

Integrated Pest Management In Buildings



Integrated Pest Management in Buildings

Table of Contents

Introduction	1
Explanation of IPM	1
1. Identify Pest and Monitor Progress	2
2. Set Action Thresholds.....	2
3. Prevent	2
4. Control.....	3
Importance of IPM.....	3
Health Benefits.....	3
Economic Considerations.....	4
Roles and Responsibilities for Pest Prevention and Management.....	4
Developers	4
Pest Management Professionals.....	4
Cleaning Staff	5
Building Management/Operations	5
Landscape (if applicable):	6
Building Occupants.....	6
Building Maintenance Staff.....	6
Implementing IPM	6
Regular IPM Team Meetings	6
Education and Outreach.....	7
Training Resources	7
External Support	8
Conclusion	8
Glossary	9
Sources.....	12
Appendix A: IPM Program Review Form	A-1

Integrated Pest Management in Buildings

Introduction

Integrated Pest Management (IPM) is an environmentally friendly, common sense approach to controlling pests. This document serves to define IPM, describe proper IPM implementation in buildings, and outline the roles and responsibilities necessary for success. The following IPM principles apply to both new construction and existing commercial and residential structures and their landscaping.

This document will best serve individuals responsible for pest prevention and management in buildings including, but not limited to, building managers, cleaning staff, maintenance staff, building occupants, and pest management professionals (PMPs). It may also serve as an informational resource for developers and state and local governmental officials.



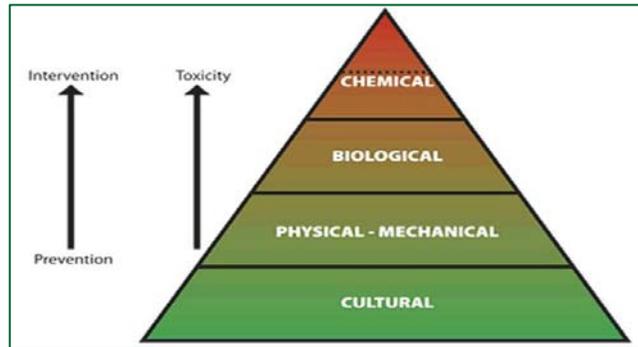
Traditional pest control involves the routine application of pesticides. IPM, in contrast, focuses on pest prevention and uses pesticides only as needed. This provides a more effective, environmentally sensitive approach.

The building-centric practices prescribed in this plan were developed in consultation with the U.S. Department of Housing and Urban Development, U.S. Centers for Disease Control and Prevention, as well as experts in the fields of pest management, facilities services, cleaning services, and healthy housing. This guidance allows for implementation in a variety of buildings and institutions, and will serve as a resource for standard-setting bodies such as the U.S. Green Building Council.

Explanation of IPM

IPM programs take advantage of all appropriate pest management strategies, including the judicious use of pesticides. Preventative pesticide application is limited because the risk of pesticide exposure may outweigh the benefits of control especially when non-chemical methods provide the same results.

IPM is not a single pest control method but rather involves integrating multiple control methods based on site information obtained through inspection, monitoring, and reports. Consequently, every IPM program is designed based on the circumstantial pest prevention goals and eradication needs. Regardless, successful IPM programs use the same four-tiered implementation approach (below).



(Pennsylvania State University, 2011)

1. Identify Pest and Monitor Progress

Correct pest identification is required to determine the best preventative measures and reduce the unnecessary use of pesticides. Additionally, correct identification will prevent the elimination of beneficial organisms. When monitoring for pests:

- ✓ Maintain records for each building detailing monitor techniques, location, and inspection schedule
- ✓ Record monitoring results and inspection findings, including recommendations

Many monitoring techniques are available and often vary according to the pest. Successful IPM programs routinely monitor pest populations, pest vulnerable areas, and the efficacy of prevention and control methods. IPM plans should be updated in response to monitoring results.

2. Set Action Thresholds

An action threshold is the pest population level at which the pest’s presence is a nuisance, health hazard, or economic threat. Setting an action threshold is critical to guiding pest control decisions. A defined threshold will focus the size, scope, and intensity of an IPM plan.

3. Prevent

IPM focuses on prevention by removing conditions that attract pests, such as food, water, and shelter. Preventative actions include:

- | | |
|--|---|
| <ul style="list-style-type: none"> ✓ Reducing clutter ✓ Sealing areas where pests enter the building (weatherization) ✓ Removing trash and overgrown vegetation | <ul style="list-style-type: none"> ✓ Maintaining clean dining and food storage areas ✓ Installing pest barriers ✓ Removing standing water ✓ Educating building occupants on IPM |
|--|---|

4. Control

Pest control is required if action thresholds are exceeded. IPM programs use the most effective, lowest risk options considering the risks to the applicator, building occupants, and environment. Control methods include:

- ✓ Pest trapping
- ✓ Heat/cold treatment
- ✓ Physical removal
- ✓ Pesticide application

Documenting pest control actions is critical in evaluating success and should include:

- ✓ An on-site record of each pest control service, including all pesticide applications, in a searchable, organized system
- ✓ Evidence that non-chemical control methods were considered and implemented
- ✓ Recommendations for preventing future pest problems



Importance of IPM

Health Benefits

Adopting IPM reduces exposure to both pests and pesticides. Two health concerns faced throughout the country by children and adults are allergies and asthma. Rodents, cockroaches, and dust mites are often present in buildings and can cause, or inflame, serious allergic reactions and asthma attacks. A New York City Housing Authority study revealed a significant association between the prevalence of asthma among children



and adults, and the incidence of pests, allergens (high cockroach and mouse allergen levels), and pesticides found in public housing (Chew, et al., 2006).

While pesticides can play a key role in IPM programs by their very nature most pesticides pose some risk. They are powerful tools for controlling pests but need to be used carefully and judiciously. For more information on health and safety issues associated with pesticides, visit: www.epa.gov/pesticides/factsheets/health_fs.htm. For information on specific chemicals, visit: www.epa.gov/pesticides/chemicalsearch.

Economic Considerations

There are cost savings associated with using IPM. IPM may be more labor intensive than conventional pest control and may require more up front resources. However, costs are generally lower over time because the underlying cause of the pest problem has been addressed. IPM practices also provide financial benefits unrelated to pests.

Weatherization of buildings not only excludes pests but also saves energy and reduces moisture problems.

Roles and Responsibilities for Pest Prevention and Management

All stakeholders should be involved in a decision to use pesticides, including the IPM coordinator, pest management professionals, building managers, residents, and cleaning staff.

Developers

- Educate the building management staff on IPM-based design changes
- Integrate IPM recommendations into the building design and construction
- Assess pests in vacant buildings and consult a third-party certified pest management professional for treatment and structural alteration options
- Use IPM strategies to prevent occupants from bringing pests into new or remodeled space

Pest Management Professionals

- Notify IPM Coordinator of scheduled visits
- Deliver pest management services that provide a variety of solutions, including non-pesticide options and recommendations for prevention-based improvements
- Stay current on pest management through continuing education
- Educate stakeholders on choices for non-chemical and chemical control methods
- Participate in periodic meetings on IPM implementation

- Keep a well-recorded physical log of pest management efforts (date, pest type, control method, result, etc.)
- Acquire certification through EcoWise, Green Shield, GreenPro, or a program with similar standards



Cleaning Staff

- Maintain a clean environment
- Monitor pest reports from occupants (pest pressures)
- Identify repairs that could alleviate pest problems
- Address conditions that provide pests with food, water, and shelter
- Participate in periodic meetings on IPM implementation

Building Management/Operations

- Establish key performance measures to determine success
- Ensure that the IPM Plan includes action thresholds for pests
- Keep a well-recorded physical log of pest management efforts (date, pest type, control method, result, etc.)
- Maintain an IPM budget and use contracts that require IPM methods
- Hold stakeholders accountable according to their roles and responsibilities
- Ensure communication between all stakeholders
- Use prevention measures first, especially those that have multiple benefits, such as weatherproofing (e.g. door sweeps and caulking)
- Provide training on IPM to all stakeholders
- Identify a building resident(s)/occupant(s) to serve as a volunteer liaison or council between the residents/occupants and building management on environmental matters
- Coordinate with landscapers to minimize pest-conducive conditions
- Provide occupant notices of pesticide applications in accordance with the pesticide label. Consider adopting the LEED (Leadership in Energy and Environmental Design) notification standard.



Landscaper (if applicable):

- Utilize landscape designs that eliminate pest-conducive conditions
- Assist the building managers in choosing native endemic plants that minimize potential pests
- Use IPM strategies that include proper watering, mowing, soil testing, and soil aeration
- Communicate with pest management professionals to ensure pest control techniques and pesticides are not harmful to the landscape
- Participate in periodic meetings that focus on implementing IPM
- Provide occupant notices of pesticide applications in accordance with the pesticide label. Consider adopting the LEED notification standard

Building Occupants

- Maintain a clean environment by keeping space free of crumbs, food scraps, standing water, and debris that could harbor pests
- Participate in IPM educational opportunities provided by building management
- Communicate pest and repair issues to building management
- Participate in IPM meetings with management through the building resident/occupant liaison
- Inspect your belongings to prevent introducing pests
- Prepare the area for pest control service, as detailed by the PMP
- Work with the IPM coordinator to get help if limitations make it impossible for the occupant to do his/her part
- Report the presence of pests immediately to building management
- Make all necessary preparation and accessibility for PMP appointments

Building Maintenance Staff

- Repair building deficiencies that may lead to pest problems
- Participate in regular meetings and special trainings on IPM
- Report problems to building management

Implementing IPM

Regular IPM Team Meetings

Regular IPM team meetings enable all parties to understand their roles and responsibilities. At the initial team meeting, set IPM goals and action thresholds and discuss a pesticide use plan. Use this information to develop an IPM plan that details responsibilities, action thresholds, and treatment methods. The IPM Program Review Form (Appendix A) serves as a checklist to support the design and implementation of your IPM program.

Education and Outreach

Education is of paramount importance to allow IPM stakeholders to execute their roles and responsibilities confidently and appropriately. IPM training and education should be recorded in your IPM Plan. Seek to partner with key stakeholders in your community. This is especially important in buildings in which the occupants are more susceptible to the health impact from pests (e.g., hospitals, schools, and daycares).

Partnership suggestions include:

1. IPM professionals should be encouraged to participate in or become members of local environmental advisory/strategy committees or counsels.
2. Pest management professionals (PMPs) should join local environmental and community health organizations to promote the benefits of IPM.
3. Building managers and key stakeholders should use local laws / ordinances to leverage funding to support their IPM programs.

Mechanisms of this nature can also lead to generating an internal funding source that supports the programs existence.



Training Resources

EPA has IPM resources, particularly for schools and buildings, available at www.epa.gov/pestwise.

Every state and territory of the United States has an IPM coordinator (www.ipmcenters.org/contacts/IPMDirectory.cfm). These individuals are usually located at land grant universities and are aware of research and training opportunities for IPM in their university, state, and region.

Four Regional USDA IPM Centers (www.ipmcenters.org) train and communicate (<http://www.northeastipm.org/ipm-in-action/ipmresources/>). Recent projects led by IPM Centers include IPM in housing and schools.

Information on IPM in affordable housing is available at (www.StopPests.org). The project is managed by the Northeastern IPM Center at Cornell University with funding through an interagency agreement between U.S. Housing and Urban Development and U.S. Department of Agriculture.

The IPM Institute of North America promotes IPM use in all settings. It operates several IPM certification programs including IPM Star for schools (IPM Institute of North America, 2011) and GreenShield Certified for Pest Management Professionals (IPM Institute of North America, 2011). The Institute (www.ipminstitute.org) has a wealth of IPM standards and contacts for resource information.

The National Pest Management Association (www.pestworld.org) administers the Green Pro Certification program and has an array of educational and training materials (National Pest Management Association, 2011).

External Support

In addition to the stakeholders who use the building daily, state, tribal, and local housing departments are also interested in implementing IPM programs. These authorities are often concerned with minimizing resident exposure to chemicals as well as the health and environmental impacts of living with pests. IPM is a valuable tool for balancing these concerns. For additional assistance, contact your state IPM coordinator (www.ipmcenters.org/contacts/IPMDirectory.cfm) and local support agencies such as health departments, and resident support services to synergize efforts.

Conclusion

Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. This brochure serves as a resource as you develop and implement your IPM program. Through IPM, you can prevent pests, save money, and reduce risks to human health and the environment.

Glossary

The following terms are used in this document or are commonly used in structural or landscape pest management in schools.

Action thresholds (action level) – a point at which pest populations or environmental conditions indicate that pest control action must be taken.

Infestation – a troublesome level of pests in a particular area.

Inspection – the systematic examination of a site for pest activity or conditions that might encourage or allow pests to become a problem. Careful regular inspection of buildings and grounds with a focus on pest vulnerable areas such as loading docks, kitchens, food storerooms, cafeterias, mechanical rooms, and teachers' lounges can greatly reduce pest problems and the need for pesticide applications or other intervention.

Integrated Pest Management (IPM) - an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices.

IPM team – a stakeholders group comprised of building administration, maintenance, cleaning staff, and occupants. The team formulates the IPM plan and IPM policy and participates in oversight of IPM activities.

IPM coordinator – the employee responsible for day-to-day interpretation of the IPM policy for a facility. The IPM coordinator may or may not be a pest management professional, but is the decision-maker who receives specialized training in IPM, accesses the advice of professionals, and chooses a course of action. For example, the IPM coordinator may be the facilities manager or environmental manager. For facilities with an in-house professional pest management program, the IPM coordinator may also be the pest manager.

IPM plan – a written document that includes specific information on the operation of a facility's IPM program. The IPM plan may include a description of IPM roles for all staff, occupants, and other community members; pesticide application notification and posting policies; list of key pests; action thresholds, a hazard-based hierarchy of management options and prevention/avoidance strategies to be used for key pests; inspection schedules for facilities; policies for working with outside contractors; lists of resources for resolving technical questions; and other pertinent information. The IPM plan provides an excellent tool for training new personnel including during management transitions.

IPM policy – a written document stating a building or facility’s commitment to IPM and defining overall IPM goals. This document is updated periodically and used to guide decision-making as the IPM program is implemented.

Key pest – an insect, mite, rodent, fungus, nematode or weed that frequently results in unacceptable damage and typically requires a management action. Key pest status is dependent on the action threshold set for the pest. For example, cutworms may be a key pest on high-visibility athletic fields, but not on adjacent lawn areas where the typical level of cutworm damage is very tolerable.

Monitoring – the regular, on-going inspection of pest vulnerable areas undertaken to provide accurate information to make appropriate decisions for managing pests.

Pest – an organism that causes problems for humans, including damage to structures, health threats to humans, domestic animals or livestock. For example, there are thousands of species of ants but only a few cause problems and are considered pests.

Pest vulnerable areas – sites where pests are especially likely to be or to cause damage, often due to availability of food, water or shelter, including loading docks, dumpster areas, kitchens, food storerooms, cafeterias, lounges, mechanical rooms, and custodial closets.

Pesticide – any substance or mixture of substances intended for preventing, destroying or repelling any insect, rodent, nematode, fungus, weed or any other form of pest.

Pesticide label – all printed material attached to or part of the pesticide container including directions for use, and storage and disposal instructions. Users are legally required to follow directions on pesticide labels.

Pesticide resistance – natural or genetic qualities of a pest population that enable pests to tolerate the poisonous effects of certain types of pesticides that are toxic to other members of that species.

Pest management professional – a contractual worker or staff member whose primary duties involve providing pest management services.

Pest management roles – the responsibilities assumed by individuals to maintain an environment free of interference from pest and pesticide risks.

Pest manager – the individual who conducts actions and/or directs others to maintain effective pest management at a site. The pest manager should receive specialized IPM training and be licensed to apply pesticides. The pest manager may be an employee or a contracted professional pest manager. The IPM coordinator may also be the pest manager.

Structural pest – a pest found in or on structures such as a termite or wood rot fungus that destroys wood in buildings, sometimes referred to indoor pests versus outdoor or landscape pests.

Sources

- Chew, G., Carlton, E., Kass, D., Hernandez, M., Clarke, B., Tiven, J., et al. (2006). Determinants of cockroach and mouse exposure and associations with asthma in families and elderly individuals living in New York City public housing. *Annals of Allergy, Asthma & Immunology*, 502-513.
- EcoWise Certified. (2011). *IPM Service Forms*. Retrieved 11 30, 2011, from Integrated Pest Management - Controlling Pests with Common Sense: <http://www.ecowisecertified.org>
- General Services Administration. (2011). *Integrated Pest Management*. Retrieved November 30, 2011, from General Services Administration: <http://www.gsa.gov/ipm/>
- IPM Institute of North America. (2011). *Effective pest control. Peace of mind*. Retrieved November 30, 2011, from Green Shield Certified: <http://www.greenshieldcertified.org/>
- IPM Institute of North America. (2011). *IPM Star Certified*. Retrieved November 30, 2011, from IPM Institute of North America: <http://www.ipminstitute.org/ipmstar.htm>
- Maryland Department of Agriculture. (2000). *Action Thresholds in School IPM Programs*. Retrieved November 30, 2011, from University of Florida National School IPM Information Source: http://schoolipm.ifas.ufl.edu/DOC/MD_THRES.PDF
- National Pest Management Association. (2011). *Promote Your Business. Preserve the Planet*. Retrieved November 30, 2011, from Green Pro Certified Eco-Effective: <http://www.npmagreenpro.org>
- Northeastern IPM Center. (n.d.). *Integrated Pest Management for Multifamily Housing*. Retrieved December 2011, from Stop Pests: <http://www.stoppests.org/>
- Pennsylvania State University. (2011). *Pyramid of IPM Tactics*. Retrieved November 30, 2011, from Pennsylvania Integrated Pest Management: <http://extension.psu.edu/ipm/schools/educators/ipm-pyramid-of-tactics>
- U.S. Department of Agriculture. (2004). *National Road Map for Integrated Pest Management*. Retrieved November 30, 2011, from National Information Center for the Regional IPM Centers: <http://www.ipmcenters.org/Docs/IPMRoadMap.pdf>

Appendix A: IPM Program Review Form

Instructions

This form serves as a checklist to support the design and implementation of your IPM program. To complete, you will need:

- input from site staff/occupants
- copies of service records for inspection/monitoring
- copies of service records for locations where pesticides were applied (up to three locations). This includes documentation of inspection, monitoring, PMP service, education efforts, and maintenance work.

Answer the following questions based on staff knowledge and provided documentation.

Background Information

Building Management Professional Completing Form _____

Site Address _____

Describe building/site function (commercial, school, residential, etc.):

Date of Last Program Evaluation: _____

Has the IPM program changed based on findings from the previous evaluation? Yes No N/A

Have you met the objectives established during the last evaluation? Yes No

Describe major construction, renovation, or service changes that influenced pest control since the last evaluation:

Did you have any pest emergencies this month? If yes, did you use a chemical in which the label of that product required notification? (Remember notification is only required if the label warrants it)

Describe method of evaluating and monitoring the success of the IPM plan & building occupant satisfaction:

Describe major findings from your evaluation/monitoring:

IPM Education Activities

Describe activities for educating stakeholders on IPM and the policy and procedures for your property since the last evaluation.

Target Audience(s)	Training Date	Training Length (hours)	Topics Covered	Attendees (number)	Instructor/ Information Source

IPM training available in a variety of languages (if necessary)? Yes No

Provided IPM educational materials? Yes No

One-on-one support provided to occupants living/working where infestation occurred? Yes No

Total schools Including IPM education in curricula (optional) _____

Maintenance Repair Staff

Maintenance Repair Staff						
Are pest-proofing inspections ROUTINELY conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Are the root causes of pest problems always identified and resolved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Are maintenance staff and contractors aware of their role in the IPM program? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Maintenance staff educated on their specific role within the past 12 months? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Did you note any evidence of pest presence (e.g. in a log book)? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Based on information in the service histories or IPM log, complete the following for three sites (use the treatment codes on page A-6):						
Describe any recent repairs made in response to the IPM team’s request:						

Recommended Actions (use treatment codes on page A-6):						
Date	Repair Site <i>(use codes on page A- 6)</i>	Repair Performed <i>(use codes on page A- 6)</i>	Equipment Used <i>(use codes on page A- 6)</i>	Material		Quantity (# of devices or amount of product— specify measure: oz., lbs. pt., qt. gal.)
				Product Name	EPA Reg. #	

Pest Management Professional & Building Manager

Building managers and Pest Management Professionals are primarily responsible for making decisions regarding chemical section / application in or around the building. Please document actions and decision made by both parties together in this section.

IPM coordinator is aware of all treatment options including alternative control methods without using pesticides? Yes No

Do you have a strategy for pesticide risk reduction? Yes No

Do you have IPM provisions in your pest control contract? Yes No

Are all Pest Management Personnel on site properly licensed and trained? Yes No

Are copies of current licenses included in the on-site log? Yes No

Are copies of current labels and MSDSs for each pesticide product used included in the on-site log? Yes No

Is notification of intent of service with customized preparation instruction (if needed) given in advance of visit? Yes No

Is notification and any educational materials provided in appropriate language/reading level? Yes No

Is there a formal IPM policy in place? Yes No

Is there an IPM plan in place (a plan to deal with potential and current pest issues)? Yes No

Is there an active, well-qualified and effective IPM coordinator? Yes No

Are ALL employees aware of IPM? Yes No

Management educated on their specific role within the past 12 months? Yes No

Do you ALWAYS utilize formal IPM decision-making protocols? Yes No

Have pests been identified before ANY treatment? Yes No

Does the PMP make pest-proofing recommendations at each visit? Yes No

Are the root causes of pest problems always identified and resolved? Yes No

Did your staff follow the IPM policy and plan when addressing pest issues? Yes No

If no, list strategies to improve their future response.

Have pest monitoring and action thresholds been utilized? Yes No

Are formal sanitation/housekeeping protocols in place? Yes No

Based on information in the service histories or IPM log, indicate whether the following have been completed:

Occupant interviewed for history of pest problem(s) and tolerance level

Site inspected and pest(s) identified (including exterior, if applicable)

Conducive conditions recorded (interior and exterior, if applicable)

Recommendations written for conditions that attract pest and acknowledged by responsible parties

Discussed findings with occupant/IPM coordinator

- Information about pest prevention/treatment communicated to/left with occupant
- Non-chemical control tactics used for every infestation
- Action threshold acknowledged and response scaled to level of infestation
- Pesticides selected with risk in mind and used judiciously
- Follow-up inspection scheduled before pest populations could rebound to determine if treatment was effective

Date of Treatment: _____

Treatment Record (use treatment codes on page A-6):

Date	Treatment Site <i>(use codes on page A- 6)</i>	Treatment Method <i>(use codes on page A- 6)</i>	Equipment Used <i>(use codes on page A- 6)</i>	Product			Quantity (# of devices or amt. of concentrate—specify measure: oz., lbs. pt., qt. gal.)
				Product Name	EPA Reg. #	Check if not on Program List	

Prevention Responsibilities and Recommendations

Communication with Customer (building occupants)

Information about pest prevention/treatment communicated to/left with customer (by building liaison or IPM Coordinator):

Did you have any pest emergencies this month? If yes, did you use a chemical in which the label of that product required notification? (Remember notification is only required if the label warrants it)

Describe method of evaluating and monitoring the success of the IPM plan and building occupants satisfaction:

Suggested Prevention/Treatment Choices (Choose from items below; write number code in space in previous pages)

TO LIMIT FOOD	TO LIMIT HABITAT	TO LIMIT ACCESS
1. Improve general cleanliness 2. Vacuum and/or mop floors 3. Store food (including pet food and bird seed) in pest-proof containers or in refrigerator 4. Remove or seal up garbage at night. 5. Clean garbage cans/garbage area 6. Clean recyclables before storing 7. Clean recycling area 8. Keep tight-fitting lids on garbage cans and dumpsters when not in use and at night 9. Remove and clean pet dishes after pets eat 10. Treat, trim or remove vegetation with honeydew producing insects (aphids, scales, mealybugs) 11. Remove pet droppings outside 12. Clean up fallen fruit and nuts outside 13. Clean up spilled bird seed around feeders 14. Other _____ 15. Other _____ 16. Other _____	20. Move wood piles away from structure 21. Remove brush and/or rock piles 22. Eliminate areas of excessive moisture 23. Fix plumbing and irrigation leaks 24. Seal up cracks and crevices 25. Bring order to storage areas 26. Eliminate clutter, esp. near sinks, stoves & refrigerators 27. Eliminate long expanses of dense, ground cover 28. Trim tree and shrub branches 3' to 6' away from structure—leave a clean border around foundation 29. Remove standing water 30. Remove debris from gutters 31. Remove debris from roof 32. Other _____ 33. Other _____ 34. Other _____	40. Seal holes in structure outside 41. Seal holes in structure inside 42. Trim tree and shrub branches 3' to 6' away from structure—leave a clean border around foundation 43. Weather-strip doors and/or windows 44. Add screens 45. Repair screens 46. Add door sweeps or otherwise fix gaps under doors 47. Add kick-plates 48. Seal HVAC units 49. Cover air vents with ¼" hardware cloth 50. Other _____ 51. Other _____ 52. Other _____

SITE = Site where treatment applied	METHOD = Treatment method used	EQUIPMENT = Used for chemical application
RESIDENTIAL 1. Kitchen 2. Living Room 3. Bathrooms 4. Bedrooms 5. Dining room 6. Den 7. Utility room 8. Basement/crawl space 9. Outside 10. Attic 11. Roof/gutters 12. Other _____ 13. Other _____ 14. Other _____	NON-CHEMICAL 50. Inspection only 51. General cleaning 52. Vacuuming 53. Steam cleaning 54. Heat treatment 55. Pest exclusion work 56. Insect sticky trap placement 57. Snap trap placement 58. Multiple-catch trap placement 59. Glue board placement 60. Live trap placement 61. Rodent monitoring block/non-toxic tracking powder placement 62. Other _____ 63. Other _____ 64. Other _____	200. Insect bait station 201. Hand duster 202. Power duster 203. Insect bait applicator 204. Aerosol can 202. Paint brush application 203. Compressed sprayer 204. ULV machine 205. Rodent bait station 206. Power sprayer 207. Other _____ 208. Other _____ 209. Other _____
COMMERCIAL 20. Product areas 21. Rest rooms 22. Storage 23. Offices 24. Classrooms 25. Meeting rooms 26. Areas occupied by people 27. Food consumption areas 28. Food prep areas 29. Recreation 30. Dumpster 31. Exterior 32. Basement or crawl space IDENTIFY OTHER AREAS NOT LISTED 33. _____ 34. _____ 35. _____	CHEMICAL 70. Insect bait placement 71. Void treatment 72. Treatment to other inaccessible area 73. Treatment to area humans would not normally contact 74. Spot treatment outdoors (2ft. sq. max.) 75. Rodenticide placement 76. Other _____ 77. Other _____ 78. Other _____ 79. Other _____ 100. Method not allowed in the <i>Standards</i> and requiring Notice of Deviation. Describe: _____ _____	COORDINATION AND EDUCATION 300. Conduct initial IPM team meeting 301. Hold regular team meetings 302. Provide training materials to all stakeholders

Modified with permission from EcoWise Certified treatment code reference chart. (EcoWise Certified, 2011)