



CITY OF TUKWILA –INTEGRATED PEST MANAGEMENT (IPM)

What Is Integrated Pest Management?

A well-defined Integrated Pest Management (IPM) is a program that should be based on prevention, monitoring, and control which offers the opportunity to eliminate or drastically reduce the use of pesticides, and to minimize the toxicity of and exposure to any products which are used. IPM does this by utilizing a variety of methods and techniques, including cultural, biological and structural strategies to control a multitude of pest problems.

IPM is a term that is used loosely with many different definitions and methods of implementation. IPM can mean virtually anything the practitioner wants it to mean. **Beware of chemical dependent programs masquerading as IPM.**

Those who argue that IPM requires the ability to spray pesticides immediately after identifying a pest problem are not describing IPM. Conventional pest control tends to ignore the causes of pest infestations and instead rely on routine, scheduled pesticide applications. Pesticides are often temporary fixes, ineffective over the long term.

Non-toxic and least toxic control products are a major growth area and new materials and devices are increasingly available in the marketplace.

The Six IPM Program Essentials

Monitoring. This includes regular site inspections and trapping to determine the types and infestation levels of pests at each site.

Record-Keeping. A record-keeping system is essential to establish trends and patterns in pest outbreaks. Information recorded at every inspection or treatment should include pest identification, population size, distribution, recommendations for future prevention, and complete information on the treatment action.

Action Levels. Pests are virtually never eradicated. An action level is the population size which requires remedial action for human health, economic, or aesthetic reasons.

Prevention. Preventive measures must be incorporated into the existing structures and designs for new structures. Prevention is and should be the primary means of pest control in an IPM program.

Tactics Criteria. Under IPM, chemicals should be used only as a last resort only, but when used, the least-toxic materials should be chosen, and applied to minimize exposure to humans and all non-target organisms.

Evaluation. A regular evaluation program is essential to determine the success of the pest management strategies.

For more information on IPM. Click here for our [Ten Myths Behind Pesticide-Dependent Pest Management in Schools](#). Click [here](#) for a pdf copy of *What Is IPM?*

Integrated Pest Management

(as defined by Beyond Pesticides)

IPM is a managed pest management system that:

- eliminates or mitigates economic and health damage caused by pests;
- minimizes the use of pesticides and the risk to human health and the environment associated with pesticide applications; and
- uses integrated methods, site or pest inspections, pest population monitoring, an evaluation of the need for pest control, and one or more pest control methods, including sanitation, structural repairs, mechanical and living biological controls, other non-chemical methods, and, if nontoxic options are unreasonable and have been exhausted, least toxic pesticides.

Least Toxic Pesticides (as defined by Beyond Pesticides)

Least toxic pesticides include:

- **boric acid**
- **desiccant dusts (diatomaceous earth and silica gel)**
- **nonvolatile insect and rodent baits in tamper resistant containers or for crack and crevice treatment only,**
- **microbe-based pesticides,**
- **pesticides made with essential oils (not including pyrethrums) without toxic synergists; and,**
- **materials for which the inert ingredients are nontoxic and disclosed.**

The term **'least toxic pesticides'** does not include a pesticide that is:

- determined by EPA to be a possible, probable, or known carcinogen, mutagen, teratogen, reproductive toxin, developmental neurotoxin, endocrine disruptor, or immune system toxin;
- a pesticide in EPA's toxicity category I or II; and
- any application of the pesticide using a broadcast spray, dust, tenting, fogging, or baseboard spray application.

From "What is Integrated Pest Management," by Beyond Pesticides.

(<http://www.beyondpesticides.org/assets/media/documents/infoservices/pcos/What%20is%20IPM.pdf>).

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How to Implement an IPM Program

Decision-Making Process. Create an IPM decision-making process that draws on accurate, timely information to make pest-prevention and management decisions. Determine the needs of the site and set “action thresholds,” i.e., levels of pest populations at which remedial action is necessary. This will vary depending on the site: what type of structure it is, who is using it, and how it is being used. For instance, a cafeteria will need a higher level of pest protection than an equipment room. This decision should be made with someone knowledgeable about the target pests and the risks of pesticides to be used, not someone who has a financial interest in selling a toxic pesticide product.

Monitoring. Implement a monitoring program designed to provide accurate, timely information on pest activity, to establish whether there is in fact a pest problem, and to identify its causes. Implement a schedule and a plan for monitoring pest populations and the success of pest-control efforts. This will help determine acceptable pest-population levels, effective reduction measures, and breach of the action threshold. The best way to monitor for many pests, like cockroaches, is with sticky traps. They should be placed throughout the site at many different levels. Set the traps for 24 hours and then record your results. The traps should be used on a regular schedule.

Pest-Prevention Practices. Use practices that eliminate the need for hazardous pesticides—changing the conditions to prevent problems, including occupant education, careful cleaning, pest-proof waste disposal, and structural maintenance. Know what conditions the pest requires: food, water, and habitat. Reduce or eliminate the sources of food and water. For instance, always clean up food and food areas; place food in airtight, sealed containers; dispose of food and food packaging in sealed garbage containers; repair leaky pipes and faucets; caulk up cracks and crevices; and eliminate clutter whenever possible. Remember that it can take some time for these methods to be effective.

Mechanical, Biological, and Least-Toxic Controls. If all other methods have failed and monitoring shows that your pest population is still above your action thresholds, use mechanical methods, such as sticky traps, and biological controls like pheromones and parasitic insects. Then, and only then, should you consider spot treatment with least-toxic pesticides. You must weigh the risks associated with the use of a pesticide against the problems caused by the pest. Consider your options carefully, being mindful not to blindly jump at a solution that may have risks without first collecting the facts. If you must use a pesticide, you should choose the least-toxic pesticide available. Remember, all pesticides are poisons designed to kill; they should be handled carefully, with respect, and according to their labels.

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IPM Training Resources

Healthy Housing Solutions – Integrated Pest Management in Multifamily Housing Online Course

<http://healthyhousingsolutions.com/training-course/integrated-pest-management-in-multifamily-housing-online-course/>

Free online class - The IPM in Multifamily Housing course is designed to help a property manager, including a public housing authority, implement a comprehensive integrated pest management (IPM) program by bringing the stakeholders, especially resident leaders, together to develop the skills and practices needed to effectively eliminate pests such as cockroaches and rodents from multifamily housing. This course is available both in the classroom and online. Click on the link to register for the online version of this course. After you submit your registration information, you will automatically be taken to the start page for the course. There is no cost for this course.

NEHA CERT Online Classes

<http://nehacert.org/moodle/course/category.php?id=43>

Free online class - CDC1001: Biology & Control of Vectors and Public Health Pests: The Importance of IPM - 15.0 CE Credits. This 2 ½ day workshop recorded in New Orleans, LA in January of 2010 includes lecture, discussion and visual training on integrated pest management (IPM) to control insects and rodents with a specific emphasis on the biology and control of rodents and bed bugs. This course is a modified and updated version of CDC0702, Biology and Control of Insects and Rodents but does not include all previous modules such as tick control and bioterrorism. In addition to detailed training in rodent and bed bug control, this course also includes a new module on the effects of global climate change on pests and disease vectors.

STOP Pests in housing – Integrated Pest Management: A Guide for Affordable Housing

<http://www.stoppests.org/what-is-ipm/guide/?thvqr>

Urban Integrated Pest Management Learning Lessons: What is IPM?

<http://articles.extension.org/pages/21031/urban-integrated-pest-management-learning-lessons:-what-is-ipm>

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Additional IPM Resources

Beyond Pesticides – What is Integrated Pest Management?

<http://www.beyondpesticides.org/resources/safety-source-on-pesticide-providers/what-is-integrated-pest-management>

Centers for Disease Control and Prevention

<https://www.cdc.gov/nceh/ehs/elearn/ipm.htm>

IPM Institute of North America – Frequently Asked Questions

<https://ipminstitute.org/faq/>

National Pesticide Information Center

<http://npic.orst.edu/pest/ipm.html>

STOP Pests in housing

<http://www.stoppests.org/>

STOP Pests in housing – Integrated Pest Management

http://www.stoppests.org/stoppests/assets/File/IPM_Summary.pdf

Washington State University – Integrated Pest Management School IPM. What is IPM?

<https://schoolipm.wsu.edu/what-is-ipm/>

Washington State University – Urban IPM and Pesticide Safety Education

<http://pep.wsu.edu/>

Washington State University – Pestsense: Fact sheets for managing common indoor pest problems.

<http://pestsense.cahnrs.wsu.edu/Home/PestsenseHome.aspx>

Manejo Integrado de Plagas - Recursos

Manejo Integrado de Plagas: Una Guia para la Vivienda

<http://www.stoppests.org/what-is-ipm/guide/?thvqr>

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