

Integrated Pest Management Plan for Bates School

Wellesley, Massachusetts

(#1 of 8 Wellesley Public Schools)

12/19/2001

INDOORS

1) General School Information

Bates School
116 Elmood Rd
Wellesley, MA 02482
781-446-6260
abock@postal.wellesley.mec.edu
Prepared by Sarah Little
Dec 19, 2001

2) IPM Coordinator

Dana Cotto
Director of Buildings and Grounds (of Schools)
781-446-6210 x4517
dana_cotto@wellesley.mec.edu

3) School IPM Committee

Amber Bock
Principal
Ted McGlone
Head Custodian
Anne Prinn
Director, Nursing Services (of Schools)
Lenny Izzo
Environmental Health Specialist (Health Dept)
Janet Bowser
Director, Wellesley Natural Resources Commission

4) School IPM Policy

The School Board, the Health Department, the Department of Public Works, and the Natural Resource Commission recognize the potentially serious risks inherent in using chemical pesticides in the school environment. It therefore supports the implementation of a comprehensive Integrated Pest Management (IPM) program for all school buildings and grounds with the goal of controlling pests while preventing exposure of children to harmful pesticides.

Integrated Pest Management (IPM) will be defined as the coordinated use of physical, biological and cultural controls, and, in the face of a public health threat or substantial property damage, the use of least-toxic pest control chemicals. The goal of using IPM in Wellesley is to control pests without exposing people, property and the environment to harmful chemicals.

Integrated Pest Management will be understood to involve the monitoring of pest populations, establishment of tolerance thresholds, modifications of habitats (to eliminate sources of food, water and harborage and entry), utilization of least-toxic controls, keeping of records and evaluation of performance on an ongoing basis.

A pesticide will be defined as any insecticide, rodenticide, herbicide, acaricide, algicide, slimicide, disinfectant or other chemical utilized to kill or repel a pest.

Any use of chemicals will be in compliance with Act Protecting Children and Families From Harmful Pesticides (Chapter 85 of the 2000 Massachusetts Acts) (hereafter referred to as the Act), which restricts specific pesticide use on school property; requires that schools, daycare centers and school age child care programs notify employees, pupils or supervised children and their parents or guardians of pesticide application; requires maintaining detailed records of all pest control procedures; and prohibits the use of any chemical pesticide for purely aesthetic purposes.

Further, all necessary chemical applications shall be made such that no child shall be exposed to pesticides except as may be required in life-threatening situations.

Pursuant to state law, no pesticide may be applied except by a licensed pesticide applicator.

5) School Indoor Pest Problems Description

Ants, Wasps, Hornets, Bees, Wood Roaches, Mice, Termites, Lice

This program is developed for pests present in the years 1998-2000, and may be updated and modified as new pests, tolerance levels, or methodologies appear.

Ants

Ants have been treated with Bendiocarb 1% dust, Sulfluramid 0.5% (Advance Dual Choice) stations, and Deltamethrin 0.03%. Going forward, we will only use stations if necessary, and the following IPM protocols:

Tolerance level

Ants are not specifically a health threat so tolerance levels are quite subjective. We propose to tolerate ant activity unless there are multiple incidences of ants biting people in the classroom, or if the numbers of ants are so large as to be distracting to the learning environment for more than several days.

Control

There are three reasons why ants can become a problem; 1) worker ants coming inside for food or water, 2) winged reproductives ("the swarmers"), emerge inside, or 3) ants colonize and nest in walls or other structures within the building. Different species of ants feed on sugar, fat, or protein. Most species nest outside. Winged ants are "swarmers" - the kings and queens. Large numbers of winged ants indoors indicate an indoor infestation.

Ant problems in the winter indicate an indoor colony. Proper identification will help in finding the nesting site. Most ant problems do not require professional pest control and can be handled with non-chemical means:

- General sanitation. Eliminate food sources. If an ant finds food they recruit hundreds more as long as food is available. If the food is removed ants will be forced to look elsewhere and should stop the habit of coming indoors.
- Wash trash containers, recyclable items, clean up all spills.
- Seal all food, especially sugar containing products in tight fitting glass or plastic containers.
- Caulk entrances and points of entry to keep ants outdoors.
- Spraying ants with soapy water will kill them.
- Winged ants can be cleaned up with a vacuum

If the problem persists, ant baits may be used in schools. Workers will take poison back to the nest and feed it to the young and queen. Some ant baits are for sweet feeding ants, some for protein feeding ants, and some for both types. Active ingredients will include less toxic products such as boric acid, sulfuramid, abamectin, hydramethylnon and fipronil. Baits come in plastic stations, gels and pelleted baits. Different treatment sites will require different formulations. Baits will not be placed in classrooms unless the situation is particularly severe. In that case, they can be used with the permission of the teacher, they must be placed in areas inaccessible to children, and they must be applied by a licensed pesticide applicator.

In severe cases, if colonies are found they can be spot treated. In walls, insecticide dusts containing boric acid, synthetic pyrethroids, drione or silica aerogel can be used. Pesticide applications must be made in compliance with the Act and in such a way that no child can come into contact with pesticides.

Wasps, Hornets, Bees

Wasps, etc. are common problems at the school. In the past we have used Bendiocarb 1% dust (Ficam Dust) and Vikor Wasp and Hornet (Tetramethrin/permethrin 0.1/0.3%) aerosols. Going forward, we will not use anything in the classrooms, and will follow the following IPM protocol:

Tolerance level

In a classroom it is difficult to tolerate even a single wasp, hornet or bee.

Control

Instruct the children not to swat at the insect but to leave it alone. Place a cup over it and slip a piece of stiff paper under the cup to hold it in, and release it outside. Alternatively, swat and kill it with a fly swatter or rolled paper. If more insects find their way in, investigate their entry points and seal them off with caulk. Request screens if they appear to be coming in open windows. Close doors if they are coming in doors. If there is a continuing problem, check for nearby nests and remove food from classroom. Chemical sprays would not be allowed in these circumstances.

Wood roaches

Wood roaches have been treated with Deltamethrin 0.03% (Suspend SC Insecticide). Going forward they will not be treated with any chemicals, and we will follow the following IPM protocol:

Tolerance levels

Wood roaches are not a health nor structural threat.

Control

Look for entry points and seal them off. Trap with cup and release outside, or kill with tissue paper. Chemical control is not appropriate in this case.

Mice

Mice have been treated with Contrac Blox (Bromadiolone 0.005%). Going forward we will follow the following IPM protocol:

Tolerance levels

Any sign of rodent activity should be reported to the IPM coordinator in the school. This included live or dead animals, feces or gnaw marks. Rats and mice cause damage by gnawing, urinating, defecating, and nesting. The damage to food is much greater as a result of contamination than it is from actual loss from feeding. Deer mice are also capable of transmitting the Hantavirus, a serious, often fatal, human respiratory disease.

Control

Good sanitation is essential in rodent control. Eliminate all sources of water, shelter, and food. Store food in rodent-proof containers or structures. No food should be stored in lockers overnight. All food should be drained and sealed in plastic bags. Clean trash containers regularly and make sure containers have tight fitting lids.

Identify and seal all entry points. Mortar, sheet metal, or hardware cloth can be used around pipes, sewer outlets, and small openings. Trim shrubs, grass and vines so that a 12-18 inch vegetation barrier is maintained adjacent to the foundation of buildings. An alternative is to provide a soil sterilization control area in this location.

A trapping program should be in place in critical storage and food handling areas in all schools as a preventative/monitoring program. Traps should be checked at least once a

month. Glue boards and live traps such as catch-all traps can be placed in areas away from foot traffic and are most effective when placed in areas along walls and runways.

If the cultural practices outlined above do not alleviate the problem, there are several rodenticides available. They should be used with caution in and around schools. Place bait in tamper-proof bait stations in areas that are not accessible to children. Snap traps and glue boards can be placed inside bait stations as well to keep them away from children. The IPM committee must be informed if rodenticides are to be used.

Termites

Termites are not present at Bates. If found, the following IPM protocol will be followed:

Tolerance level

Termites are not harmful to people and can be tolerated unless they are doing significant structural damage. Termite swarms in a classroom can be controlled non-chemically on a case by case basis.

Control

Swarms in classrooms can be vacuumed up. Entry points should be caulked. Buildings can be protected from infestation by physical barriers. Existing colonies can be controlled with a chemical baiting system. A number of other treatments such as heat, cold, electricity and microwaves exist, and may or may not be appropriate for specific situations.

Lice

CHEMICALS SHOULD NOT BE USED ANYWHERE IN SCHOOLS TO CONTROL LICE.

6) School IPM Information Flow and Training

A school principal will notify the IPM Coordinator of a pest issue. The Coordinator will call in the pest control company (presently Waltham Chemical) to assess the issue. If pesticides are proposed, the entire Committee shall be notified of, and allowed to comment on, any proposed pesticide use before application, except in emergency situations, in which case a Health Department representative shall be notified beforehand, and the rest of the committee afterwards. A record of the actions taken and outcomes will be maintained in each instance.

The school nurse, PTO safety officer of each school, and the school PTO president will be notified of any decisions made by the IPM Committee, and will also receive prompt notification of any pesticide applications in the school, including those not requiring parental notification under the Act.

School custodians and staff will be invited to attend a yearly training session on building IPM given by the school's pest control company or other IPM professional.

7) School Chemical Pesticide Applied

Advance Dual Choice Sulfluramid 0.5% stations for ants.
Contra Blox Bromadiolone 0.005% for mice.

Wasps etc. are the only anticipated emergency problem. We plan to *Victor Poison-Free® Wasp & Hornet Killer*. Kills wasps, hornets, and yellow jackets in seconds. 15 foot spray. One application lasts 4 weeks. Nozzle sprays easily in corners and tight spaces. Contains: Mint Oil, Sodium Lauryl Sulfate, Water, and Carbon Dioxide. This product is not EPA registered.

Pesticide applicator:
Waltham Chemical, Dick Berman 781 893-1810
817 Moody St
Waltham, MA 02453

8) School non-chemical actions

There are no pests currently being treated. The most common problems are ants, wasps and mice. We plan to follow the IPM protocol described in section 5) above to manage these pests as they arise.

9) School IPM Program Evaluation

The IPM Committee will meet twice per year to review the pest issues, evaluate the IPM actions being taken, to identify training opportunities, and to recommend improvements and update the IPM plan.

10) School IPM Plan Location

A copy of the IPM Plan, standard notification and record keeping data sheets, and all records relating to pest issues and pest control activities will be kept on file in the school office.

References

Wisconsin School IPM program available on the web at:
<http://ipcm.wisc.edu/programs/school/table.htm>

EPA IPM for Schools: A How-to Manual
<http://www.epa.gov/pesticides/ipm>

IPM Integrated Pest Management Kit for Building Managers, Mass Dept. of Food and Agriculture Pesticide Bureau
http://www.massdfa.org/pesticides/publications/IPM_kit_for_bldg_mgrs.pdf

University of Massachusetts Extension, School IPM program
<http://www.umass.edu/umext/schoolipm>

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Director, Wellesley Natural Resources Commission
Judy Curby
Assistant Director, Department of Public Works

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Further, all necessary chemical applications shall be made such that no child shall be exposed to pesticides except as may be required in life-threatening situations.

Pursuant to state law, no pesticide may be applied except by a licensed pesticide applicator.

5) School Outdoor Pest Problems Description

Grounds and Playing fields, Poison Ivy, and Wasps, Hornets, Bees

This program is developed for pests present in the years 1998-2000, and may be updated and modified as new pests, tolerance levels, or methodologies appear.

Grounds and Playing fields

The playing fields are currently managed with applications of lime and fertilizer only. Grubs are addressed by replacing turf and maintaining proper pH. Going forward we will use the Town's new policy as follows:

School grounds will be covered by the Town of Wellesley's Organic Turf and Landscape Management Policy, which prohibits the use of any chemical pesticides on Town-owned land, except in emergency situations with authorization from the Health Department. If EPA-registered pesticides are to be used (including biological controls), application will be made in accordance with the state regulations for schools, including notification of IPM committee, signage, and full parental notification.

Poison Ivy

Poison Ivy is currently managed by hand pulling. Going forward we will use the following IPM protocol:

Tolerance level

Poison ivy is indigenous to our region, is able to grow in many types of soil conditions, is useful to birds and in fact is spread by birds carrying seeds. It can never be eradicated completely or permanently, but it can be controlled. On school grounds, poison ivy needs to be controlled if it is along school paths, on the playing fields or playgrounds, or coming through fences demarking playing fields or playgrounds. Poison ivy in the woods on school grounds need not be controlled and it is impractical to control.

Control

Children should be instructed to recognize poison ivy and avoid touching it. The use of chemical defoliant for removal of poison ivy will be avoided in favor of mechanical removal or mulching of the affected area. Small stands can be pulled by hand by using double layers of plastic bags or rubber gloves, a Tyvek suit, and plastic bag covered shoes. Plants should be put in a large plastic bag and disposed of with the trash. The lotion product Tecnu can be applied to any exposed skin before or after exposure to remove the offending oils from skin or clothing. Large stands should be prevented from developing. To treat a large stand, mulch with cardboard and wood chips. Large vines climbing trees can be controlled by cutting the vine at ground level. Chemicals may be used to paint the stump to prevent further sprouting, or in other extreme cases, but must be used in compliance with the Plan, including full parental notification and pre-notification of IPM committee.

Wasps, hornets and bees

Wasps have been managed with Vikor Wasp and Hornet Tetramethrin/permethrin 0.1/0.3% aerosol. Going forward we will use the following IPM protocol:

Tolerance level

There are many kinds of wasps, hornets and bees. Most of them are beneficial to us, and not all of them sting. Most who do sting will not do so unless they are handled, their nest is disturbed, or their nest is approached too closely. They can be tolerated outdoors unless their nest is readily accessible to children playing in appropriate places such as the playground or paths leading to schools. A nest near the school which is out of reach of children needs to be assessed on a case by case basis. If a child in the school is allergic to bee stings, the nest may be removed. If the nest is giving rise to unusually high numbers of insects on the playground, the nest may be removed. Bear in mind that the insects will be seeking food, not children, and if there is no food source on the playground, a nest out of reach of children may pose little hazard.

Control

The type of wasp, hornet or bee should be identified to determine hazard level. Children should be instructed to move slowly around the insects and not hit them or their nest. The nests are easier to control if discovered early in the spring or summer, when their populations are low. A ground nest can be removed by pouring honey down it in the evening, and waiting for a skunk to dig it out, one or two nights (it's true). An accessible nest may be controlled by bagging it after dark and disposing of it after the insects have died.

Most problems with wasps and yellow jackets will occur in the fall. Some species feed on sugar, meat, or other forms of protein. Wasps will be attracted to garbage cans, pop dispensers, dumpsters and other sources of food. If food is always present the wasps or yellow jackets will continue to come back to the site. In bad years it will be very difficult for children to eat or drink outdoors during the day without attracting yellow jacket workers.

The biggest general threat is if a nest is disturbed because bees and wasps become very defensive. If the nest is in an area of people traffic and is in the ground, wall voids or on low-hanging branches it will need treatment. Bumble bee nests are often in-ground and can be treated like a wasp nest. Bumble bee, yellow jackets and paper wasps will freeze out by late October or early November. These species do not utilize the same nest next spring.

Look for nesting sites under bushes, in old rodent burrows, in hollow trees and other void spaces. Treating nests is more effective than treating individuals. Honey bees will be active in spring and will be in play areas if flowering plants and weeds are present. They are mild mannered and usually only pose a threat if handled. Do not allow children to walk bare footed in these areas. If honeybees are nesting in a building, the comb and honey will need to be cleaned out after the bees have been removed.

- All trash containers need tight-fitting lids or spring loaded doors. Trash should be emptied frequently.
- Dumpsters should be washed on a regular basis to eliminate spilled food and liquids.
- Seal entrances in walls to prevent void-nesting species.
- Individual wasps can be killed with a fly swatter or use a small butterfly net. Captured individuals can be released outdoors or crushed.
- Do not seal the nest entrance of an active nest until the nest is destroyed.
- Foam sprays (Victor brand) can be used on nests. [*Victor Poison-Free® Wasp & Hornet Killer*. Kills wasps, hornets, and yellow jackets in seconds. 15 foot spray does One application lasts 4 weeks. Nozzle sprays easily in corners and tight spaces. Contains: Mint Oil, Sodium Lauryl Sulfate, Water, and Carbon Dioxide.]
- [Nests can be vacuumed. This should only be done by people with experience.]

If the above methods prove ineffective and synthetic chemicals may be used to kill a nest, they must be used in the evening when the insects are in their nest and **when no children are present**. The must be applied in accordance with the Act, including parental notification. All areas accessible to children which have been treated with pesticides must

be washed with soap and water after the nest has been killed and before children are allowed in the treated area.

- Nests in walls may be treated with a dust formulation such as bendiocarb (Ficam), deltamethrin, pyrethrin, or cyfluthrin. Treat in early evening. The nest should be controlled by mid-day.
- Nests high in trees should not be disturbed and do not need to be treated.
- For above ground nests use aerosol sprays containing Pyrethrum or synthetic pyrethroids (allethrin, resmethrin, permethrin).

6) School IPM Information Flow and Training

For pest problems, a school principal will notify the IPM Coordinator of a pest issue. The Coordinator will call in the pest control company (presently Waltham Chemical) to assess the issue.

For turf maintenance, the Town's Department of Public Works will conduct maintenance in accordance with the Town's Organic Turf Policy without using any EPA-registered chemical pesticides.

If pesticides are proposed in either case, the entire Committee shall be notified of, and allowed to comment on, any proposed pesticide use before application, except in emergency situations, in which case a Health Department representative shall be notified beforehand, and the rest of the committee afterwards. A record of the actions taken and outcomes will be maintained in each instance.

The school nurse, PTO safety officer of each school, and the school PTO president will be notified of any decisions made by the IPM Committee, and will also receive prompt notification of any pesticide applications in the school, including those not requiring parental notification under the Act.

The Department of Public Works groundskeepers will be invited to attend training on organic and non-toxic turf maintenance annually. School custodians and staff will be invited to attend a yearly training session on building IPM given by the school's pest control company or other IPM professional.

7) School Chemical Pesticide Applied

Vikor Wasp and Hornet Tetramethrin/permethrin 0.1/0.3% aerosol has been used.

Wasps etc. are the only anticipated emergency problem. We plan to *Victor Poison-Free® Wasp & Hornet Killer*. Kills wasps, hornets, and yellow jackets in seconds. 15 foot spray. One application lasts 4 weeks. Nozzle sprays easily in corners and tight spaces. Contains: Mint Oil, Sodium Lauryl Sulfate, Water, and Carbon Dioxide. This product is not EPA registered.

Pesticide applicators:

Waltham Chemical, Dick Berman 781 893-1810
817 Moody St
Waltham, MA 02453

Department of Public Works, Ron Despris. 781 235-7600 x331
455 Worcester St.
Wellesley, MA 02481

8) School non-chemical actions

There are no pests currently being treated. The most common problems are wasps, poison ivy and grubs. Wasps are tolerated and trash removed from outside. Poison ivy is hand pulled. Grubs are handled by replacing turf and maintaining pH. Biological controls may be tried in the future. We plan to follow the IPM protocol described in section 5) above to manage these pests as they arise.

9) School IPM Program Evaluation

The IPM Committee will meet twice per year to review the pest issues, evaluate the IPM actions being taken, to identify training opportunities, and to recommend improvements and update the IPM plan.

10) School IPM Plan Location

A copy of the IPM Plan, standard notification and record keeping data sheets, and all records relating to pest issues and pest control activities will be kept on file in the school office.

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http://www.massdfa.org/pesticides/publications/IPM_kit_for_bldg_mgrs.pdf

University of Massachusetts Extension, School IPM program
<http://www.umass.edu/umext/schoolipm>