



# Pest control in affordable housing: a wicked problem (Rittel & Webber, 1973)

#### It may also be framed as a social mess (Horn, 2007):

- No unique "correct" view of the problem;
- Different views of the problem and contradictory solutions;
- Most problems are connected to other problems;
- Data are often uncertain or missing;
- Multiple value conflicts;
- Ideological and cultural constraints;

- Political constraints;
- · Economic constraints;
- Often a-logical or illogical or multi-view thinking;
- Numerous possible intervention points;
- Consequences difficult to imagine;
- Considerable uncertainty, ambiguity;
- Great resistance to change; and
- Problem solvers are out of contact with the problems and potential solutions.

#### Solving wicked problems

- A collaborative approach: all stakeholders are engaged in order to find the best possible solution for all.
- · Key advantages include
  - higher stakeholder commitment,
  - more comprehensive and effective solutions, and
  - fewer resources having to be used by any one stakeholder.
- Key disadvantages include increased
  - transactions costs and
  - the fact that the skills of collaboration are in limited supply.



#### We can all come together to **Stop Pests**

#### Healthy housing

- Reduction in indoor allergens
- Reduction in pests
- Reduction in pesticides
- Least risk chemicals
- Safe and decent housing
- Public health



- Bed bug management that is effective both in terms of budget and controlling the pest property-wide
- Making a profit in the affordable housing market
- Reduce the risk of staff members bringing home pests
- Increasing the quality of services sought by and offered to affordable housing



#### A worthy fight

#### "Now we know that the

frequent hospital admissions of innercity children with asthma often is directly related to their contact with cockroach allergens-the substances that cause allergies."

~ Asthma & Allergy Assoc. of America





There are numerous reports of cockroaches (probably Periplaneta spp. on ships and in mines biting humans and eating toenails, fingernails and the calloused parts of hands and feet. The bite of Blatta orientalis produces a characteristic triangular pattern on human skin and can be followed by slight pain and itching. There are also reports that in large infestations, Blattella germanica will attack humans, particularly nursing

From: Urban Entomology: Insect and mite pests in the human environment



#### Hold an initial meeting

- Goal: increase awareness of opportunities and challenges of stakeholders
  - Executive Management
  - Board of Directors
  - PMP
  - Property Manager
  - Maintenance Director
  - Resident leadership
  - Local partners





#### **Integrated Pest Management (IPM)**

#### 1. Inspect and monitor

- 2. Identify what's found
- 3. Determine the scale of response
- 4. Respond
  - Nonchemical control
  - Change people's behavior
  - Chemical control
  - Biological control
- 5. Evaluate effectiveness





#### Take control

• Scale the response to the level of infestation



Inspect and monitor Identify what's found Determine the scale of response Respond

Evaluate effectiveness

- Get rid of pests using more than one method
- Methods must be economical and pose the least possible risk to people, property, and the environment





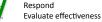




#### **Evaluate effectiveness**



- Inspect and monitor
   Identify what's found
- Determine the scale of
- 3. Determine the scale or response





#### IPM differs from conventional

- No routine pesticide applications
- Proactive vs. reactive
- Every unit and building area inspected and monitored
- A team approach
  - Educate site staff, residents, pest management professionals (PMPs), and other stakeholders
  - Focus units
  - Divide responsibilities among team members



# Practice Scenario 1 Beginning the Contract

- Your company is awarded the contract for pest management (including termites and bed bugs) at Paradise Housing Authority
- Contract specifies monthly site visits and quarterly service in each unit
- What 3 actions will you take at the beginning of the contract to help ensure long-term success (both in terms of pest control and customer satisfaction)



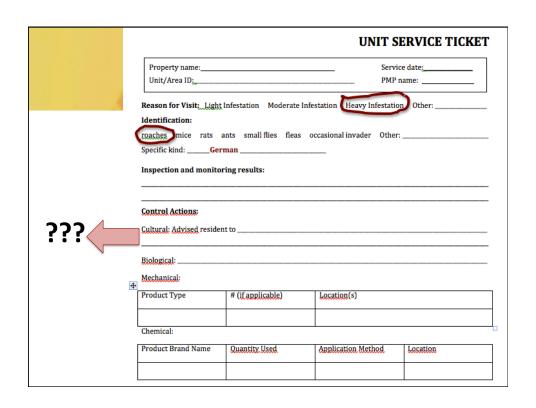
# Practice Scenario 2 Routine Maintenance

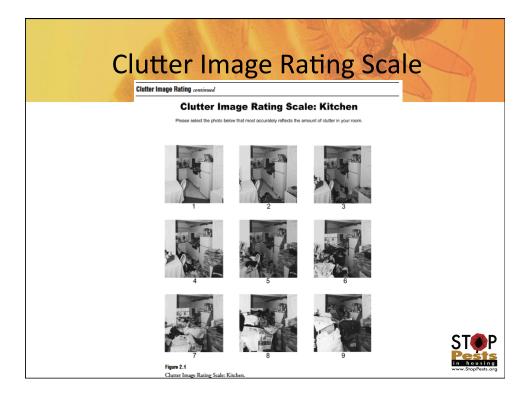
- Contract specifies monthly site visits and quarterly service in each unit
- You visited this unit 3 months ago for quarterly service
- Based on what was done at the beginning of the contract (Scenario 1), describe your service in this unit
- Hint: there are no pests present



		Code		(pest type, description of service, notes of conversation with resident, details of follow-u	
Follow-up	Unit ID	Service	Housekeeping	Comments	
Service Code:  1: Refused, 2: Inspecte 3: Light infi 4: Moderat 5: Heavy in Follow-up: R: none nee PMP: schee Maint.: file	no entry d, monitors p estation—see e infestation— festation—see eded, schedul dule a follow- a work order	olaced, no treat e unit service t —see unit serv ee unit service le for regular s up service fror r for maintena	ment needed icket ice ticket ticket ervice n PMP nce repairs	Housekeeping: G: Good—little or no food or wate accessible to pests, easy to move throughout the unit, and inspection in all areas is possible F: Fair—dishes left undone for more that one day, or plenty of food or water accessible te pests, or PMP has to step over or move items it order to inspect P: Poor—multiple days of dirty dishes, food storage feeds pests, PMPs inspection and service limited by clutter r get the family support	
				ied by:	
Property name:				Service date:	

# Practice Scenario 3 Heavy infestation of German Cockroaches • Contract specifies monthly site visits and quarterly service in each unit • You did not get into this unit 3 months ago • Describe your service here





#### Opportunities for IPM

- PMP
- Property Manager
- Residents
- Executive Management
- Maintenance Director

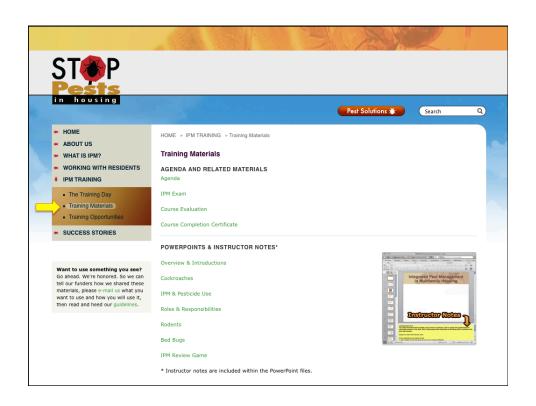
# notes! Remember! After you cooking or eating The foods please! Cleanup Everything in the kitchen! To be look good and for Protect to the cockroach Also! The otherwise don!t Forget turnoff the stove too

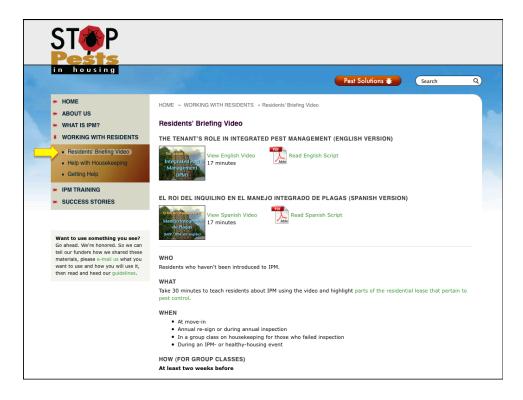












# Questions? IPM resources

#### **HUD Notices**

- PIH 2011-22: Promotion of Integrated Pest Management (IPM)
- Notice H 2012-5/PIH 2012-17: Guidelines on Bed Bug Control

#### Websites

- StopPests in Housing Program www.stoppests.org
- The National Center for Healthy Housing: www.nchh.org
- NH OneTouch: www.dhhs.state.nh.us/dphs/bchs/clpp/ documents/hhonetouchform.pdf
- The National Pesticide Information Center: www.npic.orst.edu

