



This presentation describes IPM and pesticide use.

Outline

- HUD's guidance on IPM
- IPM in practice
- Pesticides

2

This an outline of the presentation.

Making homes healthy

- IPM is part of a nationwide Healthy Homes movement to reduce housing-based health hazards.
- A healthy home is:
 - Dry
 - Clean
 - Ventilated
 - Safe
 - Contaminant-free
 - Maintained
 - **Pest-free**



3

Give the larger context of IPM: It is part of the Healthy Homes movement.

Protecting and maintaining a building for pest control will help make a building healthy to live and work in.

What does HUD say about pest control?

HUD has three core programs for pest control

- Housing Quality Standards for Section 8—Housing Choice Voucher property.
- Public Housing Standards.
- Special Guidance on Integrated Pest Management.



4

In an effort to get trainees to see the big picture of how IPM is supported by HUD, this section has been added. HUD has a commitment to IPM and supports its implementation by funding programs like this training and inspecting for pest infestation.

HUD's promoting IPM complies with Federal Insecticide, Fungicide, and Rodenticide Act: "Federal agencies shall use Integrated Pest Management techniques in carrying out pest management activities and shall promote Integrated Pest Management through procurement and regulatory policies, and other activities." 7 USC 136r-1

Suggestion: Some of the following slides may not apply to the training audience. Only spend time on those slides that are relevant to the audience.

HUD's Housing Choice Vouchers

Housing Quality Standard (HQS)

- The dwelling unit and its equipment must be free of vermin and rodent infestation. (m)(2)
- The site and neighborhood may not be subject to serious adverse environmental conditions, natural or manmade, such as . . . vermin or rodent infestations. (l)(2)
- The exterior wall structure and surface must not have any serious defects that may result in air infiltration or vermin infestation. (g)(2)

5

The HQS applies to Section 8 Housing Choice Voucher properties. Public housing also uses it as a guide.

These are the key provisions of HUD's Housing Quality Standards that relate to pests.

The numbers and letters cite the paragraph and subparagraph of the federal regulations.

There is no definition of infestation.

Note that the HQS also focuses outside the building in the neighborhood.

HUD's Conventional public housing

Resident Survey Questions

- How often, if at all, are rodents and insects indoors a problem in your development?
- How often, if at all, have you had a problem with rodents and insects indoors?

6

HUD Real Estate Assessment Center (REAC) periodically surveys residents of public housing on a wide variety of issues. The REAC score is an important part of HUD's evaluation of public housing authorities.

Two of the questions deal with pests. Residents answer either never, sometimes, often, or always. HUD's REAC reported that 10% of residents always struggled with rodents and insects and 50% sometimes did.

HUD's conventional public housing

Physical Survey Questions

Presence of rats or severe infestations of mice or insects (cockroaches, termites) observed.

- Insects
 - Frass, shells, or other evidence
 - One or more live cockroaches
- Rats, mice, or vermin
 - Droppings or chewable holes
 - One or more live rats or mice
- Other insects or vermin observed

7

HUD's REAC also sends inspectors to randomly inspect properties. Their questions focus on pest presence observed. Insects are routinely in the top five of health-related problems.

HUD's Project-based Section 8 Properties

Mark-to-Market Program

- Section 8 Properties participating in the Mark-to-Market (M2M) program must have an IPM inspection as part of its Physical Condition Assessment.
- M2M participants must adopt and follow an IPM plan to qualify for funding from HUD's Green Incentives Program.

8

HUD's voluntary guidance on integrated pest management

- PIH guidance since 2006 (PIH 2009-15 (HA))
- “Offers the potential efficacy of pest elimination while protecting the health of residents and staff.”
- “Will extend the useful life of property and, thereby, generate significant savings that offset costs of the pest control operations.”
- “Effective in preventing moisture intrusion and accumulation.”
- In the reference section of your manual.

9

On February 3, 2006, HUD issued voluntary guidance on integrated pest management. It revised the document on May 27, 2007. In 2009, it renewed the policy without revision. The revised document is included in the course materials and will be discussed over the lunch break.

These three quotes are from that document.

Suggestion: Point trainees to their copy in the binder.

Federal housing must comply with local housing codes

Typical local housing code

- All structures shall be kept free from insect and rodent infestation.
- All structures in which insects or rodents are found shall be promptly managed by approved processes that will not be injurious to human health.
- Proper precautions shall be taken to prevent re-infestation.

10

The community may have a local housing or sanitation code that addresses pest management. These codes typically apply to public housing. The code that is the most stringent must be met.

Suggestion: Customize the training by obtaining copies of local housing codes.

IPM does more than control pests

- Educating residents empowers them to improve their housekeeping and provides a marketable skill.
- Fixing pest entrances helps to weatherize buildings and keep them dry.
- Monitoring for pests allows for early intervention before the problem gets out of hand.
- When people learn that they can do something to improve their living conditions, expectations for pest control will rise!

11

IPM in practice: Documentation is key

One IPM log in each building.

Record:

- date
- detailed observations
- action taken

Make sure action is taken promptly.



12

An IPM log is one of the most essential pest control tools. Collecting and sharing facts is important to everyone on the IPM team.

Recordkeeping in ONE building log or online system will help make sure everyone's observations are noted and followed up on. Having all observations in one place helps identify trends and "focus units." A focus unit has the highest level of infestation in an area (based on sticky trap counts).

IPM in practice: An IPM log

Problem			Solution		
Date	What's seen?	Initials	Date	What's done?	Initials
4/4/08	Door sweep broken	AAT	4/7/08	New door sweep installed	CAP



13

Reviewing the IPM log will reveal patterns. It will also show the PMP the nature and location of problems so that he or she can respond. The log is the place to track improving sanitation, fixing a water leak, caulking a crack, placing bait, or applying a least risky pesticide. IPM-related information collected during HUD inspections should be transferred to the IPM log.

Examples of log entries: where traps and bait stations are placed; notes about resident cooperation to be followed up on by resident services; notes about needed repairs (work orders will need to be filed too) that will be followed up on by maintenance staff. A log book helps communication between maintenance staff and the PMP, as well as between maintenance workers at shift changes. One system for all members of the PHA community will avoid confusion and having all information in one place will make it easier to identify patterns and get to the source of the problem.

At first more work, but then less

- Starting an IPM program may mean more work because of education, repairs, and monitoring.
- Expect to see increased work orders as pests and pest-friendly conditions that were previously overlooked are reported.
- THEN...you will get fewer complaints, have fewer pests, and be providing a better place to live.



14

The Boston Housing Authority states that at the beginning of their IPM program a lot of work was requested because unreported problems were finally reported. As the repairs were made and pests were controlled, there were fewer work orders than before the IPM program.

IPM is not something that can work when implemented half-heartedly.

Another view

- **Invest**
time and materials for repair and education.
- **Protect**
through exclusion, sanitation, and careful product choice based on least risk to human health and the environment and compatibility with other management practices.
- **Maintain**
with monitoring, communication, and documentation so that infestations do not grow.

15

The PHA will have to invest time and money to get caught up on repairs, but these repairs are essential to pest control and protecting the building from the damaging effects of moisture.

Once fixed, the building must be maintained.

Pest management will be an everyday event because preventative measures will be taken so that pest levels stay very low.

Pesticides

Why do people tolerate exposure to pests and pesticides?

- They are used to living with problems
- Low standards for pest control and maintenance
- Other priorities
- Not aware of the problems
- Cannot envision a better way

16

There is a better way to manage pests than just using conventional pesticides.

Suggestion: Ask the trainees why they think people tolerate pests.

Routine spraying of pesticides is not the only option

We've learned a better way.



Routine baseboard spraying is not part of IPM.

17

Refer back to the discussion at the beginning of the day about previous practices and their effectiveness.

Avoid disparaging pesticides. Put them in context. Pest management using only routine spraying of pesticides is akin to farming cockroaches. The building supplies food, water, and shelter for cockroaches to thrive in, and once a month some are harvested (killed by pesticides). As long as food, water, and shelter are present, the cockroaches will be there too. Pesticides work to kill most of the time, but they do not solve the ongoing problem and may pose unnecessary risk.

Concerns with pesticides

- Pests can become tolerant of or avoid pesticides.
- Risk from exposure may outweigh the benefit of killing pests.
- Possible harm to pets and wildlife.
- Certain populations may be especially vulnerable or sensitive to some pesticides:
 - Elderly; children; pregnant women
 - People with breathing or lung disorders such as asthma
 - People with multiple chemical sensitivities

18

Some of the trainees may have experience with resistance (pests don't die) or aversion (pests avoid baits).

Property managers and maintenance crews must identify residents who are especially vulnerable to chemical exposure. Some residents may not be able to tolerate the presence of chemicals, such as gel baits, in their units, or they may feel that admitting a PMP to their unit may expose them to the pesticides present on the PMP's clothing. Special attention must be given to people with chemical sensitivities so that they receive pest management services that meet their needs. Conventional pesticides should not be used in the units occupied by people with chemical sensitivities, or in adjacent or neighboring units, or in common areas such as the halls, lobbies, laundry rooms, elevators, or stairs, or along paths of travel for disability access. (Under the Fair Housing Act, multiple chemical sensitivities (MCS) can constitute a handicap. MCS refers to a condition that causes a person to have severe hypersensitive reactions to a number of different common substances including pesticides and solvents.) People with chemical sensitivities are frequently very knowledgeable about least risky pest control practices and may be helpful in assisting and educating other tenants in achieving the IPM goals. The elderly, pregnant women, and families with children are at greater risk for adverse health effects associated with exposure to pesticides. For these reasons it makes sense to use reduced risk practices, to follow label instructions, and to practice prevention-based approaches that reduce reliance on chemical control measures. Working with these residents is an important part of the property manager's responsibilities.

How to handle illegal and risky pesticides



Unlabeled Mothballs Chinese Chalk Tres Pasitos
Products without a pesticide label are illegal.

- Educate residents on the dangers of using illegal pesticides. For example, pesticides that look like candy are risky.
- Report illegal sales to the EPA or to the state pesticide licensing agency.

19

Examples of illegal pesticides are pictured.

The three pictures on the left are of unlabeled packages of mothballs.

The fourth photo is Chinese Chalk. People illegally use this unregistered pesticide to kill cockroaches. But the “chalk” could seriously harm people, especially children and pets.

The fifth photo is Tres Pasitos—“three little steps” in Spanish. The phrase refers to the number of steps mice take before they die.

Insecticide “chalk” (a.k.a. Miraculous or Chinese Chalk) and Tres Pasitos are two common illegal pesticides sold by street vendors or at ethnic markets.

Pesticides are illegal when they are not registered by the EPA or the state within which they are used or they are used against the label. Illegal pesticides should not be purchased or used.

Illegal pesticides may be stronger than ones that are legal for residential use. People may be tempted to purchase and use illegal pesticides because they are fast-acting. These products are illegal and harmful to people and pets.

In Boston, there has been success with pesticide buy-backs where residents are paid for the pesticides they have in their home.

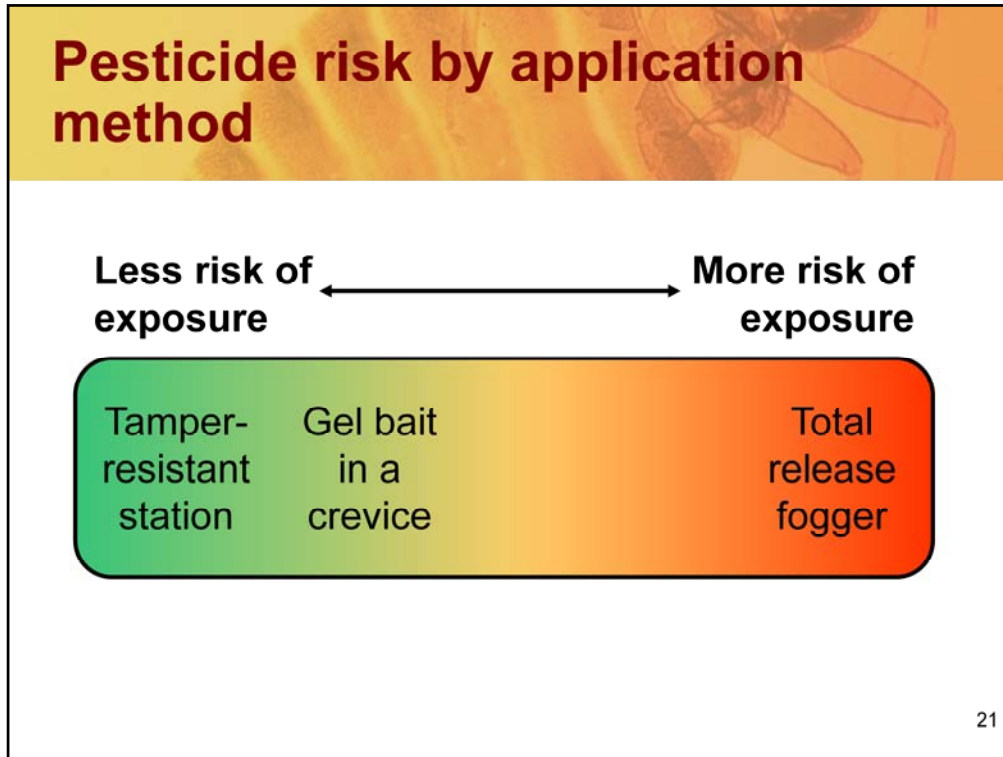
Total release foggers (there's a reason they're called bombs!)



20

The photos above show houses and apartments destroyed by “bug bombs” used incorrectly.

Foggers, officially called “total release foggers” (TRF), release a very fine mist of pesticides into the air from pressurized cans. The mist penetrates deeper than a liquid spray. They pose the same risk of exposure as sprays. In the hands of a consumer they are prone to dangerous misuse. The propellant (isobutane or isopropane) that spreads the insecticide through the air is flammable and can create an explosion. Foggers will cover all surfaces, regardless of whether they need pesticide. Foggers may also affect pets.



Risk of exposure is the risk of coming in contact with a pesticide. Note that touching a pesticide that can be seen is not the only way to be exposed to pesticides. Get trainees to think about pesticides getting into the air and remaining on surfaces even when they can't be seen or smelled.

Another risk to consider is that someone could misuse a pesticide by applying it incorrectly.

Suggestion: Have trainees think of and place on the gradient one or two other application methods they have seen.

How to read a label

- Product name
- Active Ingredients
- Signal words:

CAUTION = slightly toxic

WARNING = moderately toxic

DANGER = severe skin or eye irritation

DANGER-POISON = highly toxic



22

With an IPM program in place, almost all infestations can be managed with a pesticide that says, "CAUTION" on the label.

The EPA takes great care to review the uses of pesticides to avoid impacts to people or the environment. But EPA assumes that people will follow the pesticide label. Read the label carefully!

DANGER means that the pesticide product is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. Alternatively, it may be highly toxic if eaten, absorbed through the skin, or inhaled. If this is the case, then the word "POISON" must also be included in red letters on the front panel of the product label.

Labels list locations where the chemical can be legally applied. Labels are the law.

Labels tell you how the product must be used. The following unapproved or "off-label" uses are not only dangerous, they're illegal:

- using higher (stronger) concentrations;
- using the pesticide in places not listed or against pests not listed;
- not using proper protective equipment;
- unapproved application techniques; or
- improper disposal.

Pesticides (other than tamper resistant stations containing bait) should be applied only by a

How to read a label

- Registration number: “EPA Reg. No.”
- Precautionary Statements
- Directions for:
 - Use
 - Storage
 - Disposal



Suggestion: With this slide up, have trainees complete the “How to Read a Label” exercise with those next to them. Do not add more questions than what is printed in front of them. Give adequate time for them to discuss with their neighbors. Make sure you give the answers.

Product use and emergencies

National Pesticide Information Center
800-858-7378
www.npic.orst.edu

Poison Control Center National Hotline 800-
222-1222
www.aapcc.org

24

NPIC can help answer questions when IPM teams are trying to choose compatible and effective treatments.

The Poison Control Hotline should be used in emergencies.

Labels also have emergency contact numbers on them.



Questions?

25