

# Safe, Decent, and Pest-Free Housing

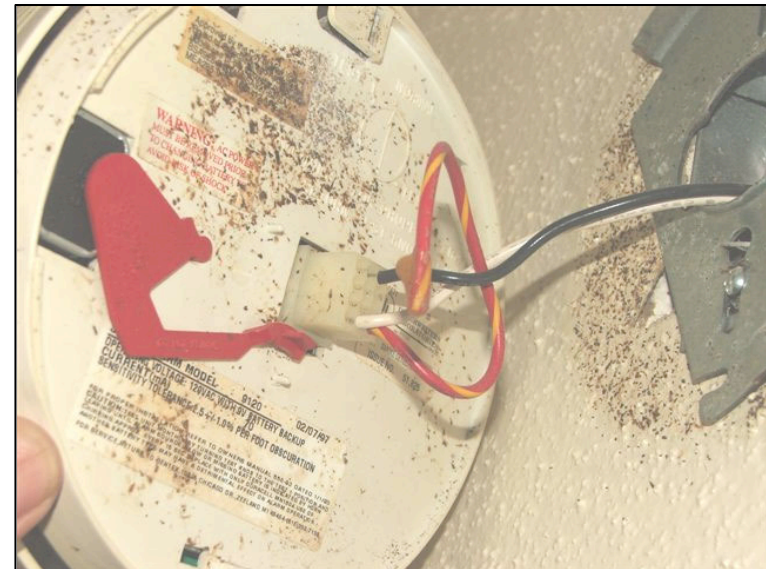
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# Making homes healthy

- ☛ 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**



Cockroach infestation in a smoke detector

# Priority pests

- 🪳 Cockroaches cause asthma in infants, trigger asthma attacks, and contaminate food
- 🐭 Rodents such as mice and rats carry diseases, bite, destroy property, may cause fires, and may trigger asthma attacks
- 🪲 Bed Bugs and their bites are a nuisance and are expensive to eliminate



# Training agenda

## Morning

- 🕷 Overview and Introductions
- 🕷 Cockroaches
- 🕷 IPM and Pesticide Use
- 🕷 Indoor Demonstrations
- 🕷 *Working Lunch*
- 🕷 Video

## Afternoon

- 🕷 Roles and Responsibilities Panel
- 🕷 Rodents
- 🕷 Outdoor Demonstrations
- 🕷 Bed Bugs
- 🕷 IPM Exam and Course Evaluation

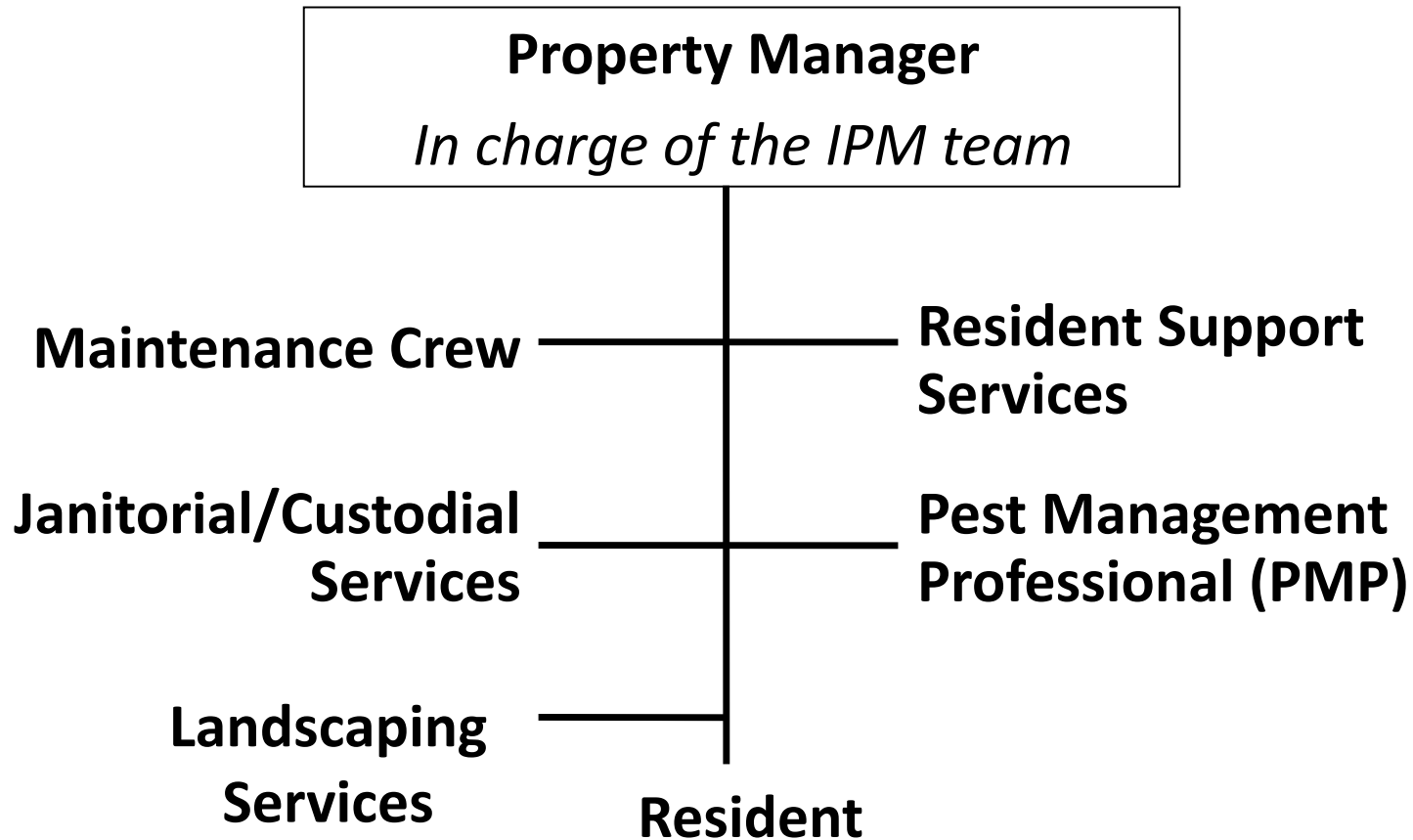


# Pest problem solving— Integrated Pest Management

1. Inspect
2. Identify
3. Establish thresholds
4. Take control measures
5. Evaluate effectiveness



# The IPM team



# 1. Inspect

- 🕷️ Visual inspection
- 🕷️ Interview
- 🕷️ Monitor



**Sticky trap monitors from one unit**



## 2. Identify



**Mosquito Bites**



**Tick**



**Cockroach Nymph**

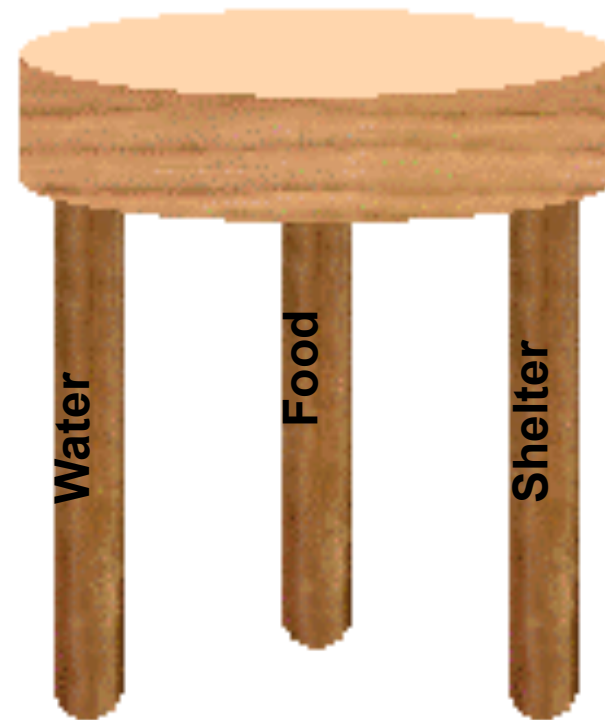


**Bat Bug**



# What all pests need

- Food
- Water
- Shelter



### 3. Determine the level of response



vs.



## 4. Employment of 2 or more control measures

- ✪ Cultural, mechanical, biological, or chemical
- ✪ Strategies chosen should be ones that are:
  - ✪ Least disruptive of natural controls;
  - ✪ Least hazardous to human health (including mental health of the resident);
  - ✪ Least toxic to nontarget organisms;
  - ✪ Least damaging to the general environment;
  - ✪ Most likely to produce a permanent reduction of the pest population; and
  - ✪ Practical in terms of time and expense.







# Control measure: cultural

- Residents and staff change practices or habits
- Residents may require education or hands-on support
- Guidance should be catered to the resident
  - translation or pictures,
  - provide detailed directions, and
  - refer to specific areas and conditions in the home






# Cultural continued

## Consider the routines for:

-  Food preparation
-  Food storage
-  Trash removal
-  Eating (locations in the home)
-  Acquiring infested items and bringing them home, and
-  Cleaning

## Focus areas are determined by the pest:

-  Food sources: human food, pet food, cardboard glue, grease around the stove...
-  Water sources: dripping faucets, sweaty pipes, plant saucers, sinks...
-  Shelter (a place to hide)...

# Control measure: mechanical



# Control measure: biological

- Biological control is the use of parasites, predators, or pathogens to control or manage pests.
- Not usually applied in structural IPM.
- Cats can't be relied on for rodent control.





# Control measure: chemical

- ☛ Using pesticides—chemicals that kill pests.
- ☛ Only licensed pest management professionals should apply pesticides.
- ☛ Pesticides should work *with* other control measures to gain sustainable control.
- ☛ Choose the lowest risk pesticide *for the job*.
- ☛ Risk = toxicity + risk of exposure



## 5. Evaluation of effectiveness

- Use monitors, searchable work order codes, and service reports.
- Assess and adjusts the control measures that have been employed.
- Plan to evaluate should
  - Identify areas overlooked;
  - Enhance program effectiveness;
  - Reapply or revise any pest management procedures as appropriate; and
  - Monitor for new infestations.

# How to know if you are getting IPM service

- Focus on prevention and monitoring
- Technicians focus on the source of the problem
- Methods such as exclusion, vacuuming & trapping are commonplace
- “Sprays” or “fogs” aren’t commonplace
- Time spent relative to the infestation
- Least risk products and application methods used

# The Results of the Team Approach

- 🕷️ An inspection and monitoring system that finds pests
- 🕷️ A reporting system that identifies areas of improvement
- 🕷️ Areas are prepared to receive effective treatment
- 🕷️ Communication that empowers all
- 🕷️ Fewer pests and a healthier environment



Questions?





The end.



Thank you for having me!



# IPM in Action

# How to start

- Hire a qualified pest management firm or get staff licensed
- Pick a pilot site
  - ~100 units
  - Enthusiastic and willing property manager
  - Active tenant council
- Incorporate pest-specific codes into your work order system
- Train site IPM team members using resources from [www.stoppests.org](http://www.stoppests.org)



**A property manager inspecting building exteriors for holes**



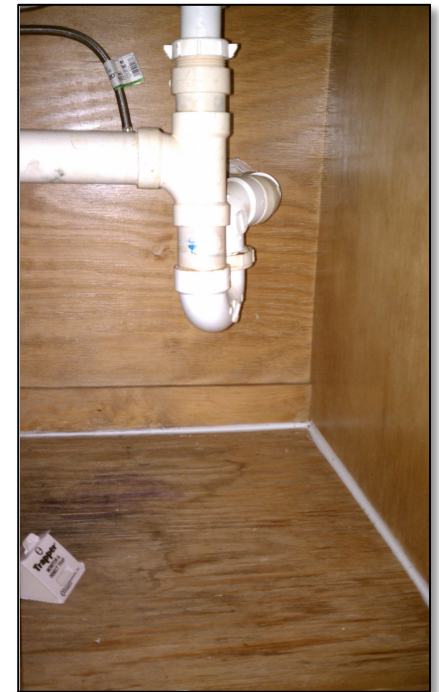
# Identify focus areas

- 🕷️ Monitor and inspect
- 🕷️ Identify focus areas
- 🕷️ Look through service records and work orders for trends



# Solve problems

- ☛ Allocate time and resources to focus areas
- ☛ Use renovation as an opportunity
  - ☛ Eliminate pests
  - ☛ Reduce the risk of pest infestation
    - ☛ Seal up holes and crevices where pests hide
    - ☛ Educate the incoming tenant
- ☛ Track data from work orders and PMP service reports to identify trends and track efficacy



**Monitor under a well-sealed sink**

# Focus units & housekeeping

- 🪳 Require housekeeping classes that focus on taking food, water, and shelter away from pests
- 🪳 Case management
- 🪳 Reach out
  - 🪳 Family members
  - 🪳 Faith-based organizations
  - 🪳 Local support agencies
- 🪳 Motivate with lease enforcement

# Focus units & the PMP

- ☛ Vacuum to achieve initial knock-down and remove pests and evidence
- ☛ Visit every room
- ☛ Spend time in focus units
- ☛ Communicate with the resident
- ☛ Leave detailed recommendations on the service report

# Focus units & maintenance

- 🕷️ "Exclusion" or "pest-proofing"
- 🕷️ Door sweeps
- 🕷️ Screens
- 🕷️ Seal around plumbing/electrical wall penetrations
- 🕷️ Seal cracks and crevices in kitchens and bathrooms
- 🕷️ Follow PMP's recommendations

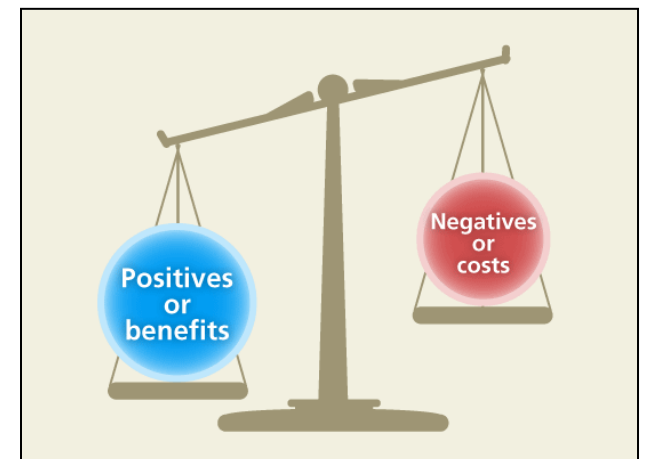


# Maintain and expand pest-free housing

- 🕷️ Inspect new residents' homes within 90 days of move-in
- 🕷️ Ensure the PMP gets access to units
- 🕷️ Teach everyone to prevent, inspect, and monitor so introductions never turn into infestations
- 🕷️ Expand program to other sites

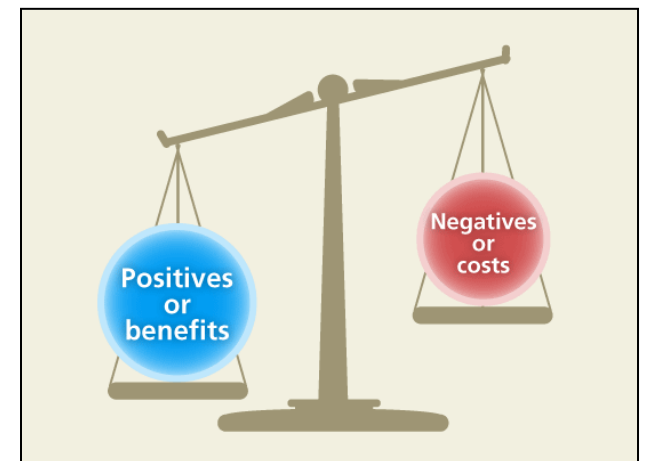
# Program costs

- An IPM budget includes
  - Materials for caulking and sealing holes
  - Free items for residents in need: cleaning supplies, mattress encasements, monitors, etc.
  - An IPM contract, including inspection and monitoring



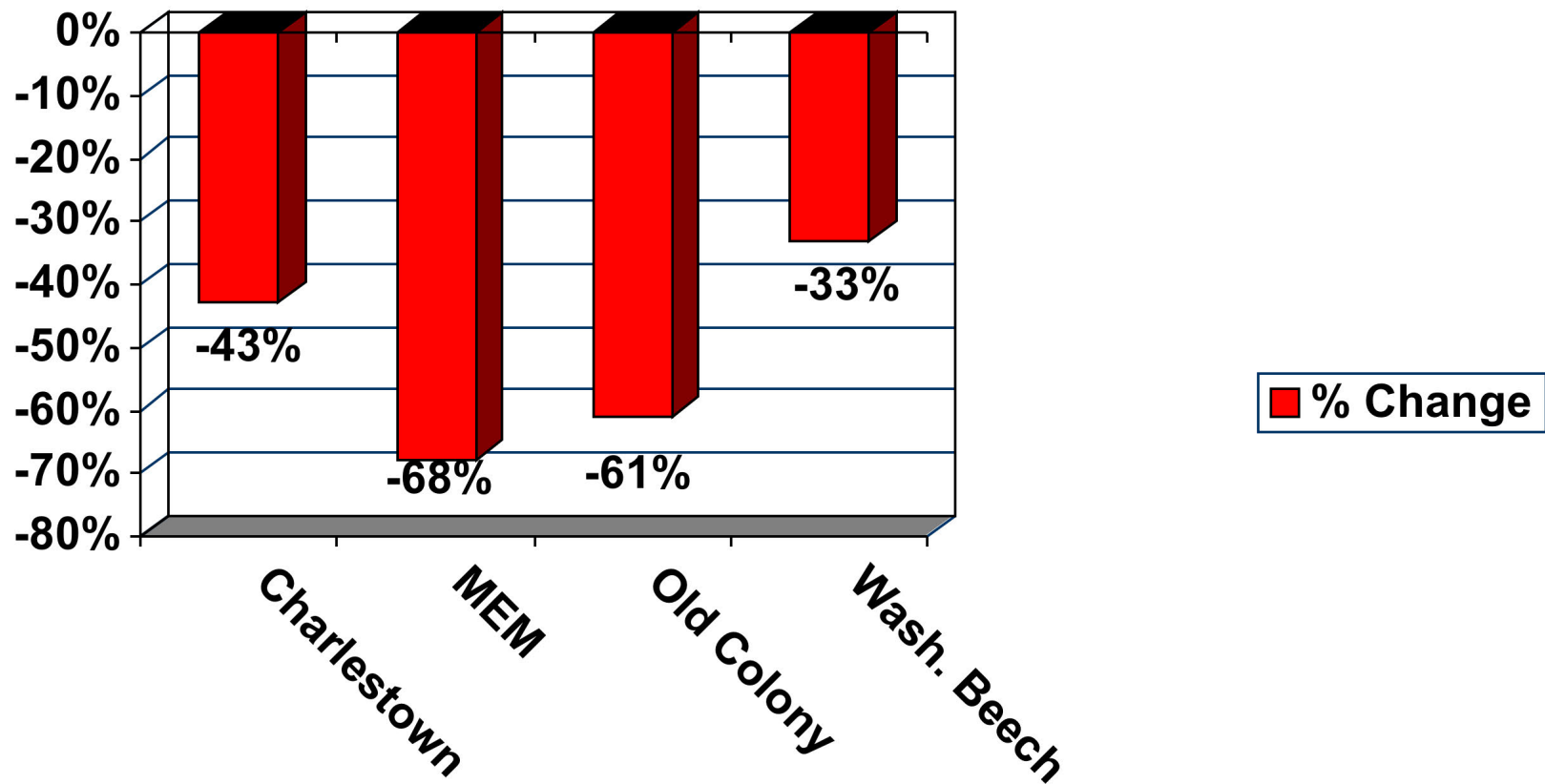
# Expected program outcomes

- Increased cooperation and communication
- Decreased pesticide applications
- Infestations limited to periodic introductions—no high-level infestations
- Increased partnership with outside agencies



# Boston's success

Percent Change in Total Pest Work Orders





# What we've learned in public housing

- Executive management must be supportive
- Start your IPM program at a pilot site
  - Licensed pesticide applicator
  - Enthusiastic property manager
  - Staff time and funding
  - Small enough to cover the entire building/AMP

# What we've learned

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# What we've learned

- Educate staff, residents, home health aides, and community partners—give everyone the basics and have each person commit to doing their part
- Have a continuity plan for staff and resident turnover

# IPM resources

## Websites

- The Northeastern IPM Center's IPM in Multifamily Housing website and blog: [www.stoppests.org](http://www.stoppests.org)
- The National Pesticide Information Center: <http://npic.orst.edu/>
- Boston's Healthy Pest Free Housing Initiative:  
<http://www.bphc.org/hpfhi/AboutUs/Pages/home.aspx>
- PIH 2011-22: Promotion of Integrated Pest Management (IPM)
- Notice H 2011-20: Guidelines on Bed Bug Control and Prevention in HUD Insured and Assisted Multifamily Housing