

## Rodent Control in Schools

Schools, especially daycare, elementary and high schools are among the most sensitive accounts rodent control professionals are called upon to service. Much scrutiny is placed on the methods used to control various vermin infesting schools. Although not exhaustive, the following guidelines are intended to serve as a starting point for a rodent control professional in developing plans to solve rodent problems in schools.

### INTEGRATED PEST MANAGEMENT FOR RODENTS

Integrated Pest Management (IPM) can be simply defined as using a variety of methods to control pests, and in general, with preference given to “reduced-risk” solutions. IPM does not rule out the use of rodenticides for rodent control. Indeed, the risks and benefits of any method should be carefully considered.

### KNOWLEDGE (THE FOUNDATION OF IPM)

The rodent control professional must have a good working knowledge of the variety of prevention and elimination tactics and materials at his or her disposal. New scientific discoveries about rodent behavior may require “rethinking” old tactics. Also, there are new rodent control products being introduced regularly.

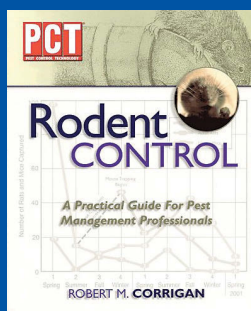


# SOURCES

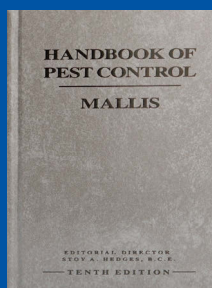
Liphatech.com



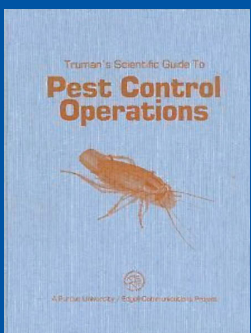
**Rodent Control:**  
A Practical Guide  
by Bobby Corrigan



**Mallis Handbook  
of Pest Control**



**Truman's Scientific  
Guide to Pest  
Control Operations**



## Developing your Plan

### REGULATIONS

Make sure you are aware of any state or local regulations that might apply to your school account. Additionally, the federal Environmental Protection Agency (EPA) has established several initiatives, encouraging IPM in schools.

Some things which may be required:

- IPM coordinator at the school
- Inspection and monitoring
- Notification prior to pesticide applications
- Posting after pesticide applications

### FUNDING

IPM requires greater outlays of money for prevention to reduce the risks associated with both pests and pesticides. However, school districts are often unable to obtain funding for building improvements and sanitation. According to one survey, as of 2013, none of the states with School IPM regulations provided the necessary funding for the schools in the program. Rodent control professionals must be careful to avoid losing money on a low bid job, when the school is unable to do their part.

### PLAN

A well thought out, written IPM plan, based on the school's written IPM Policy will lay out the responsibilities of the rodent control professional and those of the school personnel. It should contain:

- Education for staff, parents and students about pests and IPM
- Roles and responsibilities for staff and professional pest control contractors
- Action thresholds, such as: one mouse requires action within X hours
- Trained person responsible for implementing pest control activities
- Site and pest specific IPM action plans

### COMMUNICATE

Every school rodent IPM program needs a dependable means by which all staff members can communicate sightings and evidence to a person responsible for oversight of the program. This can be as basic as a verbal report to the custodian. However, a written pest sighting report is preferable. At a minimum the report should cover:

- What kind of rodent was observed
- When (date and time)
- Where (e.g. sink area room 112)
- Who (person reporting)

The rodent control professional should start every service visit with a conversation with the contact person about recent rodent activity and a review of the sighting reports. Every service visit should end with another visit with the key contact person and a written report describing rodent control actions and suggestions for eliminating conducive conditions.

# ALLERGENS

Many schools are concerned about students with food allergies, especially to peanuts. Peanut butter may be forbidden as a lure on snap or glue traps. Liphatech Rat and Mouse Attractant™ is a non-toxic soft bait, which contains no nut ingredients. It can be used as a monitoring bait in bait stations. If feeding is noted, trapping or rodenticide application is initiated. It can also be used as a trap lure. Remove it from the paper pouch and place it on a snap trap. It can also be used to lure rodents to glue traps, but it must be placed in a container such as a bottle cap to keep the oil from leaching out and rendering the glue less sticky.

## Complexity

There are myriad potential infestation sites in a school! Classrooms, kitchens, lunchrooms, teachers' lounges, snack bars, vending areas, voids above, behind or below lockers, custodial areas, basements, crawlspaces, attics, suspended ceilings, etc. are all susceptible to infestation. Here are a few of the most significant areas of potential infestation.



### CLASSROOMS

All sorts of paper and art supplies provide harborage and nesting material in closets and cabinets.

- Suspended ceilings provide an undisturbed harborage for house mice and roof rats.
- Norway rats may travel great distances from an uncapped sewer floor drain or other harborage to a classroom food source.
- Lunches, snacks and treats for students may be stored in drawers and cabinets.
- Pet food may be on hand for the class pet guinea pig, goldfish or hamster.
- Insects, indoors and outdoors, such as cockroaches and crickets may also be a food source for mice.



### BOILER AND UTILITY ROOMS

Similar support areas are found in every school. These are too often cluttered and too seldom cleaned. They provide excellent harborage for rodents. Even if there is no food for them in these areas, rodents can forage in other areas of the school.

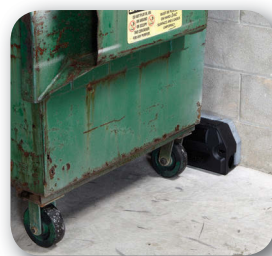
- Materials should be stored up off the floor and as much as practical, away from the walls.
- Keep in mind, rodents often live indoors and forage outdoors.



### KITCHENS/CAFETERIAS

Food handling areas in a school must be kept free of rodent infestation to prevent food-borne disease outbreaks, such as salmonella. The following are critical considerations:

- Proper food storage practices.
- A high level of sanitation.
- Regular and thorough inspections for rodents and their evidence.
- Properly positioned and maintained preventive rodent control devices.
- Fast and aggressive response to any rodent activity.



### GARBAGE AND TRASH MANAGEMENT

Dumpsters and compactors must be:

- Placed on a concrete pad.
- Kept tightly closed when not being loaded or emptied.
- In good structural condition and kept clean inside and out.
- Emptied often enough to eliminate risk of overflow.
- Inspected thoroughly as part of every service visit.
- Protected by appropriate rodent control devices and/or materials.



## Prevention Tactics

The old saying “an ounce of prevention is worth a pound of cure” is very true. Keeping rodents out of schools in the first place will greatly reduce risks and stresses.

Mice only need 1/3 ounce of food spillage a day. Rats only need 1 ounce per day. Cleaning up spilled food and garbage is essential. Pet or lab animal feed should be stored in rodent proof containers. Snacks and carried in lunches should be kept in a rodent resistant area. Snacks to be kept in desk drawers should be in rodent resistant containers.

During the summer, rodent populations climb due to plentiful food and shelter. Populations may exceed the available natural shelter by the time fall arrives. School buildings must be “rodent proofed” to try to keep these shelter seekers out. Rodents can get into buildings by:

- Climbing concrete, brick or other rough surfaced walls.
- Traveling on wires and pipes, etc.
- Gnawing through almost anything softer than steel.
- Digging under structural elements.
- Swimming up through pipes from sewers.
- Squeezing through very small openings.

Campus grounds often offer much that rodents like. School administrators should be informed about things which could attract rodents to the property, such as:

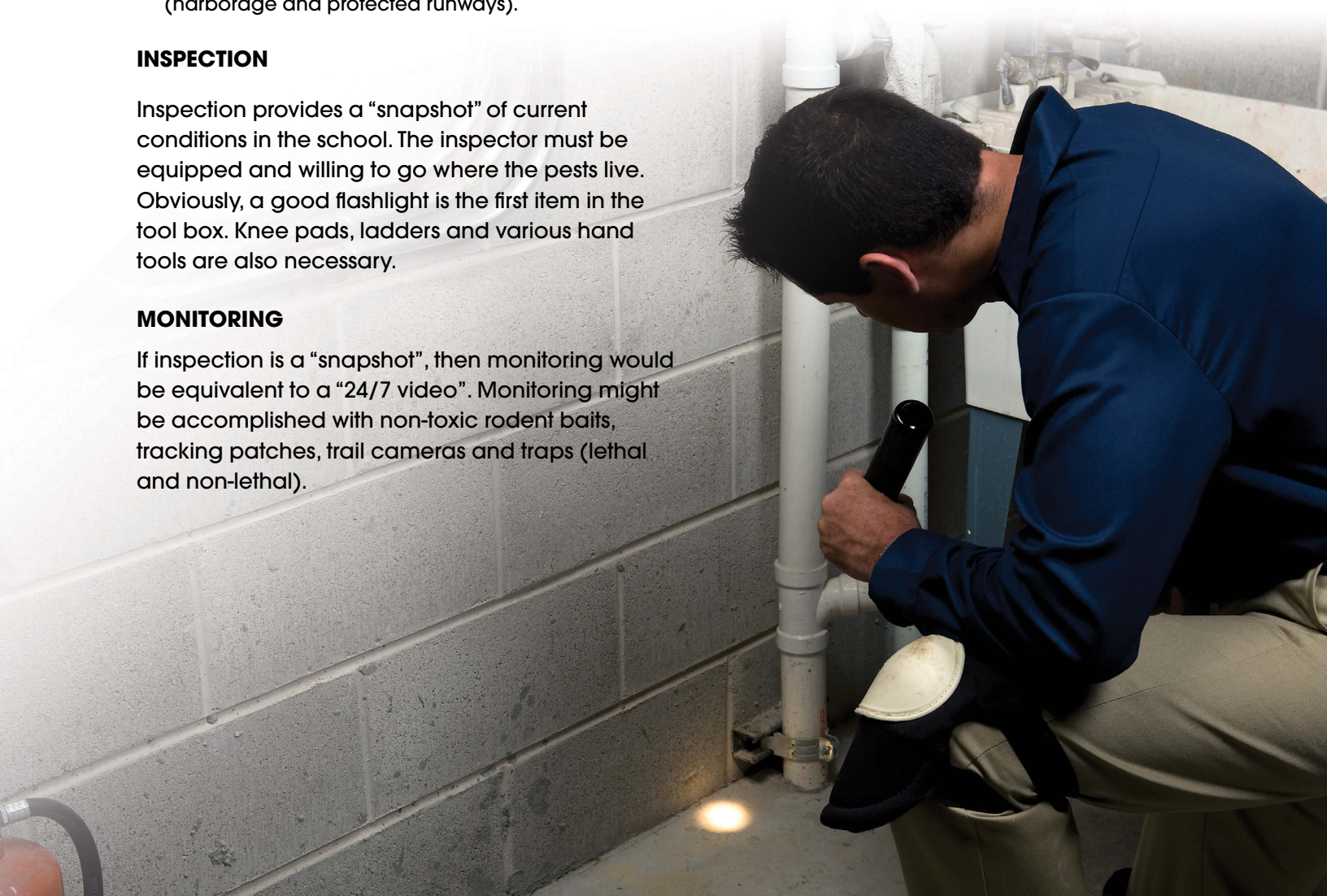
- Fruit bearing trees and shrubs (windfall fruits, seeds and nuts).
- Ground cover plants and organic mulch (harborage and protected runways).
- Piles of debris or poorly stored materials (harborage and protected runways).
- Shrubbyery against the building (harborage and protected runways).
- Tree limbs overhanging roofs or contacting walls (building access – especially roof rats).

### INSPECTION

Inspection provides a “snapshot” of current conditions in the school. The inspector must be equipped and willing to go where the pests live. Obviously, a good flashlight is the first item in the tool box. Knee pads, ladders and various hand tools are also necessary.

### MONITORING

If inspection is a “snapshot”, then monitoring would be equivalent to a “24/7 video”. Monitoring might be accomplished with non-toxic rodent baits, tracking patches, trail cameras and traps (lethal and non-lethal).

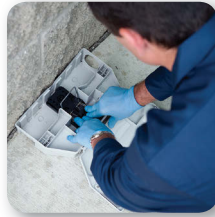


# Elimination Tactics

It is impossible to absolutely exclude all rodents from a school. Doors are opened, products are brought in, and the rodents are incredibly persistent. Sooner or later it will be necessary to eliminate rodents from a school. Here are some ways to control the problem:

## SNAP TRAPS

Used as a routine control method, snap traps are not without risk to children and classroom pets. The old style break-neck traps can break small hands as well. While the newer asphyxiation traps may pose a reduced risk, trapped rodents may draw attention to themselves as they struggle before dying. Place snap traps in bait stations such as the Aegis-RP®:



- Children are less likely to be injured by them.
- Mice will be attracted to the “hole”.
- Trapped rodents will be concealed from view.

Large numbers of snap traps can rapidly reduce a population of rodents. It is usually best to pre-bait them and leave them unset until rodents are taking the bait without hesitation. Then, set them; eliminate the first “wave;” and go back to pre-baiting until feeding resumes. Repeat as needed.

## RAT TRAP SENTRY

Some areas, such as loading docks, may be prone to occasional incoming rats. It may be difficult to keep preventive rat traps in position and set. However, rats are most likely to investigate a trap when the area is still new and they are learning their way around. Take advantage of this by establishing “sentry stations”. Put rat traps in Aegis-RP bait stations. Spray the triggers until wet with unscented powdered anti-perspirant (e.g. Arid Extra Dry). When it dries it will leave a powdery residue.



- Leave the trap unset to avoid spooking a rat, which might only nudge it as it explores it and trigger it without being killed. Once “spooked” like this, it may never get near a trap again.
- You can further enhance your chances of killing the rat by skewering some Liphatech Rat and Mouse Attractant on vertical rods behind the station. This material is a highly palatable, but non-toxic soft bait.
- When rat tracks are noted on the trigger, set it to kill the unsuspecting rat the next time it passes through.

## MULTI-CATCH TRAPS

Maintain multi-catch traps such as a Ketch-Alls in cabinets or closets prone to mouse infestation. They are less likely than snap traps to be sprung and ineffective when a foraging mouse enters the area.



## GLUE TRAPS

Give careful consideration to glue traps before incorporating them into a school IPM plan. They are viewed by some as inhumane. They often catch mostly juvenile rodents. And a child encountering a trapped but still live rodent may be bitten if they try to release it.



- Mice are attracted to holes and burrows. Enhance the effectiveness of glue traps against mice by rolling them and placing them in a length of PVC pipe.
- The oil from trap bait materials such as peanut butter can leach out of the bait and form a non-sticky coating on the glue. Use non-oily bait materials, or place oily baits in a container such as a plastic bottle cap.
- Make sure glue traps are placed in such a way that a struggling rodent won't attract children's attention, and be sure they are inaccessible to children and classroom pets.

## RODENTICIDES

While intensive trapping can often eliminate a rodent population, in some extreme situations it may take a rodenticide application to solve the problem.



- Choose a single-feed rodenticide to make an impact on the population as quickly as possible. Multiple feed rodenticides may take many weeks to produce the desired results.
- Choose the most palatable rodenticide available such as FirstStrike® or Resolv® Soft Baits. Neither of these contains wax which makes them much more attractive to rodents than conventional blocks. Using soft bait rodenticides will improve the odds rodents will find it, try it and then, eat a lethal dose.
- Weekends and holidays offer good opportunities for intensive rodent control work.
- Position rodenticide placements wherever rodent signs are found or activity is suspected. Do not expect rodents to go out of their way to find either traps or rodenticide. You must intercept them between their nest and their food source.
- Maintain an uninterrupted supply of rodenticides to make sure every rodent has an opportunity to eat a lethal dose.
- Keep detailed records as to the location of every bait placement so it can be recovered.
- Plan to search high and low for carcasses to minimize odor problems.



## Know your Pest



### HOUSE MICE INDOORS

- Usually, a population of mice will occupy a small area. Mice appearing in multiple areas more than 30 or 40 feet apart may indicate multiple populations. It is critical to treat all populations aggressively, or the survivors will re-populate.
- Mice are more likely to investigate a trap but like rats, some will do so cautiously. If they spring the trap and are only frightened or slightly injured they may become trap shy. FirstStrike or Resolv Soft Bait in tamper-resistant bait stations or secured in inaccessible areas is a good rodenticide choice for eliminating these trap shy mice, due to its excellent palatability.



### NORWAY RATS OUTDOORS

- Norway rats are by nature burrowing rodents. They are also more likely to take a rodenticide which is delivered to the safety of their burrow. Burrow baiting is usually the best way to eliminate an outdoor Norway rat infestation.
- Maki® and Generation® pellets are paraffinized to help them withstand the moist environment of a rat burrow. They are also labeled for burrow application.
- While properly applied pellets are unlikely to be kicked out of a burrow by rats, BlueMax™ Meal is even less likely. Even if some is, it blends in with the dirt and is not able to be picked up by a child or non-target animal.



### NORWAY RATS OR ROOF RATS INDOORS

- Due to their larger size, the potential for an odor problem is much greater. Start with intensive snap trapping as described above. Pre-baited live traps may catch some of those which have become snap trap shy due to a near miss experience.
- Rats are often reluctant to enter a bait station. In some situations, it may be necessary to secure FirstStrike or Resolv pouches with wire in areas inaccessible to children, but actively used by rats.

Rodent IPM in accounts as sensitive as schools requires knowledge of rodent pests as well as control tools and tactics. The rodent control professional and school personnel must communicate well and work together to develop and implement an effective Rodent IPM plan. Situations will change and new products will become available, so regular evaluation and modification of the plan is necessary.

**To learn more or for assistance with a difficult rodent control problem in a school, contact your local Liphatech representative.**