



### Pests cause problems

- Trigger/cause asthma and allergies
- Rite
- · Contaminate food
- Lead people to overreact and ignore pesticide labels
- Transmit disease
- Hitchhike in belongings
- Violate housing codes

IPM makes homes healthier!







### Integrated Pest Management

- 1. Inspect and monitor
- 2. Identify
- 3. Determine the scale of response
- 4. Respond
  - Biological control
  - Non-chemical control
  - Changing people's behavior
  - Chemical control
- 5. Evaluate effectiveness





### IPM is not...

- · Using only bait
- · Applying more than one kind of pesticide
- · A certain set of pesticides
- · Using spices and herbs
- · A service that can be contracted out



### **Healthy Homes Technical Study in** Greensboro

### Goal

Achieve IPM in private multifamily rental housing

### **Expected (and Actual) Results**

Behavior change by management and tenant Reduction in number of units with pests Reduction in number of pests per unit Infestation less likely after IPM adoption



# Enrollment Results – 8 Properties

- 6-204 units, 1-51 buildings
  - All units in 3 properties < 30 units enrolled
  - Higher-risk buildings in 5 properties
- Enrolled 55% of units due to economic stress
  - Doubling up increased vacancy rates
  - Tenants working multiple jobs, not home / responsive
- 77% of enrolled participants were still in the same dwelling unit at the end of study period







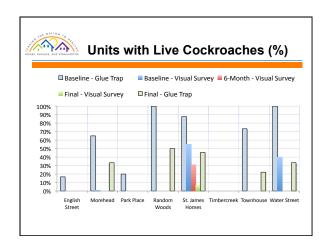
### Implementation of IPM

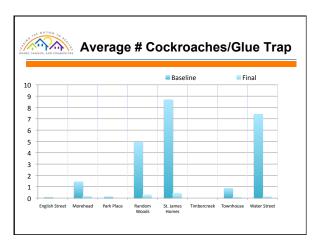
- Property-wide IPM plans (Management + PMP)
  - Reduction of pest intrusion and habitat
  - Coordinated targeted attention to focus units
  - Monitoring of tenant complaints
- · Project staff
  - Monthly inspections
  - Accompany PMP
  - Regular educational/monitoring with tenants
  - Glue trap monitoring of focus units

# HOMES, FAMILIES, AND COMMUNITIES

### **Education and Training**

- Training for PMPs and property managers
  - Trainer from NCSU's entomology program
  - 1:1 follow-up
- · Tenant Education
  - Printed educational materials NYC brochures
  - Explanation during interview/enrollment
  - Explanation during visual, glue trap, sampling
  - Emphasis on self-protective action







## Discussion – Keys to Success

- Tenants and property managers learned:
  - what was expected
  - health risks and ineffectiveness of common pesticides
  - food and water sources maintain pest populations
- · Sustainable adoption of IPM requires:
  - Education property mgmt, tenant, PMP
    - · Equipping property manager to expect/demand IPM
    - Providing Guide sheets for owners/tenants/doctors nchh.org/Training/IntegratedPestManagement.aspx
  - Imposition of mutual expectations regarding roles
  - Monitoring and communication

## Property Management's Self-Interest

- · Reduce tenant complaints
- Reduce turnover vacancy prevention
- · Pay only for effective pest control strategies
  - 5 property managers changed PMP to ensure
  - Cost of pest management not # 1 concern
- Prevent pesticide exposure new concern
- · Asset protection



# Promoting IPM in Affordable Housing

### Goal

To improve pest control in affordable housing by teaching everyone who works, lives, and plays in housing how to use integrated pest management (IPM).



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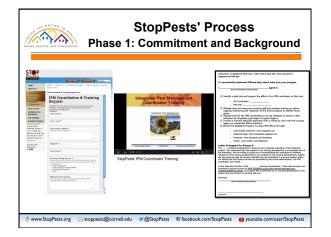


# Promoting IPM in Affordable Housing

### **Deliverables**

- Actively work to eliminate documented obstacles to IPM in affordable housing;
- Develop and replicate an IPM implementation process for housing providers to follow;
- Coach at least 70 housing providers through the process; providing—as needed—pre-training guidance, on-site training, and post-training technical assistance; and
- Evaluate IPM in the participating housing communities and gather the data needed to assess a return on investment (ROI) of the Center's efforts.

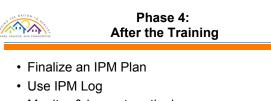
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- Monitor & inspect routinely
- Revise procedures/documents
- Plan for continuing education
- · Collect data
- · Share the story





### **Thank You**

### **Our Funders**

- Rachel Riley, Government Technical Representative
- U.S. Department of Housing and Urban Development's Office of Healthy Homes and Lead Hazard Control
- U.S. Department of Agriculture's National Institute of Food and Agriculture

### **Our Employers**

 Healthy Homes Technical Study: Cooperative Agreement DCLHH0169-08





Promoting Integrated Pest Management in Affordable Housing: USDA Special 2012-04039 Northeastern





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