



Integrated Pest Management

How does this fit into the Maintenance Dept.

Janet Hurley, MPA
School IPM Program Specialist
Texas AgriLife Extension Service
Southern Region School IPM Committee

It's just pest control



What IPM can be

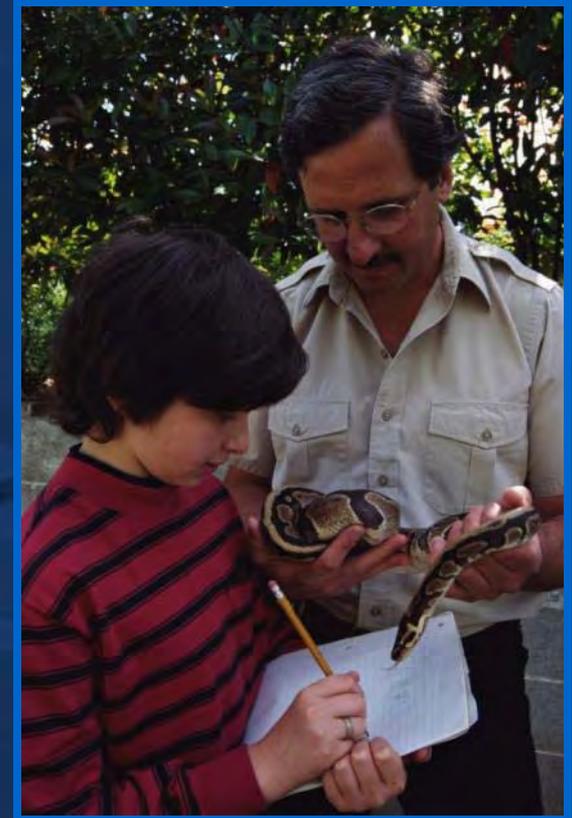
- Help balance pests and pesticides
- Helps maintain a healthy learning environment
- Help aid in building integrity
- Ties into the Green Building – sustainable building concept
- Focuses on what you are doing now – think like a bug

Basic Facts

- 96% of fish, 100% of surface water and 33% of major aquifers contain one or more pesticides.
 - *US Geological Survey 2006, compiled 1992-2001 studies*
- As adults, our children may have an average of 91 chemical contaminants in their bodies, fully one-fifth of which are pesticide-related, and including known carcinogens, neurotoxins, reproductive toxins or endocrine disruptors.
 - *Based on 2002 sampling by Environmental Working Group, Commonweal, Mt. Sinai School of Community Medicine; CDC; 2003*

And...

- Up to 1 in 4 children in cities have asthma (6% nationally). Cockroaches, dust mites, pesticides are prime causes/triggers. Childhood asthma treatment costs \$3.2 billion per year!
 - Centers for Disease Control
- New York City childhood asthma hospitalization rates are 3-4 time the national average
 - NYC Department of Health and Mental Hygiene



IPM Does Work!

- IPM contract specs and oversight reduces pesticide use and pest complaints by 90%.
 - Greene and Breisch, J. Econ. Entomol., 2002
- IPM schools had little pesticide residue vs. conventionally treated schools which had residues on baseboards and walls.
 - Williams et al., J. Econ. Entomol., 2005
- IPM training model in ten school districts reduced pesticide applications by 71% and pest complaints by 78%.
 - Gouge et al., American Entomologist, 2006



Schools Are Not Alone

- Hospitals, nursing care facilities
- Parks, playgrounds
- Aircraft
- Animal research facilities
- Zoos, pet stores and aquariums
- Museums
- Computer facilities
- Child care facilities





Do what your doing think Pests

- Injury and Illness Prevention Program
- Emergency Response Plan
- Asbestos Compliance/Management Plan
- Bloodborne Pathogen Exposure Control Program
- Lab Chemical Hygiene Plan
- Hazard Communication Program
- Lead Paint Management Program
- HACCP – food protection
- Indoor Air Quality Program
- ADD - Integrated Pest Management Program



What is IPM?

- An environmentally sound approach to pest control
- Quality pest control using the least hazardous chemicals and techniques
- A way to ensure building safety from all chemical area (pollutants)
- Safety from harmful pests like wasps, rodents, and other nuisance pests.
- Best management practice for schools

A definition:

- IPM is a strategy using multiple control tactics to ensure that:
 - pest populations are managed at acceptable levels
 - risks to people, other non-target organisms and the environment are minimized
 - the pest control program is practical and economical
 - Allows the judicious use of pesticides

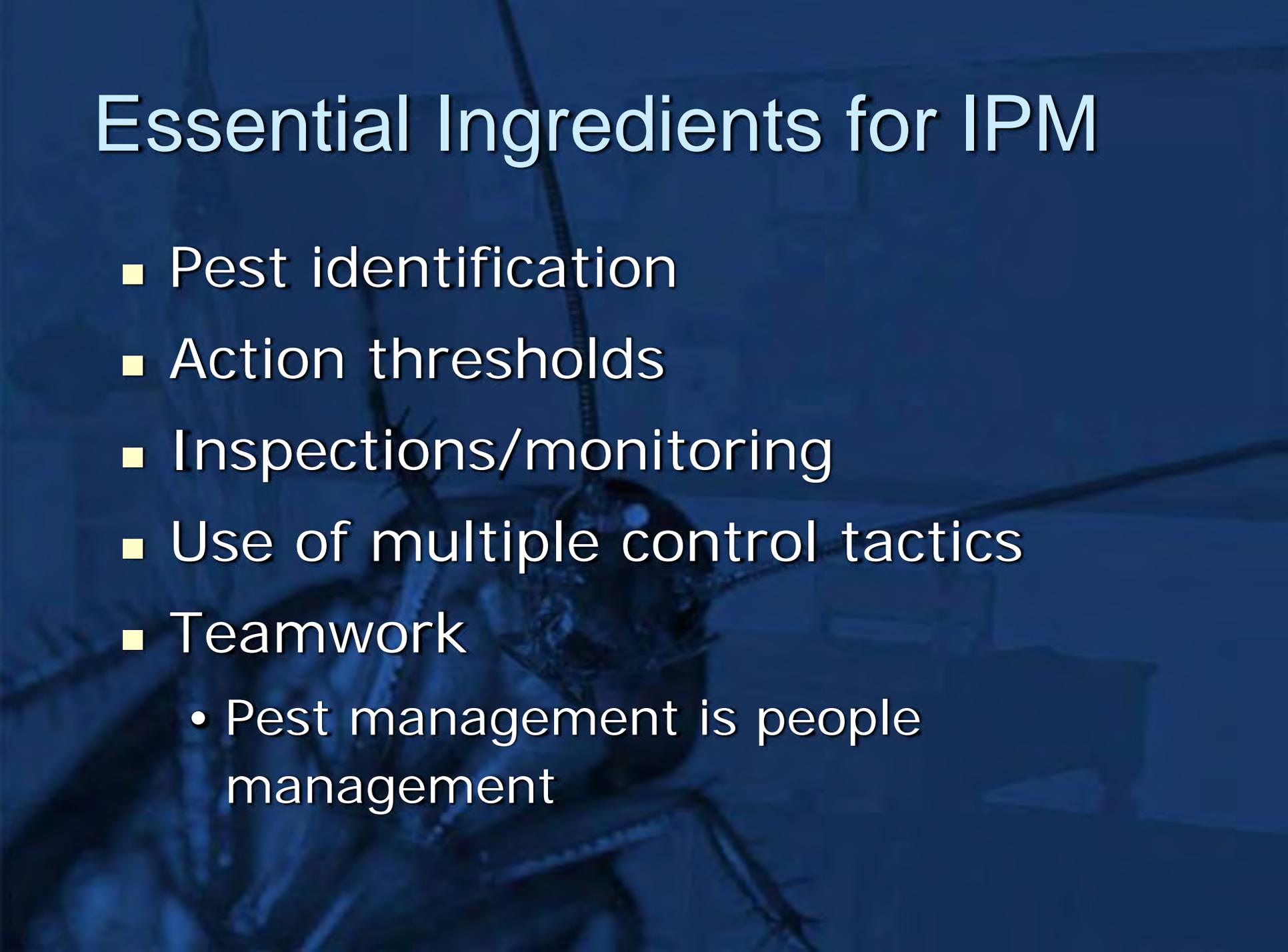


Common Pests in Schools

- **Cockroaches:** Skin fragments and feces are the most common cause of asthma in urban youth.
- **Ants:** Fire ant stings cause several human deaths per year.
- **Rodents:** Deadly hantavirus is transmitted by rodent urine and feces.



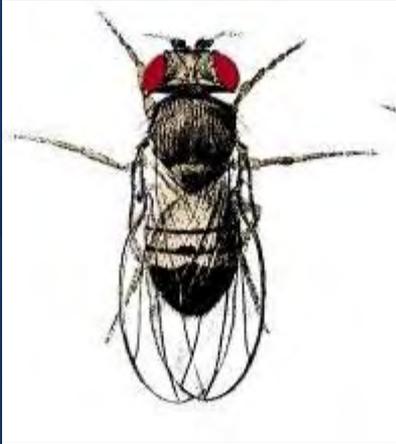
Essential Ingredients for IPM



- Pest identification
- Action thresholds
- Inspections/monitoring
- Use of multiple control tactics
- Teamwork
 - Pest management is people management



Do you know your pests



Fruit fly breeds
in rotting fruit,
syrups, vegetables



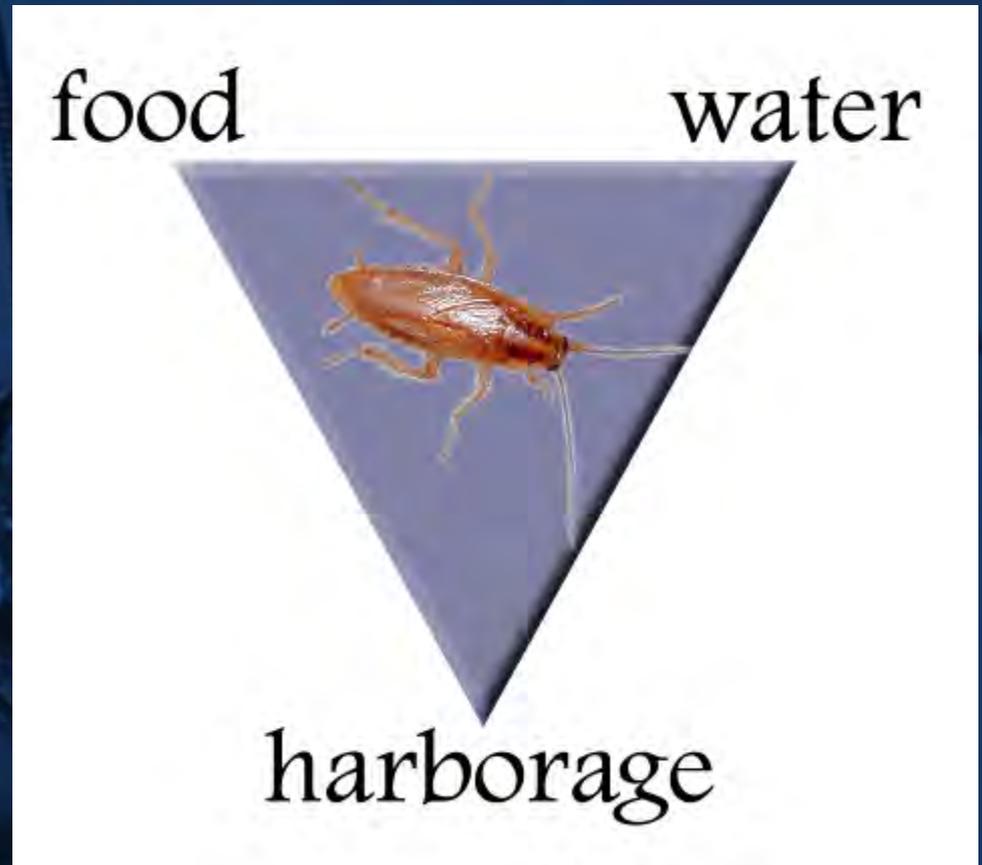
House fly breeds in
manure, garbage



Moth fly breeds
on fungus in
drains, under
cracked tiles

What is an IPM inspection?

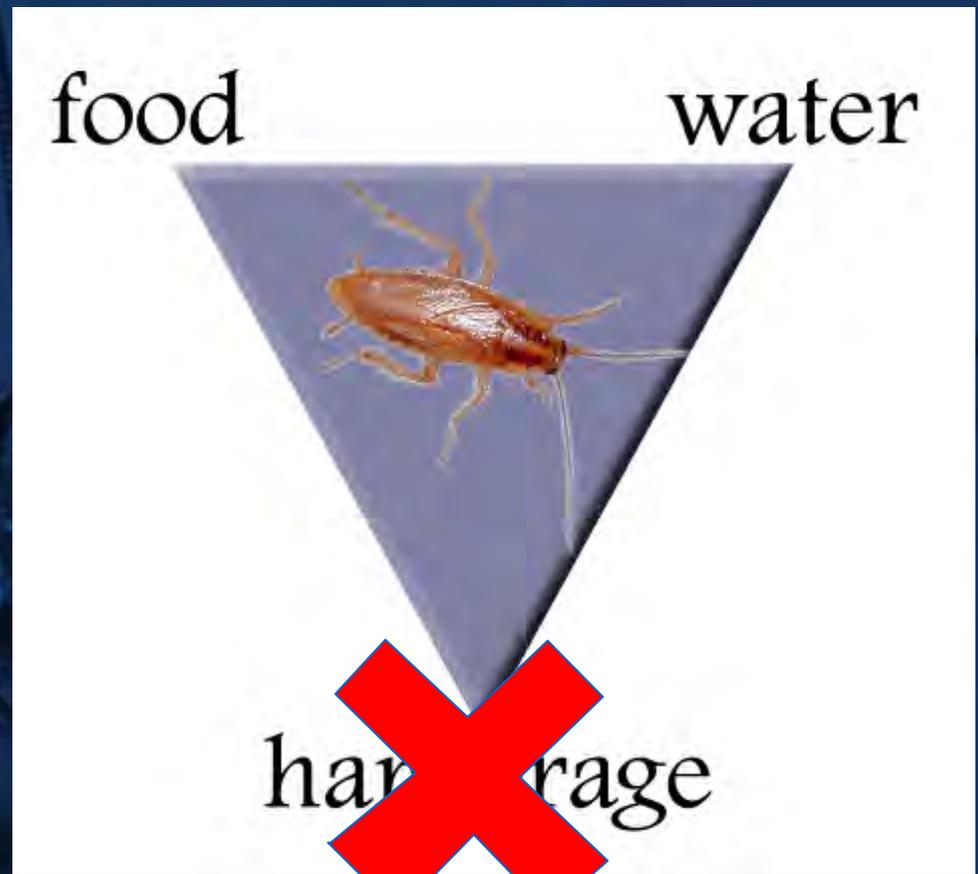
- Goes beyond sanitation
- Looks for critical things pests need
 - food
 - water
 - temperature
 - harborage



The pest triangle

What is an IPM inspection?

- Reduce a "requisite" - reduce a pest



The pest triangle



So when do you make a treatment

- IPM allows for specific treatments for pests
- Thresholds determines when you treat



<i>Ave. # cockroaches per zone</i>	<i>Action</i>
0	None
1-2	Bait stations; check sanitation
3-6	Spot treat c&c; add or replace baits; review sanitation
7-15	Thorough bait and c&c application; revisit in two weeks
15+	Close facility; conduct thorough c&c inspection and sanitation improvement; increase baits in infested areas; monitor biweekly

Controlling pests without chemicals

- Can you eliminate the food source
 - Remove cobwebs
 - Vacuum up droppings
 - Wipe down surfaces



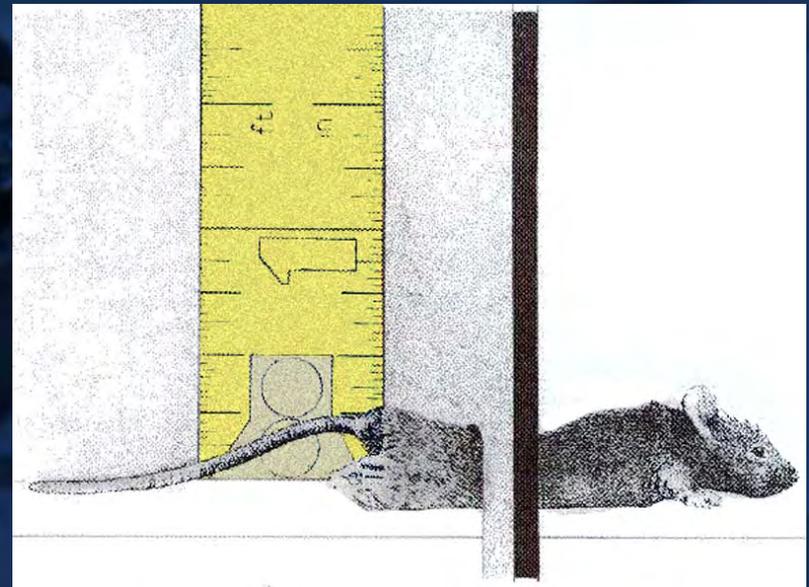
Taking action thru design

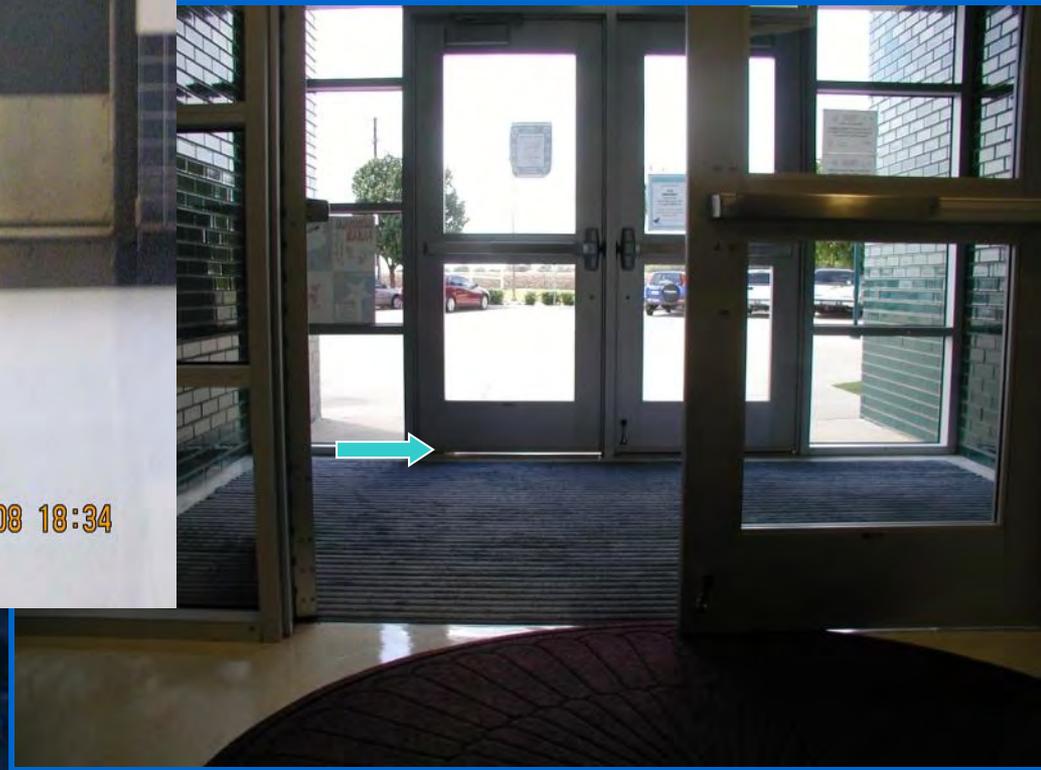




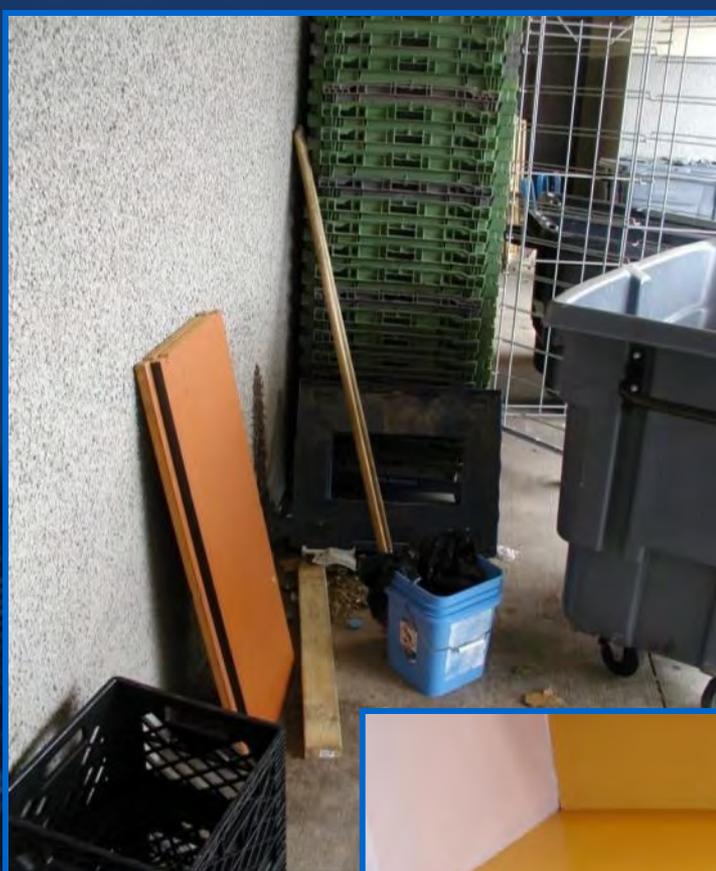
Pest prevention

- Single most important component of pest management program
- Pest-proofing, repair, maintenance of buildings
- Good building practices – maintaining the building integrity
- What do you look for?





All Exterior doors need sweeps, which can reduce pest complaints by 65%. To a mouse, ant or occasional invader, this door is wide open.



Sanitation. Clutter makes it impossible to clean and inspect, and provides harborage for many kinds of pests.



- Broken drain covers allow pests like roaches and Norway rats to gain access to the building
- Build them out!



Dirty drains provide food and breeding sites for drain flies, fruit flies, cockroaches.

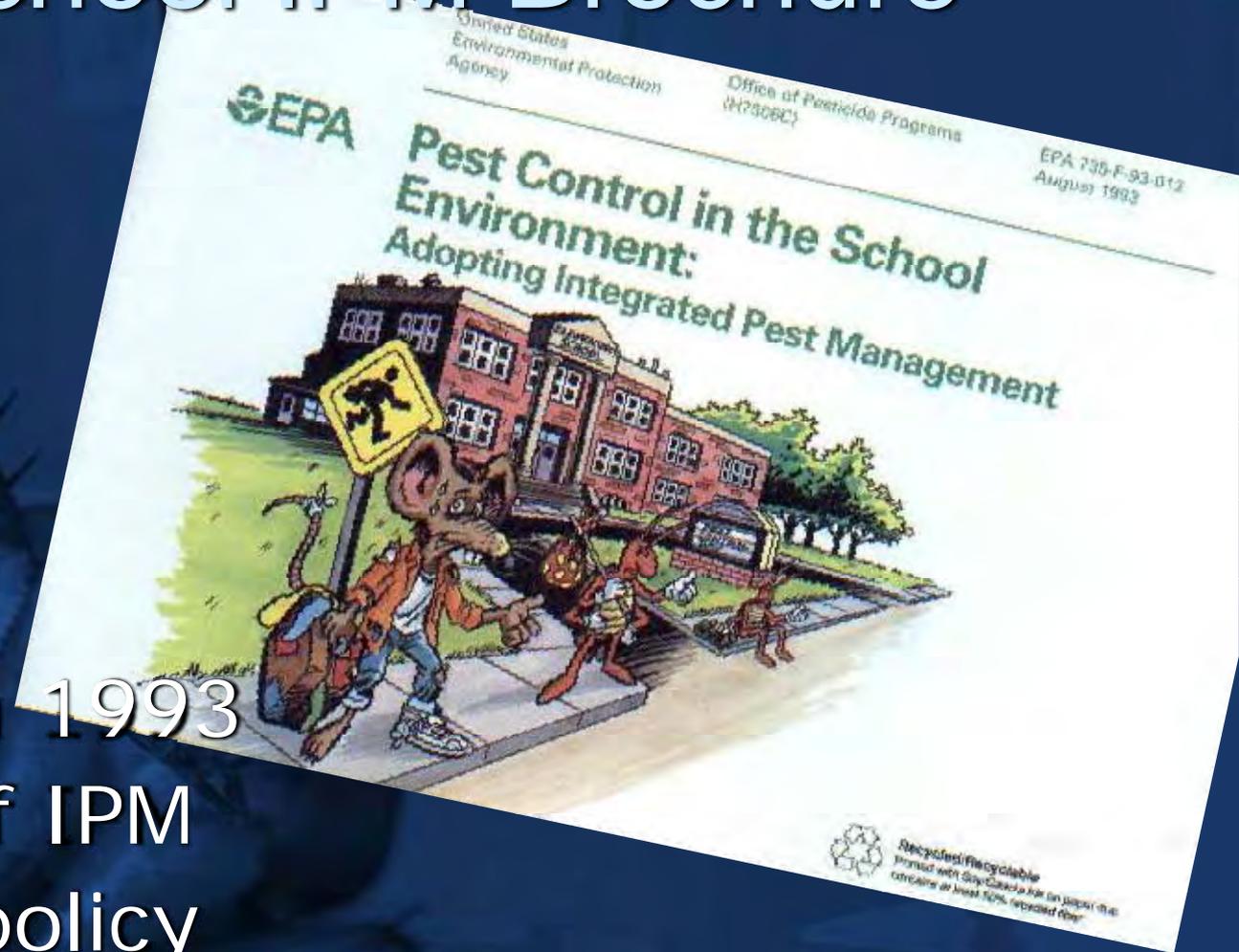
Hard to reach, or "hidden" drains are often neglected.

Teamwork makes IPM work

- IPM is people-oriented
- Communication skills essential
- Education is the most often overlooked IPM tactic



EPA School IPM Brochure



- Published in 1993
- Definition of IPM
- Model IPM policy
- www.epa.gov/pesticides/ipm

School IPM 2015

- EPA, USDA, HUD, CDC
- IPM Institute of North America
- Guidelines on how to implement IPM in your state or where to find more information
- Looking for more volunteers
- http://www.ipminstitute.org/school_ipm_2015.htm

How to Maintain Your Program

- Have the school board adopt an IPM policy statement
 - Appoint an IPM Coordinator to ensure program efficiency
 - Have a committee to make it easier on everyone
- Are school employees licensed to make applications
 - Or can anyone do this?
- Review your bid specifications
 - Does your bids request routine treatments to kitchens?
 - Do you receive monthly reports on sticky traps?
 - For more information (Bid Specs and RFPS)
http://schoolipm.tamu.edu/IPM_forms.asp

Professional IPM Services

- Thorough and regular inspection of all pest vulnerable areas of buildings and grounds
- Monitoring for pests and pest identification
- Does your pest management professional talk with you and your staff about the conditions?



Professional IPM Services

- Does the applicator recommend housekeeping tips
- Pesticide applications are made on an as needed basis – based on sticky traps – Not routine sprays
- Provides you with pesticide labels and MSDS
- Detailed records of what, where, when and why applied



An Ounce of Prevention

- Educate community
 - Inform people about IPM
- Good sanitation
 - Don't feed pests
- Exclusion and pest-proofing
 - Don't let pests in
- Modify the habitat
 - Don't give them a place to live



Where to get more information

IPM Links | Texas Cooperative Extension | Texas A&M University System

 **SOUTHWEST TECHNICAL RESOURCE CENTER**
IPM IN SCHOOLS

A+ A A-

Google™ Custom Search Search

Mailing List Sign-Up

Integrated Pest Management Resources

 Training Training information, times and dates for School IPM Coordinators	 Awards Program Recognition programs for school districts implementing School IPM.
 Video School IPM resource videos.	 Manual Step by step guide for School IPM Coordinators
 Pesticide Applicator Info Details concerning pesticides and how to apply them.	 Forms IPM pest sighting log Facilities Inspection Report Form IPM Service Report
 Newsletter Monthly newsletter covering current IPM topics.	 Message Board Ask questions and find answer at the school IPM Message



About School IPM

Kids deserve a safe place to learn and grow. Today's children spend a significant part of their lives in school. Pest management is an important, but often overlooked, part of school safety.

Pests can cause stings and bites, and can trigger allergies. In

In the News

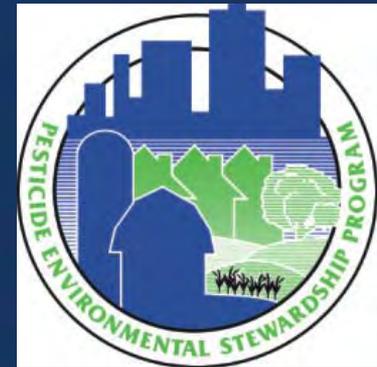
9/30/2007
New Asthma Guidelines Stress Importance of Safe Pest Control

9/13/2007

Even More information

- US EPA – Healthy Schools
 - <http://cfpub.epa.gov/schools/index.cfm>
- IPM Centers
 - <http://www.ipmcenters.org/>
- IPM Institute of North America
 - <http://www.ipminstitute.org/>

Thank YOU



Improving Lives. Improving Texas.