maintenance program to provide optimum growth and playing conditions for our programs. Once the pest complex has been defined, the probable amount of damage predicted, and the tolerable level of damage determined, all control strategies are considered.

Cultural Control

The most effective long-term solution to minimizing weed pest population and fungus Disease outbreaks is through proper establishment and maintenance of turf areas. Maintaining a thick and healthy turf minimizes weed seed germination, growth, and survival. The most common infectious agents to grasses include bacteria, virus, and fungi with the latter being the leading cause of disease outbreaks.

Cultural Control Methods Include:

- **Selecting** turfgrass species that are well adapted to Maryland climate and disease resistance.
- Using certified seed inspected by the Maryland Department of Agriculture.
- **Taking** soil tests regularly and correct soil acidity problems and deficiencies.
- **Applying** recommended amounts of nitrogen at the proper time. Both low and high or improper fertilization application rates make turfgrass more susceptible to pests and diseases.
- **Mowing** at recommended heights and frequencies. Use sharp blades that do not tear grass blades and leave injured blades open to infection. Never remove more than one-third of the leaf blade.
- **Irrigating** thoroughly to encourage deep rooting during the morning hours. Good drainage and infiltration must be maintained since excessive moisture in the soil will decrease air circulation to the roots and lead to rotting.
- **Thatching** to remove the dead and decaying grass at the soil level at the base of the grass. Thatch is composed of clippings from mowing and natural mortality of the grass. Excessive amounts can harbor insect and disease pests. Air circulation and water infiltration to the roots is reduced and thinning turf density results. Pesticide effectiveness may be reduced due to the barrier effect and the active ingredient not being able to reach the target area to control the pest.
- **Overseeding** the worn, thinning areas of turf on a regular basis to minimize time soil is exposed to allow weed seed germination.
- **Sanitizing** by removing food and shelter from the pest and making the site inaccessible is

important in the control of some pests.

Biological Control Methods

Pests have natural enemies, known as parasites and predators that keep the population constant in the wild. Introducing the natural enemies or increasing its population can result in control of the pest. Japanese Beetle grubs are controlled in the soil by applications of the bacteria *Bacillus popilliae*. The bacteria are watered into the soil and infect the grubs, which die. *Bacillus thuringiensis* is used in various products for biological control of mosquitoes and caterpillars while the protozoan *Nosema locustae* is a specific control of grasshoppers. These biological controls attack only the pest organism and do not harm beneficial insects such as bees.

Chemical Control Methods

Pesticides must be used in situations where other tactics are ineffective. When pesticides are needed, AACPS will choose those that are least disruptive to the pests natural enemies.

SUMMARY

AACPS INTEGRATED PEST MANAGEMENT PLAN, NOTIFICATION PROCEDURES AND, PROGRAM PRACTICES

Since 1989 AACPS has utilized the IPM method of pest control. This method reduces our historical dependence on chemical pest control treatments. It relies on traps, surveys, education and elevated school cleanliness standards to manage pest populations. Pesticides are used only when all else fails. Even then, the least toxic chemical is applied. Pests will be managed to:

- Reduce any potential human health hazard or to protect against a significant threat to public safety.
- Prevent loss or damage to school structures or property.
- Prevent pests from spreading into the community, or to plant and animal populations beyond the site.
- Enhance the quality of life to students, staff, and others.
- Provide universal notification to all staff, parents, guardians and students whenever a chemical pesticide application is necessary.
- Maintain Notification Lists in secondary schools.
- Maintain records, MSDS and Labels.
- Use IPM strategies to control both indoor and outdoor pest.
- All pesticide applications conducted inside school buildings are scheduled for after school hours or when students are not present in the classroom.
- Requests by a school for special (non-emergency) problems can be called into Operations and receive a work order number. Upon receipt, IPM personnel will coordinate a time for inspection will contact the school.
- Emergency situations, i.e., bees, wasps, bats, snakes, black widow spiders should be immediately call into the Operations office at (410) 360-0138. IPM personnel will respond the same day.
- Termite and certain bee/wasp responses will be contracted out to a private contractor. All termite applications will be performed after school hours.
- Except for pesticide emergency application, it is incumbent upon the school administration to:
 - ◆ **Provide** advance notice of application to parents/guardians and staff as specified by the Environmental Issues Program Manager.
 - ◆ **Ensure** necessary administrative measures are taken to reduce risk to those individuals who have been identified as potentially sensitive to pesticides.
 - ◆ **Coordinate** with the Pest Management / Grounds/ Athletic Grounds Managers in the scheduling/notification of pesticides application.

PERSONS TO CONTACT

➤ **Operations:**

Environmental Programs Mgr. @	410 -360-0138
Pest Management Specialist @	410 -360-0138
Area Foreman @	410 - 360-0138
Supervisor @	410 - 360-0138

➤ **Maintenance:**

Grounds Foreman @	410 - 255-2535
Athletic Grounds Foreman @	410 - 255-2535
Supervisor @	410 - 255-2535