"Where IPM is at…. and going to"

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matures…

What are the major "drivers" of IPM?

- Awareness of the IPM innovation by consumers (Ag, Urban & Public Health)
- Relative advantages of the IPM innovation (reduction of health, environmental and economic costs…)
- Government initiative to implement
- Change Agent Resources and Activities

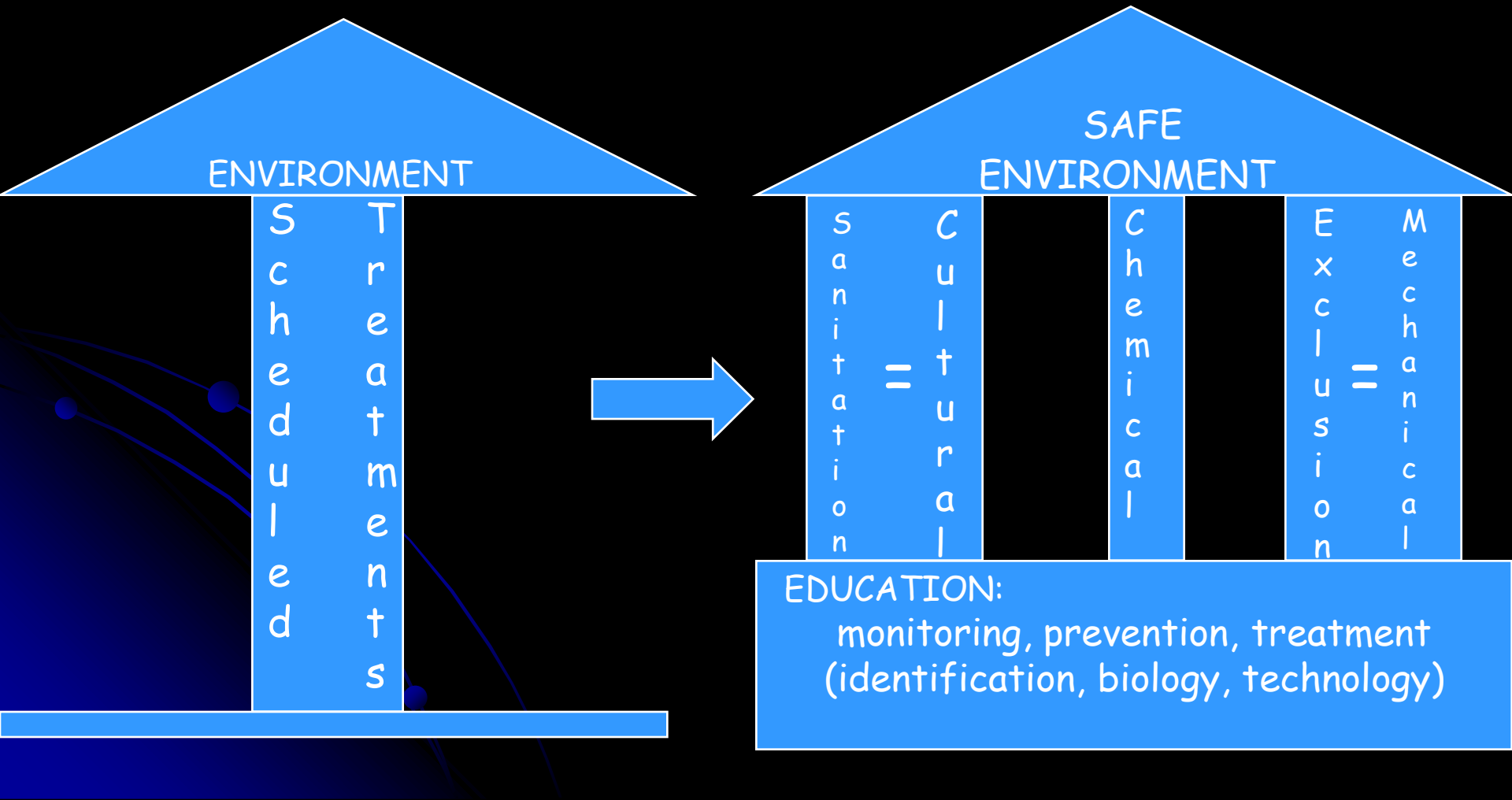
IPM as a publicly known innovation – From Ag to Urban

- Pediatricians are supporting IPM
- Environmental Health Specialists (health inspectors) are becoming change agents
- School IPM
  - State mandates for policies and plans
  - All Facility managers know the phrase
- Bed bug Epidemic is the new "window of opportunity": CBS evening news coverage invoking IPM as the solution

The basics of IPM as the non-ag community see it:

- Don't attract Pests
- Keep them out
- Get rid of them, if you are sure you have them with the safest, most effective method(s)

A Shift to an IPM Program



Bed Bug "Epidemic" Requires Active leadership to implement community action

- Awareness
- Surveillance
- Ethical response
- "protective"
- communication

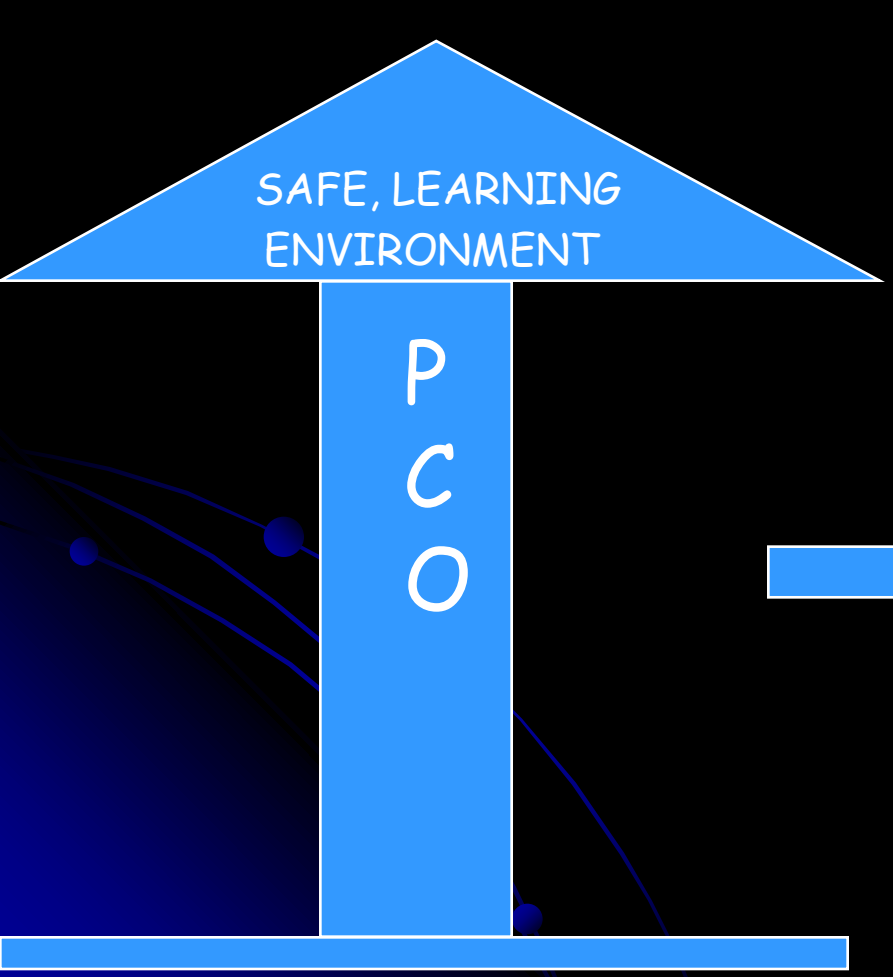
Interestingly, a Public Health protocol

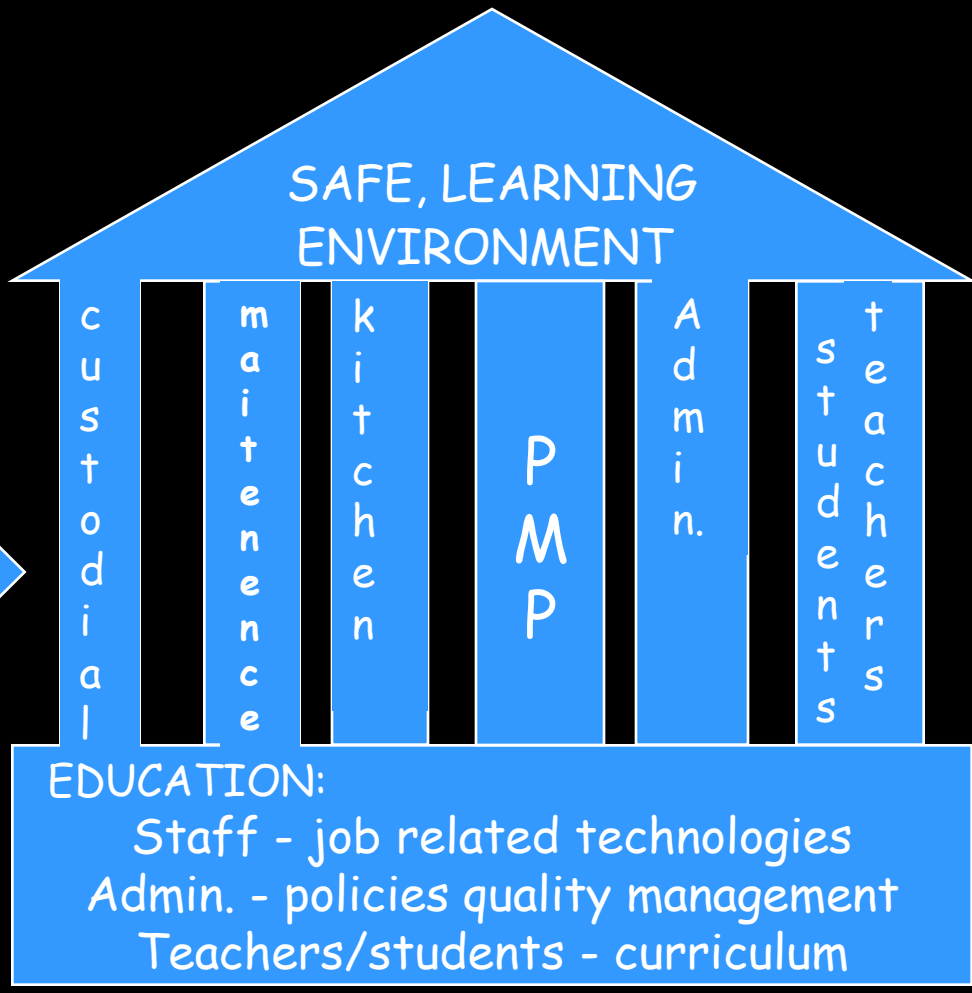
Requires Community Action!

Bed Bug IPM plan -creating a communal awareness of:

- how to identify bedbug infestations
- how to prevent these infestations
- how to safely and effectively address infestations with the earliest possible intervention.

a Shift in Pest Management for Schools





Spanning 14 Years, 14 States and 7 EPA Regions:

- 71% Reduction in Pesticide Applications
- 78% Reduction in Pest Complaints to School Administrations

A safe learning environment

IPM: FIFRA, FQPA, ESA and beyond…. Mission oriented partnerships

- Internal Partnerships…"ONE EPA" –
  - Air – IAQ (ex. -tools for schools)
  - Water – NPDES
  - OCHP – IPM training for HDs & CE housing
  - American Indian Environmental Office
- External Partnerships…beyond USDA
  - CDC – bed bugs and EHP (health inspectors)
  - HUD – housing
  - DOD – AF pest management board

IPM: FIFRA, FQPA, ESA and beyond….CWA, PPA, TSCA

- CWA – NPDES – IPM with TEETH requiring permits beyond registration!
- Pollution Prevention Act- VERIFIABLE IPM!
- TSCA title V: required guidelines…2012!
- Professional standards
  - Pest Management Professionals - NPMA
  - Environmental Health Professionals - NEHA
  - School IPM coordinators

Why a SIPM strategic plan is Critical to the Mission

- Prevents Past Mistakes
- Provides Leadership!
- Reduces Uncertainty

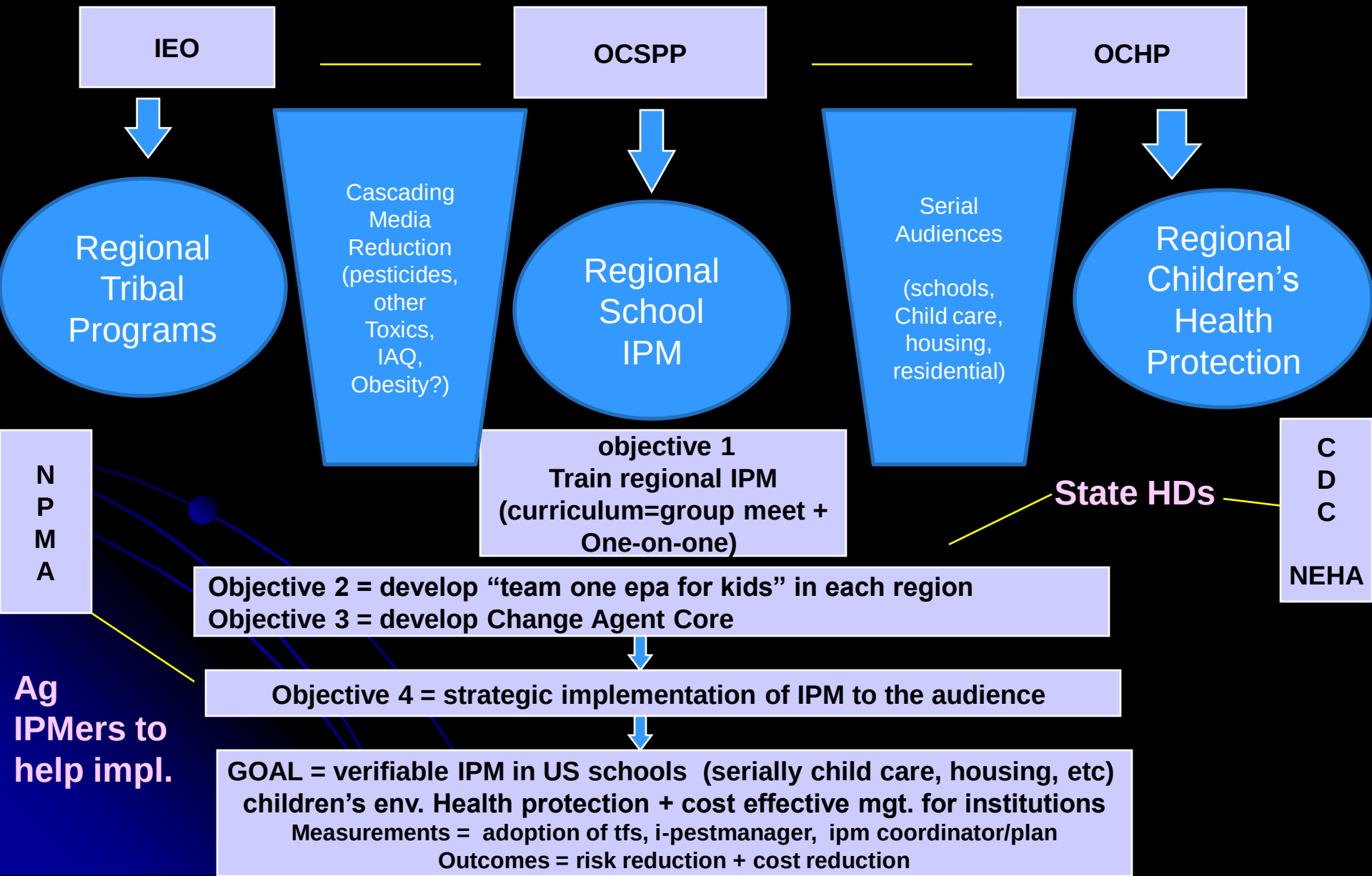
by "charting the way"

- Better HQ/REGION coordination
- A path for PARTNERSHIP

Prevents Past Mistakes: IG's report on the SAI

- Lack of Coordination Between HQ & Regions
- No strategic plan that demonstrated success
- lack of guidance led to inconsistencies between the Regions

"One epa for kids" structural model - logic = Agency infrastructure development for implementation AND child institution infrastructure development for "cascading" adoption of Pollution Prevention innovations



Recognizing IPM as a Pollution Prevention INNOVATION:

- Source Reduction for pesticides is preventing pests from triggering pesticide applications
- IPM is a cluster of technologies (cultural, mechanical, biological, genetic, and chemical) which is an integrated application (based on biological information) designed to allow humans to compete with other species (pests).

POLLUTION PREVENTION ACT (paraphrasing)

- When feasible, pesticides should be prevented or reduced at the source
- When prevention is not feasible, chemical control should relegated to non-toxic options
- When prevention or a non-toxic option is not feasible, treatment should be relegated to the least toxic option
- Only when prevention, non-toxic, or least toxic options are not feasible should pesticides should be used in environmentally safe ways (label)

What IPM is NOT

- A job description added to an unwilling or unqualified individual
- A "low bid" process
- An "out of sight, out of mind" contractual function ……..An "after hours" program
- A scheduled pesticide application program
- A program prohibiting all pesticides (what is DE, Bt…?)
- A program that does not educate the school community

Demand-side vs Supply-side IPM

Implementing Integrated Pest Management –

"Insects can be managed, but management is people oriented..." (Metcalf and Luckmann, 1975).

"pest management is people management!"

…."do what you are doing now, just think pests"

SUPPLY-SIDE IPM: supplying practitioners of IPM with:

- Training to manage pests via integrating strategies – Extension/SLA
- Materials for monitoring and treatment of pests – industry
- Time to educate consumer – industry

PROBLEMS?

- Standards for Trained vs. route tech
- Time….
- Partnership for "people management"

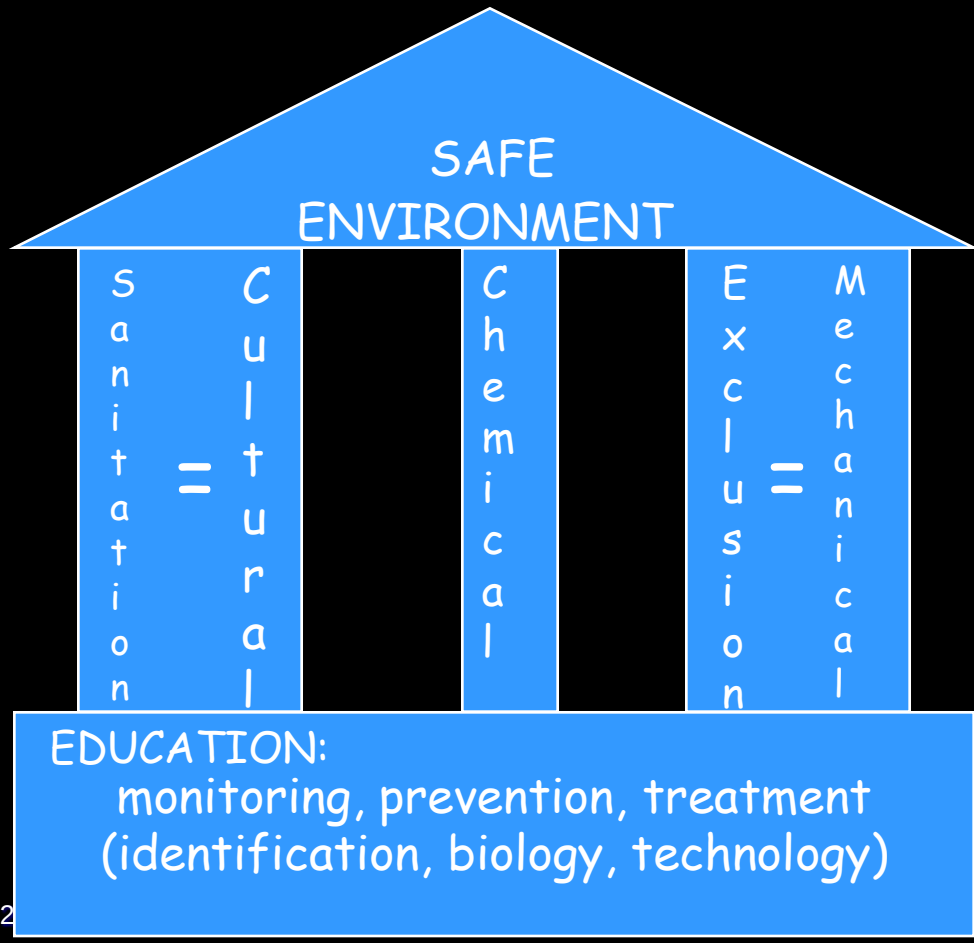
Pest Prevention is Everyone's Job

You must be a partner with your Pest Management Professional for:

- figuring out the problem
- fixing the problem

Demand-side IPM

Fact: the vast majority of pest management activities are conducted by food service, administrative and building maintenance professionals…. NOT pesticide applicators



Implementers must demonstrate IPM is compatible with the built environment's current operations

- Doing what you do now---just think pests!!!
  - Security = monitoring
  - Energy conservation = exclusion
  - Sanitation = nothing to eat
  - Clutter control = no place to live

Food Water Shelter

What is VERIFIABLE IPM?

- A documented and evaluated, working partnership of a trained, diagnostician/educator and the school community
- Based on pest monitoring & information sharing regarding:
  - How to monitor
  - How to "not attract pests"
  - How to exclude pests
  - How to control pests with the safest, most effective methods possible

Minimum Standards for a Verifiable, Demand-side IPM

- The school administration is aware of what their pest management program is.
- District must demonstrate a working partnership with a Pest Management Professional
- Those responsible for the cultural (sanitation) and mechanical (exclusion) components of IPM have been trained to incorporate them into existing job responsibilities .
- Those responsible for the chemical pesticide component of IPM are certified PCOs (with instructions to treat as needed and based on monitoring)

The school administration is aware of what their pest management program is:

- What pests are being managed in buildings and on grounds at all times.
- Who is responsible for QAQC:
  - monitoring, reporting and documenting pest complaints,
  - Developing pest management policies (lice, pesticides…)
  - Providing information and training to the community
  - Procuring and evaluating pest management services
  - Interfacing with the PMP if they are contracted
- What internal education programs are in place (faculty, staff, nursing…)
- What the cost of pest management is
- How it compares to state/national stds.

The INFORMED consumer: What is the cost of what you are getting?

Time - By the minute (square ft. bids are not appropriate in schools)

- Elementary School average = 30-45 min/month
- Middle School average = 45-60 min/month
- High School average = 60-120 min/month

The Public become an "informed consumer" such that they DEMAND the Pest Management Professional be a:

"Diagnostician/educator"

PMP = "Diagnostician"

- Your "professional" relationship
  - History
  - Inspection for conducive conditions
  - Inspection for pests
  - ID and biology
  - monitoring

Perform regular inspections for Pests AND Conducive Conditions (those things that attract pests and allow them to be where you don't want them).

Monitoring

- The only way to justify pesticide application
- Allows for proper diagnosis

IPM Education for the affected community

- pest ID
- Pest Biology
- conducive condition ID and remediation
- All management alternatives …and their safe use!

Thus…

PMP = "Educator"

Your "professional" relationship is a Partnership to teach your "patient" how to:

- To prevent pests
- Inspect for pests
- ID and biology
- Monitoring
- To Remove pests

What is the value of "Metrics" for IPM implementation?

- TRUTH SERUM - Whether participants are REALLY practicing IPM.
- BAROMETER – how are we doing with our implementation.
- DECISION Making TOOL – such that the community can adopt IPM

Measuring IPM in the Urban Environment

- *i-pestmanager*

a web-based application that:

- aids in the identification of pests;
- provides a means to report pests;
- tracks mitigation efforts to eliminate pests;
- tracks IPM related costs and
- pesticide use; and
- compiles various pest reports.

- free to schools?
- an innovation born of EPA funding, developed for schools BY a school facility manager (engineer)

The FIFRA "Balancing" mandate matures…

- Scientific analysis of the risks to human health and the environment from inerts, synergism, and cumulative effects will re-balance the "risk/benefit" mandate in terms of "unreasonable adverse…"

THE END