



**U.S. Army Environmental Command**

**Pest Management User's Guide**

**INTEGRATED PEST MANAGEMENT (IPM)  
IN  
CHILD DEVELOPMENT CENTERS (CDCs) AND SCHOOLS**

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## CHAPTER 1. INTRODUCTION

**1-1.** The goal of this user's guide is to help you, the installation pest management coordinator (IPMC) or Army Child Development Center (CDC), Child Youth Services, or school administrator to: (1) understand the reasons and goals for programs that limit pesticide exposure risks in your school or preschool institutional environments, and (2) describe how you can establish and operate such programs effectively and with the least administrative effort. Parents and administrators will immediately see the rewards of successful programs of this type - often referred to as "IPM-in-Schools" or "IPM in Child Development Centers" programs. This guide addresses:

- **WHY** an IPM-in-Schools program is important,
- **WHAT** features to address,
- **HOW** to address, and
- **WHO** should address them.

This guide is intended to outline procedures that reduce children's pesticide exposure in CDCs and schools.

**1-2.** More than 30 states have implemented Integrated Pest Management (IPM) strategies for CDCs and/or schools (nurseries and day care centers) to reduce pesticide exposure to children. In addition, there is pending legislations at the Federal level to address this issue. The proposed School Environmental Protection Act (SEPA) is intended to ensure that the safest methods of pest control are used in and around buildings where children spend much of their day in controlled learning or temporary care environments while away from their families or caretakers.

**1-3.** IPM uses and promotes pest management practices which eliminate or reduce property damage and human disease by pest species in ways that minimize risks from pesticides to human health and the environment. IPM has served as the foundation of DoD pest management policies and practices for many years. The DoD Pest Management Program is recognized nationally for its leadership in the promotion of IPM. This commitment was recognized in 2004, 2005, and 2006 by the U.S. Environmental Protection Agency's (USEPA), Pesticide Environmental Stewardship (PESP) "Champion" award to DoD for its successful reduction of pesticide use by more than 50% from levels in the early 1990s.

**1-4.** In recent years many states have passed legislation to reduce pesticide exposure risks for school age and preschool age children. These "IPM in Child Development Centers" "IPM-in-Schools" statutes incorporate methods to lower exposure risks to pesticides. Another goal of these statutes – to reduce childhood injuries from and exposure to pest species such as cockroaches, ants, bees, wasps, birds, animals, and poisonous plants in and around CDC and school buildings and grounds. This legislation also requires the posting of

warning signs for pesticide application sites, establishes registries for children with pesticide exposure sensitivities, and provides notification of parents regarding possible exposure risks to their children from pest management operations in these institutional settings. Although DoD installations are not subject to these state requirements, these DoD IPM-in-CDC and schools initiatives are meant to implement viable programs at our DoD installations. In accordance with DoD Instruction 4150.7, paragraph 5.3.17, DoD components will cooperate with State and local government agencies involved with pest management.

- 1-5.** The IPM-in-CDCs and schools initiative is built upon long-established DoD IPM principles including:
- a. Planning and Professional Oversight. All installation pest management operations are described in planning documents that are reviewed annually by DoD professional pest management consultants who visit installations periodically to review and advise installation pest management personnel about their IPM programs.
  - b. High Training Standards. Only individuals who meet DoD standards for certification as pesticide applicators are allowed to apply pesticides at our installations and facilities. DoD training and certification standards, which include a 1-year apprenticeship period and 3 weeks of resident classroom training, are among the most comprehensive in the nation.
  - c. Recordkeeping and Reporting. DoD installations keep permanent records for all pest management operations, including both pest surveillance and pesticide applications, when necessary. Annually, installations summarize and forward records of pesticide use to their pest management consultants for evaluation and trend analysis.
  - d. Pesticide-Lite Application Strategies. For CDCs and schools, IPM policy requires certified applicators apply least toxic pesticides only when necessary and by methods and at times when children are not directly exposed.

**1-6. Definitions**

- a. Bait - a pesticide formulation containing an ingredient that serves as a feeding stimulant, odor, pheromone, or other attractant for a target pest.
- b. Child Development Center (CDC) - includes any Army-sponsored CDC building and any areas outside of a CDC building, including lawns, playgrounds, sports fields, and any other property or facilities that are controlled, managed, or owned by the CDC for the purpose of temporary care for children (6 weeks to 5 years of age).

- c. Emergency pest management situation – a situation requiring an urgent need to mitigate or eliminate a pest that threatens human health or safety.
- d. Fenced Area – an area completely enclosed by a fence, wall, or other natural or artificial barrier preventing unauthorized entry.
- e. Pesticide – any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests and is specifically labeled for use by the USEPA.
- f. Pesticide Applicator – any individual who applies pesticides or supervises the use of pesticides by others, and who has been authorized to do so by successfully completing a training program approved by the USEPA and formal certification by DoD or a state, or for OCONUS by the Installation Management Agency Region certifying official.
- g. Pesticide Registry – a listing, maintained at the CDC or school, of parents or guardians who desire to be notified in advance of pesticide applications at the CDC or school.
- h. Point of Entry – a location designed or generally used for entry onto the property by pedestrians or motor vehicles.
- i. Posting – the placement of signs in conspicuous places at CDCs and schools to notify the public of pending pesticide applications or current applications.
- j. Registration – a method to document those parents or guardians who request to be notified in advance of a pesticide application at a CDC or school.
- k. School – any school building and areas outside of a school building including lawns, playgrounds, sports fields, and any other properties or facilities controlled, managed, or owned by the school or DoD school system.

## **CHAPTER 2. RISK TO PRE-SCHOOL AND SCHOOL-AGED CHILDREN FROM PESTS AND PESTICIDE EXPOSURE**

- 2-1.** Pests can adversely affect adults, but the same exposure of pests on children may have greater consequences. Physiologically children are more susceptible to diseases and illnesses attributed to certain insects than are adults. In addition, children's immune systems may not provide the same level of protection against pests, pests' body parts, and the diseases that they may carry.
- 2-2.** The following list illustrates common adverse effects pests may have on children.
- a. Hairs, cast skins, and other body parts of insects such as grain beetles and moths can cause asthma or produce allergic reactions.
  - b. Because of the greater dose per body weight of toxins from bee and wasps stings, children may experience greater adverse effects than adults do.
  - c. Urticating and toxic plants such as poison ivy and poison oak can cause skin reactions.
  - d. Cockroaches and flies can mechanically spread bacteria that cause human illness. Children may also be exposed to pathogens from rodent saliva and excrement.
  - e. Black widow, brown recluse, and aggressive house spiders produce bites that may result in inflammation and/or necrosis of the skin.
- 2-3.** Children breathe more air per pound of body weight than do adults. Also, they are more likely than adults to put toys and their hands into their mouths. Both of these factors may increase children's exposure to chemicals in their environment. Children's susceptibility to pesticide poisoning is increased due to the early developmental stages of their organs, nervous systems, and immune systems, as well as greater rates of cell division and their lower body weight. Their developing organs and other biological systems are particularly vulnerable to exposure from toxic contaminants. Some pesticides may become more concentrated in the fatty tissues of young children because their fat, as a percentage of total body weight, is lower than adults. Other factors that increase the risk of children's pesticide exposures are:
- a. Children absorb greater concentrations of pesticides per pound of body weight through inhalation, ingestion and contact with their skin.
  - b. Children's play habits put them into direct contact with pesticide treated floors and outdoor grounds. They often put unwashed hands into their mouths or eat food before washing their hands.

- c. Because many pesticides are heavier than air, minute particles that carry the chemical can become suspended in air zones that children breathe. In addition, children have higher respiratory rates than do adults that increase their exposures. Pesticides applied to floors can be resuspended into the air after floor surfaces are disturbed.
  - d. Children may not read, understand, or pay attention to pesticide application warning signs.
  - e. Children are extremely vulnerable to classes of synthetic pesticides that mimic naturally occurring hormones or enzymes.
  - f. Children's developing cells are more easily damaged than adult cells that have completed development.
  - g. Small doses of neurotoxins can drastically impair the learning processes in children.
  - h. Because they are younger, children have a longer life span ahead of them for pesticide-induced health problems to progress.
- 2-4.** Children may be exposed to the greatest pesticide residues in dust and carpets. Although pesticides can contaminate air, soil, food, water and surfaces, studies designed to examine children's exposure to pesticides indicate that the greatest amount and highest concentrations of pesticides are often found in household dust. Carpets act as long-term reservoirs for pesticides that are sprayed indoors. One study assessing pesticide exposures from carpet dust in homes found that the average amount of pesticides found in carpet dust samples exceeded pesticide levels found in air samples collected in the same residences by 30 percent. Children's exposures from carpets may be further exacerbated when carpets are cleaned that allows pesticides to become airborne again and available for inhalation.
- 2-5.** Not all of the residues in dust come from pesticides used indoors. Another study showed that residues of the herbicides could be tracked in from outside areas on shoes. Spray drift can contaminate areas that were not treated such as lawn area and carpets. Researchers estimated that residues of the herbicide 2,4-D can persist in carpet dust for as long as one year.



## CHAPTER 3. IPM PRINCIPLES AND STRATEGIES

**3-1. Guiding IPM Principles.** The information in this chapter was reprinted with permission from the IPM Institute of North America, Inc. These guiding principles form the basis of the Institute's IPM Star Certification program of verified IPM performance. For more information, see <http://www.ipminstitute.org/ipmstar.htm>.

- a. **Knowledge.** Participants understand IPM principles and practices. They can identify important pests and describe life cycles, habits and conditions that affect populations of those pests.
- b. **Monitoring and inspection.** Participants use monitoring and inspection to stay fully informed about pest populations and conditions that can lead to pest problems.
- c. **Action only when necessary.** Participants supplement their experience with monitoring and inspections to determine when to act against pests. Routine application of pesticides is not IPM.
- d. **Documented performance.** Participants record monitoring and inspection results. They document their performance and justify pesticide applications.
- e. **Least-toxic options.** Participants use non-chemical approaches as the first line of defense against pests. Participants evaluate all pest management options for risks to health, the environment and beneficial organisms.
- f. **Effective pest management.** Participants solve pest problems including insects, weeds, vertebrates and microbes with effective, long-term strategies. Structural design and maintenance issues that contribute to pest problems are addressed, where appropriate.
- g. **Continuous improvement.** Participants prepare for changes in pests and IPM techniques, recognizing that improvement involves staying abreast of new technologies and concepts.
- h. **Communication and outreach.** Participants communicate the IPM approach to others. They abide by posting and notification requirements for pesticide applications.
- i. **Reduction in health and environmental risks is the bottom line.** High priority risks are identified and targeted for reduction.

**3-2. IPM Strategies – Choosing a Treatment Strategy.** Select IPM treatment strategies, methods, and products that are:

- a. **Least hazardous to human health** – e.g., choose baits over aerosols.

- b. **Least disruptive of natural controls** – choose a pesticide that has less adverse effects on natural enemies of the pests controlled.
- c. **Least toxic to non-target organisms** – choose pesticides that are more selective for the targeted pests and least toxic to non-target organisms.
- d. **Most likely to be permanent and prevent recurrence of the problem** – engineer-out conditions that support pests by eliminating entry to buildings and harborage in the building, improve sanitation, and change equipment layout and storage to allow for adequate access for pest management surveillance and control.

### 3-3. Factors to Consider in IPM Strategy Decisions.

- a. **Education** – explain good IPM practices to staff, teachers, and students. Emphasize good housekeeping, elimination of food and water for pests, reporting of pest sightings to maintenance personnel, and good building integrity (close doors and windows when not in use).
- b. **Habitat Modification** – eliminates the sources of food, water, and shelter for pests as much as possible.
- c. **Design or Redesign of the Structure** – incorporate design changes that are least favorable to pests. For example, using wire racks, shelves, and baskets instead of boards and boxes can eliminate harborage for household pests.
- d. **Sanitation** – keep all food in closed containers when not in use – this applies not only to the kitchen and food preparation areas, but also to arts and crafts areas where items such as paste are used by the children for art projects. Empty trash cans daily. Remove all uneaten food from classrooms and break areas immediately. Book shelves are favorite hiding areas for cockroaches in day care centers.
- e. **Eliminating Sources of Water for Pests** – eliminate drips and standing water in the kitchen, break rooms, bathrooms, sink areas in classrooms, and janitorial supply rooms.
- f. **Eliminating Pest Habitats** – caulk or fill cracks and crevices. Remove empty boxes and equipment not in use to eliminate harborages for pests.
- g. **Modification of Horticultural Activities** – keeps shrubs and trees properly fertilized and trimmed. Healthy plants do not support as many pests as do damaged plants. By maintaining healthy plants, the need for pesticide applications is reduced.

- h. **Design or Redesign of Landscape Plantings** – keep shrubs away from building perimeters to reduce rodent and insect habitats. Plant varieties of shrubs and trees that are not attractive to pests. In CDCs, plant shrubs and trees outside of the fenced area where children play. This practice reduces the need to use pesticides in play areas.
- i. **Physical Controls** – non-toxic methods to discourage pests from entering buildings or to remove pests once inside. Many of these methods are quick and require no certification or use of pesticides to control pests. Common physical controls include: (1) vacuuming, (2) trapping, (3) barriers, (4) heat and cold, and (5) removing pests by hand.
- j. **Biological Controls** – methods using the pest’s natural enemies for control. An indirect strategy of enhancing biological controls involves selecting pesticides and application methods that are specific for the target pests and cause as little harm as possible to potential predators or parasites of the pests. The following are types of biological control:
- 1) **Enhancement/Conservation** – use baits that do not attract non-target organisms. Spot treat when practical to reduce adverse effects to non-target organisms.
  - 2) **Augmentation** – use of outdoor pest predators and parasites that can be purchased from nurseries and garden centers. These can be placed on desirable shrubs and trees for control of specific pests. Examples are lady beetles and lacewings. Use of predators can reduce, over time, the need for pesticides.
  - 3) **Microbial controls** – bacteria, fungi, and viruses that provide specific species control of selected pests. Products using the *Bacillus* group are examples of a commonly used bio pesticides.
- k. **Least-Toxic Pesticides** – the use of least-toxic pesticides, when necessary are fundamental to IPM programs because they are effective against the target pests, have a low acute and chronic toxicity to mammals, biodegrade rapidly, kill a narrow range of target pests, and have no or little impact on non-target organisms.
- **Pheromones and other attractants** – compounds used to attract pests to sticky traps.
  - **Insect growth regulators (IGRs)** – specific chemicals that disrupt the growth of pests causing death of the pests.
  - **Repellents** – chemicals that repel pests. Repellents are not currently practical for industrial application in CDCs or schools. Note: the personal

use of repellents by staff, teachers, and students for protection from biting insects such as mosquitoes is a personal matter. They are not provided by the CDC nor the school.

- **Desiccating dusts – compounds that** can be used in cracks and crevices to disrupt the integument of insects and cause pest death. These products are a good choice over pesticides that are more toxic and leave an odor after use.
- l. **Pesticide soaps and oils** – products often used on trees and shrubs for pest control. These materials are relatively non-toxic to mammals.
- m. **Botanical pesticides** – although these pesticides have relatively low mammalian toxicities, they are usually broad-spectrum pesticides that kill a wide range of insects. While this effect may not be desirable outdoors, their low toxicity makes these pesticides a good choice for indoor use. Pyrethrum is a true botanical pesticide derived from plant material while “pyrethroids” are similar compounds that are man-made.

### 3-4. **Selecting a Pesticide for an IPM Program.**

- a. **Safety** – choose pesticides with low toxicities to protect the children in the CDC or school.
- b. **Species Specificity – consider selecting** pesticides that are as specific as possible to the target species and not non-target species. This approach is more practical for outdoor pesticide applications to desirable landscaping plants than for indoor applications.
- c. **Resistance** – choose pesticides that the target pest has not developed resistance to.
- d. **Speed** – a quick knockdown, short-lived pesticide may be desirable for an emergency pest management treatment; however, the application of a less-toxic, slower-acting pesticide that provides longer control is more desirable.
- e. **Cost** – many of the older and more persistent pesticides appear to be cheaper than the newer pesticides. However, newer pesticides generally are applied at much lower rates of application yet provide the same or greater level of control.
- f. **Pesticide Application Guidelines** – pesticides may only be applied by trained and certified pesticide applicators. These individuals apply pesticides according to the pesticide labels and maintain complete records. They use professional knowledge in selecting the proper pesticide use in each situation based on the considerations presented above.

- g. **Notification and Posting Considerations** – notification and posting should always be routine procedures for application of all pesticides in CDCs and schools. The only exception for prior notification is in response to emergency pest management situations when the immediate need to make a pesticide application would not allow time for prior notification. However, in these emergency pest management situations, all precautions will be taken to ensure that staff, teachers, and students are not exposed to the pesticides. Notification of this kind of emergency application will be made after the fact in the same manner as prior notification methods.

## **CHAPTER 4. REGISTRY**

- 4-1.** A registry is established for parents that wish to be notified in advance of pesticide applications. The registry also provides information to aid parents in making informed decisions concerning potential exposure of their children to pesticides. Although pesticides will always be applied in accordance with USEPA label directions and no applications are made when children or facility staff personnel are present, the notification forwarded to parents listed in the registry will provide additional information on the nature of the pests to be treated and the pesticides proposed for use.
- 4-2.** Parents or guardians of children, the staff and teachers in any CDC or school may register for prior notice of pesticide application at their facility. Each CDC and school should maintain a current registry of persons requesting such notice. Specific information on the contents and delivery of prior notice are addressed in Chapter 5 of this Technical Guide, "Notification and Posting of Pesticide Application."
- 4-3.** CDC and school administrators should make every effort to inform parents, guardians, staff, and teachers of the registry program. In schools, this should be done at the beginning of the school year, after the mid-season break, and before each summer session when the school is in operation. Administrators should make provisions to notify the parents and guardians of newly enrolled students and to notify any staff members that are newly hired or transferred into the school system during the school year. See Chapter 5-3 for more details.
- 4-4.** CDC administrators should inform parents and guardians of children and the CDC staff members about the registry program upon their initial registration at the facility. A letter should also be sent to parents and guardians of enrolled children and staff once during the fall and once during the spring to reiterate the availability of the registry program. See Appendix A for a sample notification letter and registry form.
- 4-5.** CDCs and schools should post information about the registry program on a prominent bulletin board or other conspicuous location where parents, guardians, staff, and teachers will see the information while they are in the facilities.

## CHAPTER 5. NOTIFICATION AND POSTING OF PESTICIDE APPLICATION

- 5-1.** Notification of pesticide applications in CDCs and schools is a method to provide parents and the public on military installations with timely information about pests that may invade these facilities and the methods, including pesticide use, to be used to control these pests. Notification is an integral part of the IPM-in-CDCs and Schools program. Sample notification letters can be found in Appendix A. Appendix B is a copy of a brochure that can be duplicated and provided in either CDCs or schools to provide information on the program and to promote the IPM program to staff, parents, and students.
- 5-2.** Posting is a method to inform the public of proposed and completed pesticide applications in and around CDCs and schools. Signs can provide information on the time and place of applications for both indoor and outdoor applications. Specific information on posting can be found in Appendix C.
- 5-3.** At the beginning of each school year, at the midpoint of each school year, and at the beginning of any summer session (as determined by the school), each local school administrator should provide the staff and the parents or guardians of each child enrolled in each school with a written statement describing (1) any potential pest problems that the school may experience including a description of the procedures that the school may use to address those problems, (2) the school's policy on pesticide application on school property, and (3) a description of all pesticide applications made at the school during the previous school year. CDC administrators should provide the staff of each CDC and the parents or guardians of each child enrolled in the CDC with (1) a yearly written statement of the center's policy on pesticide application on center property and (2) a description of any pesticide applications made at the center during the previous calendar year. The statement should also include the following information to be supplied by the CDC or school as indicated in brackets:
- a. "As part of a [CDC] or [school] pest management plan, [*name of CDC or school*] may need to use pesticides to control pests. The U.S. Environmental Protection Agency (EPA) and [*State*] registers pesticides for these uses. EPA registers pesticides so pesticides used in accordance with instructions printed on the label do not pose unreasonable risks to human health and the environment. You may request to be notified at least 24 hours in advance of pesticide applications to be made and receive information about these applications by registering with the [CDC] or [school]. Certain pesticides used by CDC or school including baits, pastes, and gels are exempt from these notification requirements. If you would like more information concerning any pesticide application or any product used at the school, contact [*name and phone number of the Administrator*]."
  - b. The above statement and description also should be provided to the parents or guardians of all children who enroll in the CDC during the year or parents

or guardians of children who transfer into the school during the school year.  
The statement should:

- 1) Indicate that the staff, parents or guardians may register for prior notice of pesticide applications at the CDC or school; and
- 2) Describe the emergency notification procedures provided for in Section 5-10. Any modifications to the CDC's or school's pesticide application policy should be sent to all persons who have registered for notification.

**5-4.** The CDC administrator should also provide the parents or guardians who intermittently use the CDC a written copy of the information described in Chapter 5-3. This information should be available at the CDC check-in desk for parents' review.

**5-5.** Prior to making any application of pesticides within any building or on the grounds of any CDC or school, the local CDC or school administrator should notify parents or guardians who have registered for prior notice so the parents or guardians receive the notice no later than 24 hours before the end of the last business day during which the CDC or school is in session that precedes the day on which the pesticide application is to be made. Notice should also be given by any means practicable to the CDC or school staffs that have registered for such notice. The notice should include:

- a. The name of the active ingredient of the pesticide to be applied.
- b. The target pest.
- c. The location of the application on the CDC or school property.
- d. The date of the application.
- e. The name of the school administrator, or a designee who may be contacted for additional information.

**5-6.** Pesticide applications should not begin before the end of the CDC or school business day after students, teachers, and staff have left the buildings or grounds.

**5-7.** The school administrator should:

- a. Maintain information about the schedules for pesticide applications for each CDC or school under his/her jurisdiction.
- b. Act as a contact for inquiries, and disseminate information requested by parents or guardians, about the CDC or school pest management plans.



- c. Maintain and make available to parents or guardians, as requested:
  - 1) Copies of material safety data sheets (MSDSs) for pesticides applied at the CDC or school, or copies of the MSDSs for end-use dilutions of pesticides applied at the CDC or school.
  - 2) Copies of labels and fact sheets approved by the administrator for all pesticides that may be applied at the CDC or school.
  - 3) Any other official information related to the pesticide provided to the local CDC or school by Federal and State agencies.
  - 4) All pesticide application data for each pesticide application made at the CDC or school (other than antimicrobial pesticides) as permanent historical records IAW DODI 4150.7.

**5-8. Method of Notification.** A CDC or school may provide notifications to parents and staff, which includes the information described in paragraph 2 above, by:

- a. Written notices sent home with the students or children attending the CDC or school and given to staff members.
- b. Telephone calls.
- c. Direct contacts.
- d. Letters mailed at least 1 week before the application.
- e. Notices delivered electronically through email or facsimile.

**5-9. Reissuance of Notification.** If the date of the pesticide application needs to be changed beyond the period required for notification, the CDC or school should issue a second notice that contains only the new date and location of the application.

**5-10. Emergency Pest Management Situation.**

- a. The local CDC or school administrator may direct that an emergency pesticide application be made without prior notification in the event of an immediate threat to human health. This pesticide application may be made provided the administrator provides subsequent notification to any person who has requested prior notification subject to subparagraph 10-c.
- b. Subsequent Notification. The CDC or school administrator should provide to parents or guardians listed in the registry, staff members listed on the registry,

and the designated contact person, a notification of the pesticide application for an emergency pest management situation either 24 hours after the CDC or school made the pesticide application or the morning of the next business day, whichever is earlier. The notification should include:

- 1) The information required for a notice under subparagraph 5-5, above.
  - 2) A description of the emergency pest management situation that required the pesticide application to avoid a threat to the health or safety of students or staff.
- c. Method of Notification. The CDC/school may provide the notice required by paragraph 3 above, by any method of notification described in subparagraph 8 above.
- 5-11.** Not less than 24 hours prior to pesticide applications in a CDC or school or on the property outside of the facility, any person applying pesticides should post a sign notifying the public of the pesticides application. The sign should be posted at a conspicuous location at the point of entry to the CDC or school and at the CDC registration desk or in the school office. Criteria for signs are listed in Appendix D.

## **CHAPTER 6. PEST MANAGEMENT REPORTS AND RECORDS**

- 6-1.** CDC and school staff personnel request pest management services from the installation IAW installation guidelines. The request is usually forwarded to the customer service section at the Directorate of Public Works or the office of the designated contractor. Following the submission of a work order, the servicing pest management technician will usually call the CDC and school staff to arrange for a time to do the work. After completing the pest management service, the pest management technician should record all work performed as outlined below.
- 6-2.** Information on all pest management operations and pesticide applications performed on DoD property will be recorded using the Pest Management Maintenance Record (DD Form 1532-1) or other appropriate formats designated by the cognizant Pest Management Consultant. Copies of the Pest Management Maintenance Records should be provided each month to the IPMC. The IPMC can answer questions about recordkeeping policies.
- 6-3.** The DD Forms 1532-1 will be kept on file at each school or building in which pest management activity is performed. These forms provide a permanent historical record of pest management operations for each building, structure or outdoor site under the control of the CDC or school. Duplicate file copies may be kept with similar installation documents maintained at a central record keeping location.
- 6-4.** The use of the DD Form 1532-1 provides a standard method for recording pesticide operations and applications and complies in part with Federal Regulation 40 CFR 171.11c (7) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. This permanent record also provides continuity in the management and performance of pest control operations at the command level. Analyses of these records can aid in identifying buildings, design features, and specific areas that have significantly more pest problems than others. This historical pest control data can also be used to verify warranties, to correlate sites and treatment, and to facilitate obtaining cost effective pest management.
- 6-5.** Information on recording data on DD Form 1532-1, as well as an example of a completed record is in Appendix E.

## **CHAPTER 7. GUIDELINES FOR DEVELOPING AN IPM PROGRAM**

- 7-1.** The following guidance is provided for individuals who develop the CDC or school IPM program and make the decisions on whether to use non-chemical control methods and pesticide applications for controlling pests. This is important because of the requirement to maintain CDCs and schools in a pest-free environment, and because of children's sensitivity to pesticides. The first choice in preventing or eliminating pests from CDCs and schools should be non-chemical methods. This includes building modifications to prevent pests from entering the structure, cultural practices to eliminate harborages and food, physical practices to keep doors and windows screened or closed when not in use, and the use of vacuums, traps, and glue boards to capture pests.

The choice to use pesticides should only be made when all non-chemical options have failed or been eliminated due to time, manpower, and cost. When the choice to use a pesticide is made, the pesticide selected should have the lowest toxicity and the shortest persistence in the environment. Baits and gels that can be placed in a manner that prevents exposure to children should be first choice.

Review the IPM principles and strategies found in Chapter 3 and visit the Web sites found in the references for more information and choices for non-chemical and least toxic pesticide alternatives. These strategies should be incorporated into the IPM plan.

- 7-2.** A sample IPM Plan for CDCs and schools is in Appendix F. Each CDC or school should have their own IPM Plan that reflects their individual circumstances and IPM program. A copy of this plan may be used as an appendix to the integrated pest management plan. A copy of the CDC or school IPM plan should be kept on file at each CDC or local.
- 7-3.** All pesticide applicators applying pesticides in CDCs or schools or shall be certified IAW DoD policies and guidance. This requirement applies to contractors as well as Government personnel. All pesticide applicators will provide the IPMC with a copy of their certification documents and categories. The IPMC will maintain a file of the certificates in his office and will also furnish duplicate records to each CDC/school on the installation.
- 7-4.** Pest management personnel who conduct surveys in the CDC or schools facilities will fully document the presence of and type of pests before any pesticide applications. This information will be recorded on DD Form 1532-1.
- 7-5.** While working on CDC/school property, pest management personnel will wear uniforms identifying them as pest management technicians and should sign in and register at the visitor's desk upon entering the building. An exception to this policy is for CDC employees who are certified pesticide applicators and who apply pesticides as part of their duties.

- 7-6.** At no time will pesticides be applied in any part of a school while that section is occupied. Except for pest management emergency situations, no pesticide applications will be made without evidence of the prior notification to staff, teachers, and parents IAW the provisions for notification contained in this document in Chapter 5.
- 7-7.** No pesticides or pesticide application equipment will be left unattended on CDC or school property at any time. Pesticides kept in pest management vehicles will be secured when not attended. All vehicles containing pesticides will be properly marked on the outside. Specimen labels and MSDSs for those pesticides carried in the vehicle will be kept in the vehicle when at the CDC or school.

## CHAPTER 8. REFERENCES

The following references contain extensive information and educational materials on the subject of IPM-in-Schools. These Web sites were selected from the many leading national listings on IPM-in-Schools. Nearly all of the states have their own Web sites on this topic, and the reader is encouraged to visit the appropriate state site where the CDC or school is located.

- **IPM for Schools: A How-To Manual** - EPA manual on IPM concepts to support the establishment of IPM programs and IPM strategies to handle common pest problems. <http://www.epa.gov/pesticides/ipm/schoolipm/index.html>.
- **National School IPM - for Administrators** - Links to sample forms, contracts, school surveys and more, from the National School IPM Web site. [http://schoolipm.ifas.ufl.edu/admn\\_nfo.htm](http://schoolipm.ifas.ufl.edu/admn_nfo.htm).
- **Pest Control in the School Environment: Adopting Integrated Pest Management** - This booklet is designed to encourage and assist school officials in examining and improving their pest management practices. It identifies ways to reduce the use of pesticides in school buildings and landscapes, as well as alternative methods of managing pests commonly found in schools. Produced by the EPA Office of Pesticide Programs (must order). <http://www.epa.gov/pesticides/ipm/brochure>.
- **IPM Standards for Schools Online: A Program for Reducing Pest and Pesticide Risks in Schools and Other Sensitive Environments** - This 128-page document lists more than 700 IPM practices for use in school buildings and on school grounds, as well as more than 250 resources for information on how to implement those practices, model legislation, school pest management practice surveys, IPM curricula and project ideas for teachers, directory of organizations with resources for school IPM, school IPM-related headlines from U.S. newspapers and other resources. From the IPM Institute of N. America. <http://www.ipminstitute.org/school.htm>.
- **EPA Office of Pesticide Programs - School IPM** - Lists fact sheets, classes, grants, and more. <http://www.epa.gov/pesticides/ipm>.

- **IPM Star - Welcome to IPM STAR! - Verified IPM Performance** - The IPM Star Certification Program recognizes and rewards IPM practitioners who meet a high standard for IPM. The program provides incentives for everyone to reduce pest and pesticide risks to health and the environment.  
<http://www.ipminstitute.org/ipmstar.htm>



**APPENDIX A**

**SAMPLE IPM PROGRAM NOTIFICATION LETTER  
AND  
SAMPLE INTEGRATED PEST MANAGEMENT REGISTRY FORM**





**Dependent Domestic Child Development Center [or]  
[insert street address]  
[insert installation name, state, zip code]  
Elementary and Secondary Schools**

Office of the Director  
Phone: 123-456-7890

[12 August 2005]

Dear Parents:

[Name of Child Development Center or school] is implementing a preventive Integrated Pest Management program (IPM) within our facilities. IPM principles dictate the use of alternative pest control methods instead of application of pesticides. Pesticides will be used as a final control measure after all other control methods have been exhausted. This letter is notification that [installation name] may use pesticides within the [center or school] when needed throughout the school year. The [center or school] will post notification twenty-four (24) hours in advance of general pesticide applications. General pesticide applications may include spraying baseboards for insects, playgrounds for weeds, or kitchens for cockroaches. Applications of baits, germicides (e.g., bathroom cleaners, sanitizers, etc.) are not considered general applications. You can also be notified of pesticide applications by completing the attached registration form. We will use this registry to ensure that those families who feel the need to be advised of pesticide applications will receive at least 24-hour advance notification. An exception to the 24-hour notification will be for emergency pest management situations that present an immediate threat to human health. Following any emergency pesticide applications, we will send a notification either 24 hours after a school applies a pesticide or on the morning of the next business day, whichever is earlier.

A brochure is available at the [center or school] that explains the details of the IPM program. All pesticide applications for the [center or school] will be made by DoD or State certified individuals. As part of the [center or school] plan and the installation's Integrated Pest Management Plan, pesticide applications will be made after hours or on weekends, when children are not present in the area of the application. A complete list of pesticides, pesticide labels, and Material Safety Data Sheets are available from the [center or school] staff upon request.

Maintaining a safe, pest free environment for our children is our priority.

Further technical questions may be addressed to [insert name], Installation Pest Management Coordinator, at (XXX) 456-7890. All questions concerning administration of this program may be addressed to the [center or school] office at (XXX) XXX-XXXX).

Sincerely,

[insert name of Director]  
[Center or School] Director

**Dependent Domestic Child Development Center**

[insert installation name]

[or]

**Elementary and Secondary Schools**

**Integrated Pest Management Registry**

**[2005-2006]**

Please return this completed form to the [child development center or school] if you would like to participate in the Integrated Pest Management Program Registry. You will receive 24-hours notice\* of pesticide applications in your child's school.

Teacher: \_\_\_\_\_

Grade or Class Name: \_\_\_\_\_

Student's Name: \_\_\_\_\_

Parent's Name: \_\_\_\_\_

Parent's Daytime Telephone: \_\_\_\_\_

Parent's Work Telephone: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Parent's Address: \_\_\_\_\_

Parent's E-mail: \_\_\_\_\_

Additional Notes:

*\*An exception to the 24-hour notification will be for emergency pest management situations that present an immediate threat to human health. Following such an emergency pest management situation, we will send you a notification 24 hours after a school applies a pesticide under this section or on the morning of the next business day.*

# APPENDIX B

## SAMPLE BROCHURE FOR IPM IN CHILD DEVELOPMENT CENTERS AND SCHOOLS

### IPM IN CHILD DEVELOPMENT CENTERS AND SCHOOLS

#### Army IPM Principles

**Planning and Professional Oversight**  
All pest control operations are incorporated into planning documents reviewed annually by professional pest management consultants.

**High Training Standards**  
Only individuals who meet Department of Defense (DoD) standards for certification as pesticide applicators apply pesticides at our installations and facilities. DoD certification standards include a one-year apprenticeship and three weeks of classroom training, and are among the highest in the nation.

**Records and Reporting**  
Permanent records are kept for all pesticide application and reported annually to USAEC for evaluation and trend analysis.

**Pesticide Application Strategies**  
Pesticides are applied only when necessary and only at times when children are not present or directly exposed. Pesticide application sites are clearly posted before and after each application.

**USAEC Pest Management Team**  
Point of Contact:  
Sandra Alvey (410) 436-1568

#### Protecting the HEALTH and SAFETY of our Children

#### Integrated Pest Management (IPM) reduces childhood pesticide exposure

The U.S. Army Environmental Center's (USAEC) IPM in Child Development Centers (CDCs) and Schools mission is to reduce pesticide risks to preschool- and school-age children on Army installations. The program is one of many Army initiatives supporting its ongoing commitment to Soldier quality of life that extends to families who live, work, learn and play on Army installations.

Initiated and piloted by pest management experts at USAEC, the program specifically works to implement IPM principles at child development centers and schools on Army installations. It is patterned after proven state and U.S. Environmental Protection Agency initiatives and techniques that limit pesticide exposure risks for preschool- and school-age children in institutional environments.

The IPM in CDCs and schools goal is to control pest species through pesticide-free approaches whenever possible. However, should pesticides be required, the program's established protocol provides the highest level of safety for children through:

- Parent and guardian notification of pending pesticide treatments
- Limits regarding treatment schedules to ensure children are not present
- Requirements that dictate the use of the least toxic products possible
- Safety measures that restrict access to treatment areas before and after applications
- Maintenance of registries for children with pesticide exposure sensitivities

USAEC has implemented this initiative at the Carlisle Barracks' Moore Child Development Center in Pennsylvania, the first CDC facility in the nation to receive a star certification from the IPM Institute of North America. It also has been implemented at eight Department of Defense Education Activity schools located at Fort Campbell, Ky.

For more information about IPM in CDCs and schools, contact the US Army Environmental Center at (410) 433-2556, or visit <http://aec.army.mil/usacc/pest/index.html>.

## APPENDIX C

### POSTING REQUIREMENTS FOR PESTICIDE APPLICATION

- C-1.** This Appendix describes the type and style of signs recommended for posting pesticide applications in and around schools and CDCs. The criteria described here for signs conform to proposed Federal guidelines for posting pesticide applications in schools and those guidelines already in place in many of the states. A copy of the sign described below can be found at the end of this Appendix.
- C-2.** Signs for proposed pesticide applications should conform to the following requirements:
- a. The sign should be a minimum of 8 1/2 inches high by 11 inches wide.
  - b. The sign should be of a rigid material that is substantial enough to be easily read for at least 24 hours prior to the pesticide application despite the effects of adverse weather conditions.
  - c. The sign should contain the following information:
    - 1) The statement, "PESTICIDE APPLICATION WITHIN NEXT 24 HOURS" in bold letters at least 3/4 inches high.
    - 2) The statement, "A Pesticide Application is planned for the location(s) listed on this sign for: \_\_[Date/Time]\_\_" in bold print of at least 20-point type.
    - 3) The statement, "Do Not Enter Treated Area from \_\_\_\_[Date and Time]\_\_ until \_\_\_\_[Date and Time]\_\_" in bold print of at least 20-point type.
    - 4) The statement, "For more information contact: \_\_\_\_\_" in bold print of at least 20-point type. The blank space should contain the name or names of the person or persons at the school/CDC to contact for more information on the pesticide application.
    - 5) "Pesticide name(s): (the common name of each pesticide applied)" in bold print of at least 20-point type.
    - 6) The statement, "For emergency pesticide applications this sign must be posted at the time of the application and remain in place for at least 48 hours from the conclusion of the application. To be removed by authorized personnel only." in bold print of at least 12-point type.

[Note. A sample of this type sign can be found at the end of this Appendix.]

- C-3.** When pesticide applications are made outdoors, the area should be posted with signs as described below:
- a. Pesticide applicators making outdoor pesticide applications within school or CDC property should post signs that notify the public of the pesticide application. The signs should be posted at conspicuous locations no farther apart than every 100 feet of road frontage of the treated property.
  - b. These signs should be posted by the person applying the pesticide at the time of the pesticide application.
  - c. Signs posted along road frontage should face the road. Signs posted at a point of entry should face the direction that people walk as they enter the property.
  - d. The bottom of each sign should be at least 12 inches above the ground and the top no higher than 48 inches above the ground. Signs should be posted (1) at the property boundary between 2 and 5 feet from the sidewalk (2) or, if there is no sidewalk, between 2 and 5 feet from the road, (3) or, if there is also no road, between 2 and 5 feet from the property boundary. When landscaping or other conditions would make a sign inconspicuous or difficult to read if the sign were posted within the distances specified in this paragraph, the sign should be posted in a similar manner such that it is conspicuous and easily read by any adult or child entering or passing the property on foot.
  - e. No person should remove or render difficult to read any posted pesticide application sign within 24 hours after the pesticide application to which it applies.
  - f. Signs to be posted at the time of outdoor pesticide applications should conform to the following requirements:
    - 1) The sign should be a minimum of 4 inches high by 5 inches wide.
    - 2) The sign should be of a rigid material that is substantial enough to be easily read for at least 24 hours after the pesticide application despite the effects of adverse weather conditions.
    - 3) The sign should contain the following information in black lettering on a bright yellow background in the format specified below:
      - a) The words, "PESTICIDE APPLICATION" in bold letters of at least 36-point type.

- b) The symbol of a circle at least two inches in diameter with a diagonal slash over a person, child, and dog.
  - c) The statement, "Pesticide applied on (date) by (name and telephone number of the pesticide applicator) in at least 12-point type.
  - d) The statement, "This sign must remain for 24 hours after pesticide application" must be in at least 12-point type.
- 4) Except for the date of the pesticide application and the name and telephone number of the pesticide applicator, the information required on the sign should be professionally printed. The remaining information may be handwritten provided it is written in permanent ink and in a print that is easy to read.

**APPENDIX D**

**PESTICIDE POSTING NOTIFICATION SIGN EXAMPLE**

**PESTICIDE APPLICATION WITHIN THE  
NEXT 24 HOURS**

**A Pesticide Application is planned for an area within the Child Development  
Center on \_\_\_\_\_ at \_\_\_\_\_.**

**Do Not Enter Treated Area from \_\_\_\_\_ until \_\_\_\_\_.**

**Pesticide name(s): \_\_\_\_\_  
\_\_\_\_\_**

**For more information contact: John Doe  
Installation Pest Management Coordinator  
239-2006**

**For emergency pesticide applications this sign must be posted at the time of the  
application and remain in place for at least 48 hours from the conclusion of the  
application. To be removed by authorized personnel only.**

## APPENDIX E

### PEST MANAGEMENT MAINTENANCE RECORD (DD FORM 1532-1)

#### Data Entry on DD Form 1532-1

- E-1.** On the top of the DD Form 1532-1, in the space marked “Bldg/Area”, enter the building or structure number when a maintenance record is needed. This number may be found on the installation in the facilities inventory that is usually available from the Public Works Office. Similarly, for outdoor areas to be cited on the record, enter a general description or area number, if available. In the next space, enter the size of the area that is receiving pest management operations including surveys and pesticide applications. A legend at the bottom of the DD Form 1532-1 gives standard measurement units. In the space marked “Type of Construction”, enter the code letters from the legend to designate the major type of construction. More than one set of code letters may be used, if applicable. In the last space marked “Use Designation”, enter information to identify the major use of the building, structure, or area.
- E-2.** Enter the following information for each pest management operation conducted at the building or outdoor area.
- a. Date. Enter the date of the operation in the date column as year, month, and day.
  - b. Units Serviced and Work Origin. Enter the part of the building involved, such as a room or apartment number, or in the case of outdoor areas, a site designation such as “soccer field” or “trees”. Also, enter the work origin using the symbols in the legend to show how the work was initiated.
  - c. Units of Measure. Enter the size of the treated or protected area using the measurement units in the legend.
  - d. Target Pest. Enter the name of the target pest. Be as specific as possible.
  - e. Control Operation. Enter information to identify how the control operation was performed (e.g., misting, hand spraying, fogging, trapping, etc.).
  - f. Pesticide Use. If pesticide was used, enter the pesticide common name and EPA registration number in the first space; enter the concentration of the finished formulation in the middle space, and the amount or quantity used in the last space. If no pesticide was used, leave this section blank.
  - g. Labor Time. Enter the time required to complete the pest control operation in this space. Include all time associated with the job including travel preparation, job execution, and cleanup time. Do not include the



pretreatment inspection or post-treatment survey time. Surveillance, pretreatment inspection and post-treatment times should be entered as separate entries.

- h. Application Initials. Enter the initials of the individual responsible for performing the work. If more than one person was involved, the crew leader should initial the record.
- i. Remarks. Using the date as a cross reference, enter any remarks in this space which pertain to a pest control operation reported on the record. If a diagram of areas treated is desired for clarity, it may be put in this space or put on a separate card and attached to the record.

**E-3.** See the following example of a completed DD Form 1532-1.

1532-1 Log Sheet										Pesticide					
Building /Area	Size	Type of Constr	Use Desig	Date	Units Svc'd	Work Origin	Unit of Meas	Target Pest	Control Operation	Name	EPA Reg #	% Conc	Amount	Man-Hrs	Applic Init/#
Camp Pest	1500	NA	OPG	6/10/1999	1000	SC	AC	MOSQUITO	FOGGING	Resmethrin	432-716	4.14	(3000oz) 2.34 SLN ZGAL	3	CS
Camp Pest	1500	NA	OPG	6/10/1999	1000	SC	AC	MOSQUITO	FOGGING	Resmethrin	432-716	12.42	(3000oz) 2.34 SLN ZGAL	3	CS
Camp Pest	200	NA	WAW	6/10/1999	0.25	SW	AC	MOSQUITO	SPHAND	Altosid	2724-446-64833	20	(0.5oz) 0.004 SLN ZGAL	3	LS
Dining Facility Bldg 19	2000	CO BL	FHB	6/10/1999	8000	SC	MSF	RATS	EXBAIT	Anticoag, Diphacinone	56-23	0.005	2 BTS PDW	1	MS
Camp Pest	2	NA	IMP	6/11/1999	2	SW	MSF	MOSQUITO	DGHAND	Altosid	2724-392-64833	5	(20 ea) 1.6 BQT PWD	3	LS
Camp Pest	2	NA	REC	6/12/1999	25	SW	EA	MOSQUITO	RECEPTREAT	Bacthuring	6218-47	10	(10 ea) 1.6 BQT PWD	2	LS
Refuse Dump Site	0.25	NA	LDF	6/12/1999	0.25	SW	AC	FILTHFLIES	EXBAIT	Apache	270-255	1	2 GRN PDW	1	MS
BRQ	2000	CO BL	FHB	6/12/1999	800	SW	MSF	ANTS	SPHAND	Dursban	26-46	42	0.5 EML ZGAL	1	JC
Camp Pest	1500	NA	OPG	6/12/1999	200	SW	AC	FLEAS	DGHAND	Sevin	10107-42	5	200 PDW	4	GC

## **APPENDIX F**

### **IPM PLAN FOR CHILD DEVELOPMENT CENTERS AND SCHOOLS**

The following document is an example of an IPM plan for use at CDCs and schools on military installations. This example should be modified to suit the individual situation for each CDC or school. The administrative infrastructure mentioned in this plan may need to be modified to fit each installation's circumstances. However, the overall concepts and themes described in the first nine chapters of this technical guide are reflected in this plan and embody the scope and intent found in the national and state IPM-in-CDCs and Schools initiatives.

# IPM PLAN FOR CHILD DEVELOPMENT CENTERS AND SCHOOLS

## EXECUTIVE SUMMARY

Camp Anywhere, U.S. is a diverse military community with post housing. The education of children living in post housing is accomplished by 5 elementary schools, 2 middle schools and 1 high school. There are 5 full-time CDCs and 11 school after-care facilities on the installation. All told, approximately 5,000 children are served throughout the installation by these facilities.

All of these facilities have installation maintenance requirements to provide the best facilities possible. One aspect of maintenance is the performance of pest management activities in CDCs and schools on the installation. Camp Anywhere embraces the use of IPM practices including the use of IPM in facilities where school-age children are present. IPM is defined as, "A sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks." Basically, IPM uses a comprehensive approach to minimize the amount of pesticides used in schools and day care centers to adequately control pests.

Implementation of IPM-in-Schools also coincides with the passage of State of Anywhere Pesticide Regulations, 302 XXX 29:050, Section 12, which directs that all schools in the State of [Anywhere] will implement an IPM program in all CDCs and schools. The basic premise of the Anywhere statute and Camp Anywhere's plan is to notify all parents of any applications of pesticides in the school area. The CDCs and schools will notify parents by letter at the beginning of the school year and also 24 hours prior to emergency pesticide applications. If parents wish to be notified in advance of pesticide applications, they can complete a request during the enrollment process. Camp Anywhere pest management personnel will coordinate with school personnel prior to any pesticide applications to ensure that notification was completed and that pest management operations adhere to this plan. Camp Anywhere, as a Federal installation, is voluntarily complying with these guidelines of [State] and incorporating them into this IPM plan.

Camp Anywhere personnel will implement the elements of this IPM plan to minimize use of pesticides in CDCs and schools.

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## A. BACKGROUND

1. **Purpose.** The purposes of this IPM Plan for Child Development Centers and Schools are to:
  - a. Implement the Integrated Pest Management Program (IPM) in Child Development Centers (CDCs) and Schools, and
  - b. Provide information to parents on pesticide use, the associated risks, and what they need to do about it.
2. **Authority.** The authority for this IPM Plan is DODI 4150.7, DoD Pest Management Program, 22 April 1996.

## B. RESPONSIBILITIES

1. **Director of Public Works.** The Director of Public Works has the responsibility to:
  - a. Perform Pest Management Service for the CDCs and schools according to this IPM plan, and
  - b. Coordinate this IPM Plan with other installation directorates and applicable external organizations.
2. **Community Activities, Child Development Centers.** Community Activities and Child Development Centers personnel have the responsibility to:
  - a. Provide information to staff about this IPM Plan,
  - b. Notify parents about the IPM program. When pest control activities are to be conducted in the facilities, provide notification to parents and staff 24 hours prior to any pesticide applications.
  - c. Administer the program to provide information to parents about the IPM program and pesticide applications.
3. **Camp Anywhere Schools.** Personnel at the Camp Anywhere Schools have the responsibility to:
  - a. Provide information to the staff about this IPM plan.
  - b. Notify parents about the IPM program. When pest control activities are to be conducted in the facilities, post information 24 hours prior to any pesticide applications and provide notification to parents who have registered for notification.

- c. Administer the program to provide information to parents about the IPM program including procedures for the notification registry.

**4. Directorate of Public Works, Pest Control Shop.** Personnel at the Directorate of Public Works and the Pest Control Shop have the responsibility to:

- a. Conduct pest management operations according to this plan.
- b. Coordinate with CDC and school directors prior to doing any pest management operations which require notification.

**5. Installation Pest Management Coordinator.** The Installation Pest Management Coordinator has the responsibility to:

- a. Prepare, review, and update the Camp Anywhere IPM Plan for IPM in CSCs and Schools.
- b. Prepare reports, as needed, of pest management operations.
- c. Coordinate with USDA, APHIS, as necessary, when required to perform animal damage activities in CDCs and schools.
- d. Provide technical information about pesticides to CDCs and schools.

## **C. GENERAL**

1. [State] recently passed 302 XXX 29:050, the Commercial/Structural Pest Control and Fumigation Act. Chapter 29, Section 12 outlines pest control notification procedures in schools. Camp Anywhere intends to adopt the fundamental concepts of this law in addition to Army guidance on IPM by implementing programs for IPM in CDCs and Schools.
2. This plan provides basic concepts for IPM implementation in CDCs and schools. The use of IPM dictates that a comprehensive approach be used to control pests within schools and CDCs. Cultural, mechanical, physical and pesticides will be used to obtain the control of pests. Whenever possible, pesticides will be used as a last resort and to the least extent possible. The CDC or school will notify parents prior to pesticide applications 24 hours prior to the application. Parents requesting to be notified shall receive written notification through various mechanisms outlined below.
3. This plan provides for exemptions to notification for the following classes of pesticides.
  - a. Germicides, disinfectants, bactericides, sanitizing agents, water purifiers and



- swimming pool chemicals used in normal cleaning activities.
- b. Personal insect repellents.
  - c. Human or animal ectoparasite control products administered by qualified health professionals or veterinarians.
  - d. Manufactured paste or gel bait insecticides placed in areas where humans or pets do not have reasonable access to the bait.
  - e. Aerosols used as a contact spray to remove site specific pests such as wasps or spiders.

#### **D. NOTIFICATION PROCEDURES – SCHOOLS**

- 1. Initial Notification.** The school will initially notify all parents at the beginning of the school year by letter (see Appendix A). This letter requests that parents read the information concerning IPM program and pesticide use in the schools. If parents want to be notified prior to pesticide applications, they must return the signed IPM Registry form. The forms should to be kept in the students' files.
- 2. Notification Prior to Pesticide Applications.** After a pest control problem has been identified which requires use of a non-exempt pesticide application, the school will use one or more of the notification procedures below to notify parents of planned pesticide applications.
  - a. The school can notify parents who requested notification via a letter carried home by their child.
  - b. The school can notify parents who requested notification by a phone call via the automated phone system.
  - c. The school can notify parents who requested notification by a general announcement placed on the school bulletin boards, at entry ways, or via the internet.
- 3. Signage during Pesticide Applications.** Twenty-four hours prior to planned pesticide applications, signs will be posted by installation pest control personnel providing notice of the planned application. The signage will be removed no earlier than 24 hours after completion of pesticide application. The signs will contain the following information:
  - a. Site or area to be treated.
  - b. Pesticide to be applied.

- c. Time and date of treatment.
- d. Re-entry times.

## **E. NOTIFICATION PROCEDURES – CHILD DEVELOPMENT CENTERS**

- 1. Initial Notification.** The CDC will initially notify parents by providing an information letter when a participant is enrolled in the program (see Appendix B). This letter requests that parents read the provided information concerning the IPM program and pesticide use in the CDC. If parents want to be notified prior to pesticide applications, they must return the signed IPM Registry form. The forms should be kept in the students' files.
- 2. Notification Prior to Pesticide Applications.** After a pest control problem has been identified which requires use of a non-exempt pesticide application, the CDC will use one or more of the notification procedures below to notify parents of planned pesticide applications.
  - a. The CDC can notify parents who requested notification via a letter carried home by their child.
  - b. The CDC can place a general announcement on the CDC bulletin board and internet to ensure all interested parties receive the information.
- 3. Signage during Pesticide Applications.** Twenty-four hours prior to planned pesticide applications, signs will be posted by installation pest control personnel providing notice of the planned application. The signage will be removed no earlier than 24 hours after completion of pesticide application. The signs will contain the following information:
  - a. Site or area to be treated.
  - b. Pesticide to be applied.
  - c. Time and date of treatment.
  - d. Re-entry times.

## **F. EXEMPTIONS TO NOTIFICATION.** This plan provides for exemptions to notification for the following classes of pesticides.

- 1. Germicides,** disinfectants, bactericides, sanitizing agents, water purifiers and swimming pool chemicals used in normal cleaning activities.
- 2. Personal insect repellents.**

3. Human or animal ectoparasite control products administered by qualified health professionals or veterinarians.
4. Manufactured paste or gel bait insecticides placed in areas where humans or pets do not have reasonable access to the bait.
5. Aerosols used as a contact spray to remove site specific pests such as wasps or spiders.

## **G. LIST OF COMMON PESTS**

1. **Medically Important Pests and Plants.** Wasps, hornets, yellow jackets, and honeybees, snakes, black widow and brown recluse spiders, mosquitoes, ticks, fleas, chiggers, biting flies, filth flies, cockroaches, and poison ivy.
2. **Structural Pests.** Subterranean termites, carpenter ants, bees, wood boring beetles, and wood-destroying fungi.
3. **Vertebrate Animals.** Feral cats, skunks, raccoons, opossums, squirrels, birds, bats, moles, mice, and rodents.
4. **Vegetation.** Broadleaf and grassy weeds, all vegetation in bare ground areas, and poison ivy.
5. **Turf Pests.** White grubs, ants, and turf diseases.
6. **Household Pests.** Cockroaches, field and camel crickets, spiders, millipedes, and silverfish/firebrats.
7. **Ornamental Plant and Tree Pests.** Webworms, tent caterpillars, aphids, bagworms, mites, and plant diseases.

## **H. Pest Control Priorities**

1. **Medical.**
  - a. Disease Vectors: ticks and mosquitoes when determined by medical authorities, rabid animals, rodents.
  - b. Poisonous sting and biting organisms: wasps, bees, snakes, black widow and brown recluse spiders.
  - c. Nuisance Biters: mosquitoes (non-vectors), fleas, chiggers, non-poisonous spiders, biting flies.

- d. Mechanical Disease Transmitters: cockroaches, filth flies, rodent and bird ectoparasites.
  - e. Stored Products Pests: arthropod pests infesting stored products.
  - f. Poisonous Plants: poison ivy and urticating plants.
  - g. Nuisance Household Pests that cause psychological stress to personnel.
- 2. Structural:** termites, wood borers, wood fungi, birds, rodents.
- 3. Large Animal Control:** feral cats, skunks, raccoons, opossums, groundhogs, squirrels, birds, bats.
- 4. Weed and Undesirable Plant Control.**
- a. Safety and Fire Protection: adjacent to areas where flammable materials and electrical equipment are stored or maintained.
  - b. Security: along fences and other high security areas.
  - c. Protect Real Property: roadway "Right-of-ways" (parking lots, access roads).
  - d. Beautification of high visibility areas by selective weed control.
- 5. Ornamental Plant, Tree and Turf/Soil Pest Control.**
- a. Safety: e.g., mole and gopher control in athletic areas where uneven surfaces could cause injuries, caterpillars that have urticating hairs, such as tussock and lo moths.
  - b. Plant Destroying: e.g., gypsy moths, mites, borers, leaf beetles, bark beetles, etc. Also attacking plants in landscaped areas and plant diseases.
  - c. Beautification of high visibility areas.
- 6. Household and Nuisance Pest Control.**
- a. Indoor Breeding: cockroaches in nonfood areas and other crawling pests.
  - b. Outdoor Invaders (admin and offices): crickets, ants, spiders, millipedes, moths, and over-wintering bugs, beetles, and flies.

## 7. Other Pests.

- a. Pests in open grassy areas: grubs, ants, ticks, fleas, and flies breeding in animal feces.
- b. Ornamental Plant, Tree and Turf/Soil Pest Control in non-high visibility areas.
- c. Weed Control in non-high visibility areas.
- d. Mole and Gopher Control in areas other than athletic fields, play areas, or desirable landscaping.

## I. REFERENCES

1. **Federal Laws.** The Federal Insecticide, Fungicide and Rodenticide Act (through PL 100-460, 100-464 to 100-526, and 100-532).
2. **Regulations.**
  - a. DODI 4150.7, DoD Pest Management Program, 22 April 1996.
  - b. [insert any service-specific pest management regulations]
3. **APPENDIX A – List of Pesticides Proposed for Use in Child Development Centers and Schools.** This Appendix is for example purposes only and the pesticides listed should not be viewed as approved by DoD for use in schools or CDCs. Each installation should compile a similar listing of proposed pesticides using the sample format or other suitable format that provides the same information.