State-Based School IAQ Management Initiatives

Wednesday, August 25, 2010

1:00 – 2:30 p.m. EST

Introductions

Facilitators:

- Jennifer Lemon, *Indoor Environments Division, U.S. EPA*

Speakers:

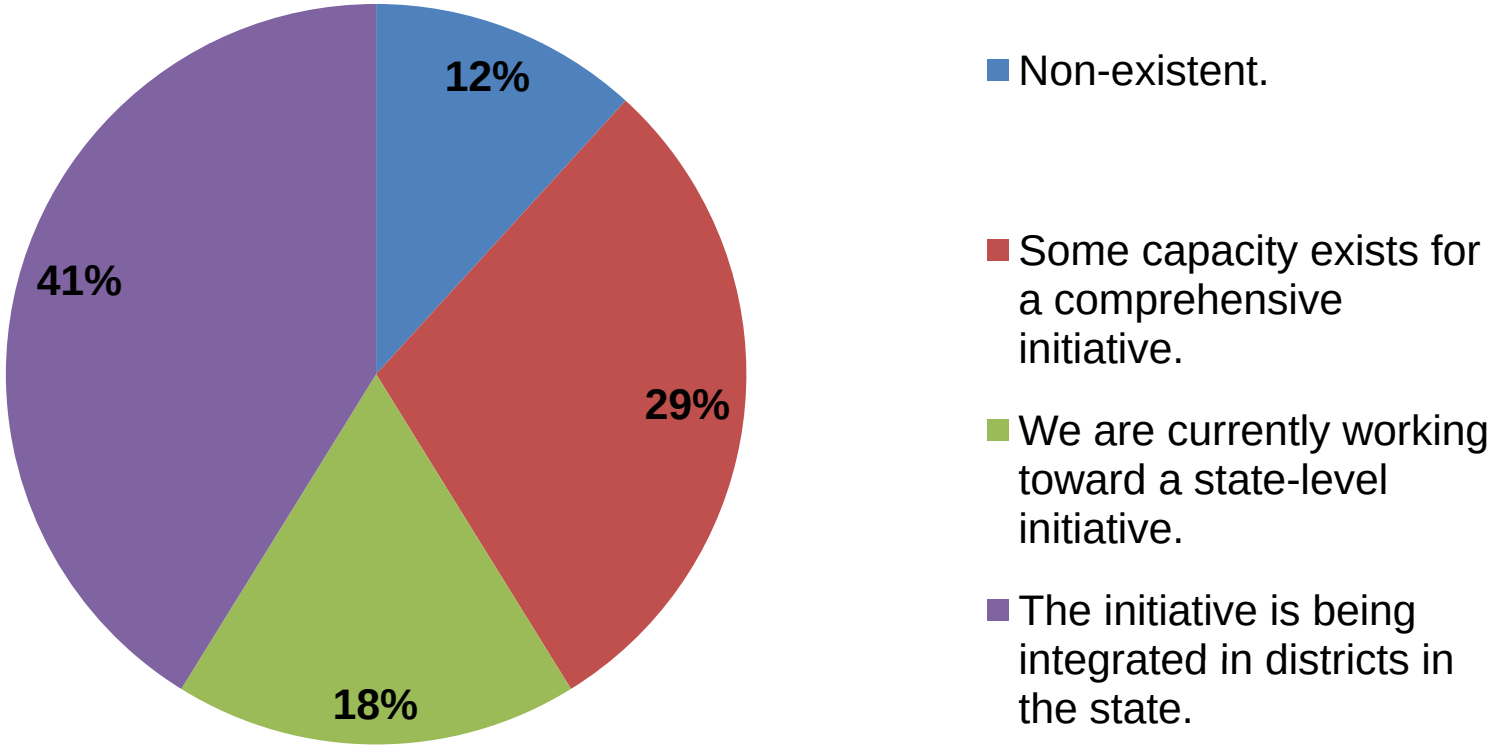
- Tobie Bernstein, *Senior Attorney, Environmental Law Institute*
- Kenny Foscue, *Health Educator, Connecticut Department of Public Health*
- Dan Tranter, *Research Scientist, Minnesota Department of Public Health*

Objectives

- Overview of the *IAQ Tools for Schools* Program
- Review State-Based School IAQ Initiatives
- Learn Successful Strategies for State-Based IAQ Management Implementation from Model Programs
- Review Resources Available to State-Level Programs

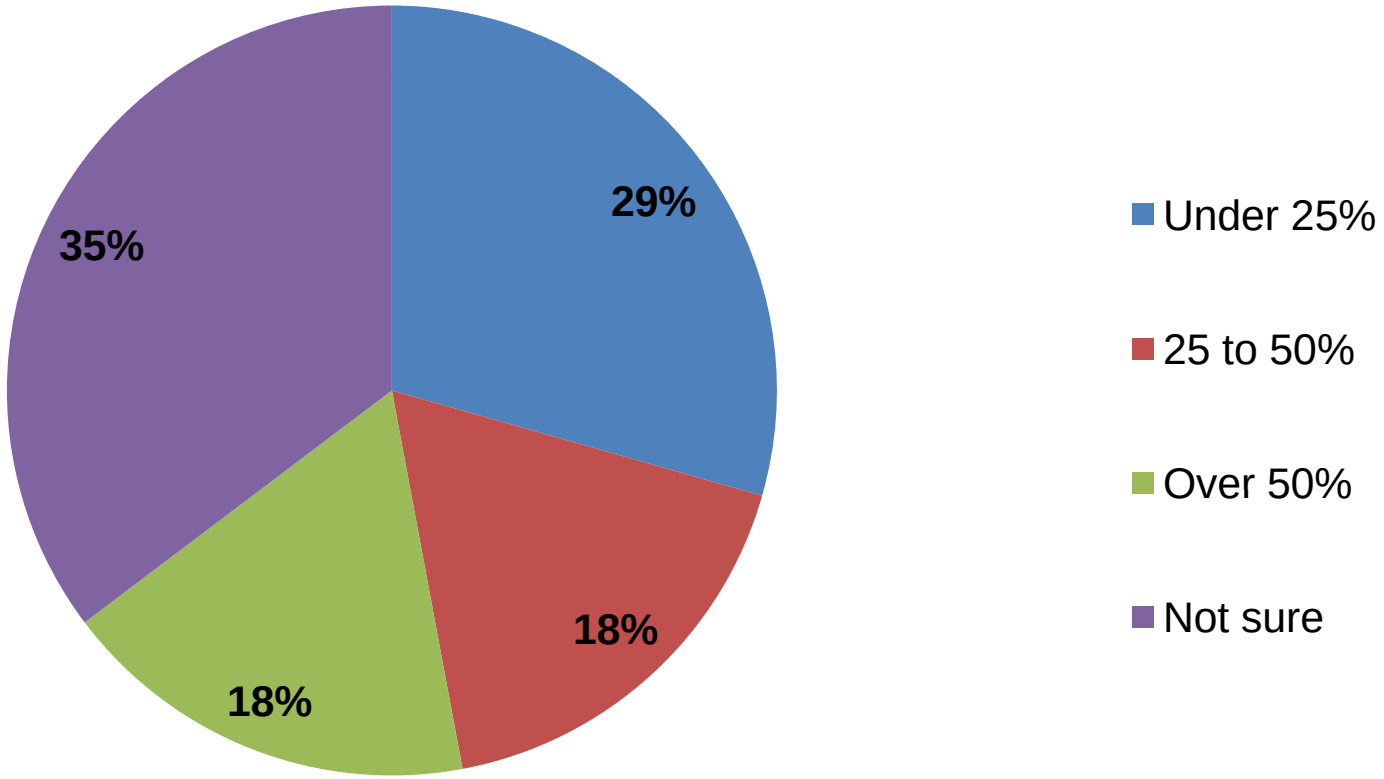
Polling Question

Based on your current knowledge, what is the status of a collaborative, state-based IAQ initiative in your state?

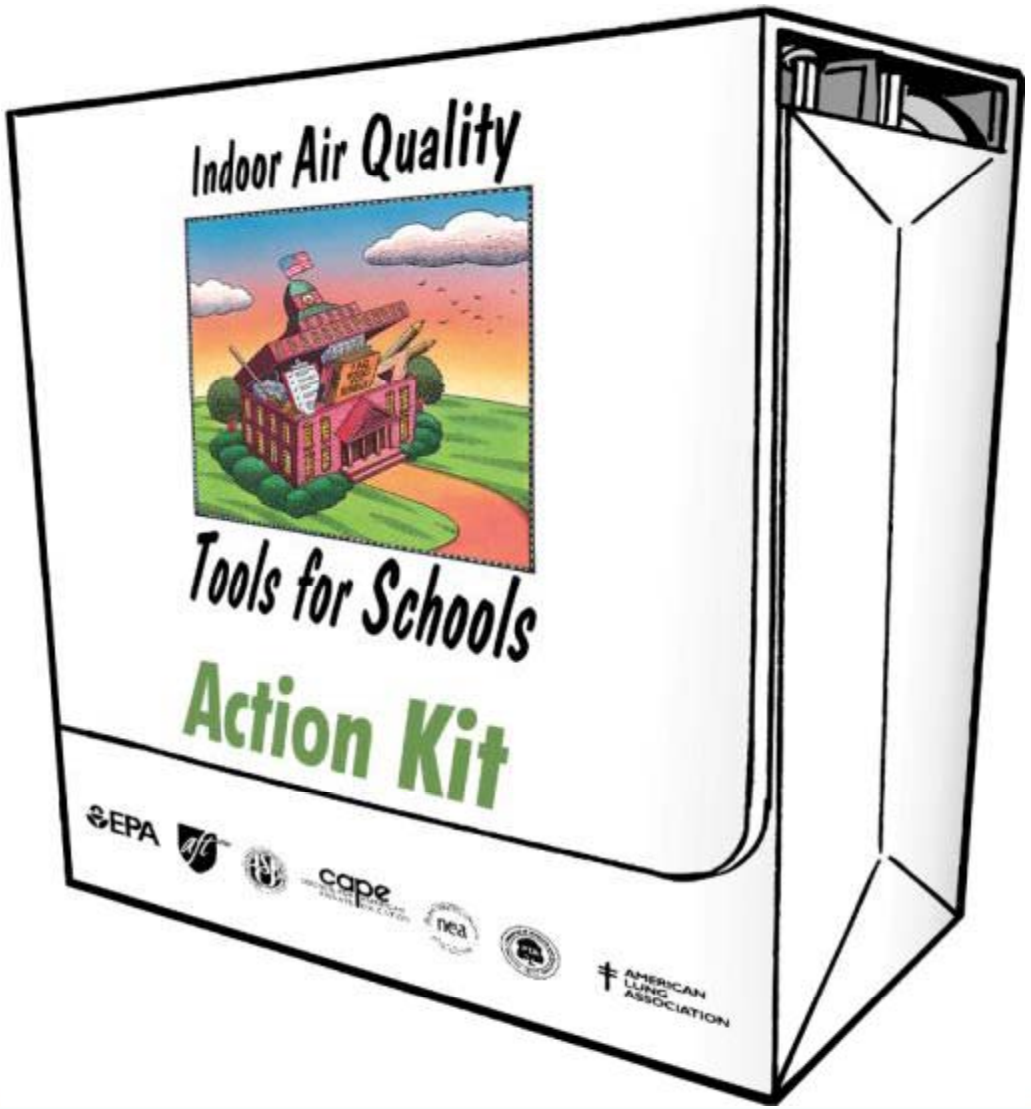


Polling Question

To your knowledge, what percentage of districts in your state are using the IAQ Tools for Schools Action Kit?



IAQ Tools for Schools Program



The Framework for Effective School IAQ Management

The Framework for Effective School IAQ Management:
Six Key Drivers

The Framework for Effective School IAQ Management:
Six Technical Solutions

The Framework for Effective School IAQ Management:
Six Technical Solutions

Quality HVAC
- Inspect HVAC systems regularly
- Establish a maintenance plan
- Change filters regularly and ensure condensate pans are draining
- Provide outdoor air ventilation according to ASHRAE Standard or local code
- Clean air supply diffusers, return registers, and outside air intakes
- Keep unit ventilators clear of books, papers, and other items

Control of Moisture/Mold
- Conduct routine moisture inspections
- Establish mold prevention and remediation plan
- Maintain indoor humidity levels between 30% and 60%
- Address moisture problems promptly
- Dry wet areas within 24-48 hours

Strong Integrated Pest Management (IPM)
- Inspect and monitor for pests
- Establish an IPM plan
- Use spot treatments and baits
- Communicate with occupants prior to pesticide use
- Mark indoor and outdoor areas treated with pesticides

Effective Cleaning & Maintenance
- Conduct routine inspections of school environment
- Develop a preventative maintenance plan
- Train cleaning/maintenance staff on protocols
- Ensure material safety data sheets (MSDS) are available to staff
- Clean and remove dust with damp cloth
- Vacuum using high-efficiency filters

Smart Materials Selection
- Maintain products inventory
- Develop low-emitting products purchasing and use policies
- Use only formaldehyde-free materials
- Use only low-toxicity and low-emitting paint
- Select products based on product rating systems
- Use least toxic cleaners possible (only those approved by the district)

Aggressive Source Control
- Conduct regular building walkthrough inspections
- Test for radon; mitigate if necessary
- Implement a hazardous materials plan (use, label, storage and disposal)
- Establish a school chemical management and inventory plan
- Implement Smoke-Free policies
- Establish an anti-idling school bus policy
- Use walk-off mats at building entrances
- Conduct pollutant-releasing activities when school is unoccupied

The Framework for Effective School IAQ Management

Polling Question

To your knowledge, what percentage of districts in your state are using the *IAQ Tools for Schools* Action Kit?

- Under 25%
- 25 to 50 %
- Over 50%
- Not sure

Polling Question

To your knowledge, what percentage of districts in your state have school-based IAQ management teams?

- Under 25%
- 25 to 50 %
- Over 50%
- Not sure

An Overview of State Policy Strategies

Tobie Bernstein

Environmental Law Institute

The State Role in Advancing School IAQ Management

Jurisdiction

- Most states have some jurisdiction over school facilities issues

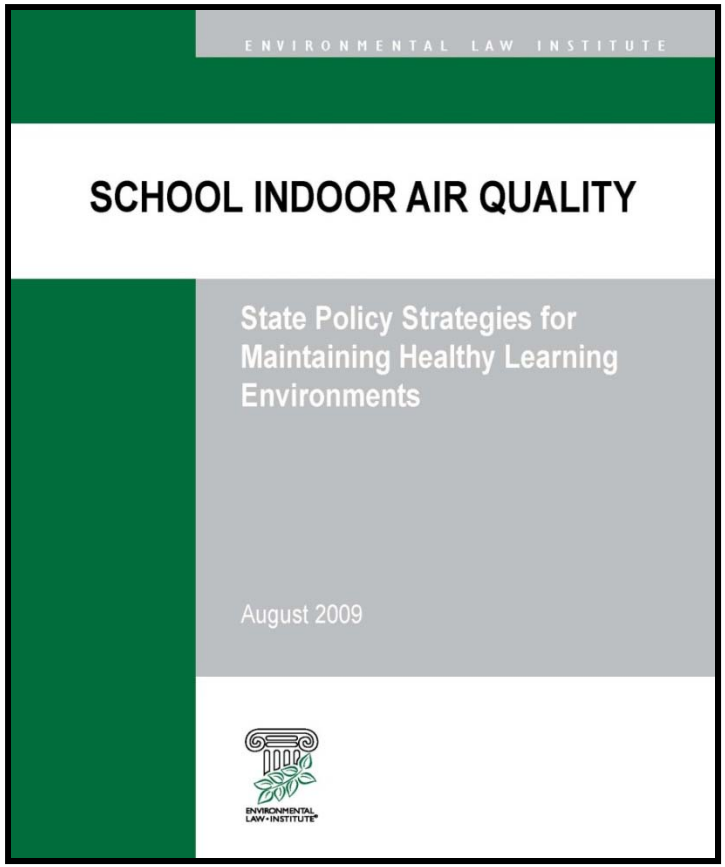
Goals

- Public health, academic achievement, cost-effectiveness
- Educational equity

Policy Development

- A well-designed state *policy* can support state efforts to achieve these goals

2009 ELI Report on School IAQ Policies



Free Download at:

http://www.elistore.org

Existing State Policy Models to Strengthen School IAQ Management

Required Inspections/Minimum IAQ Criteria

- Examples: IN, WA, NH (health and safety)
- Example: NJ (labor/OSHA)
- Example: NY (education)

Required School IAQ Management Plan/Program

- Examples: MN, CT, WI

Basic Elements of an Effective School IAQ Policy

Requirements

- Minimum facility practices, core elements of an IAQ Plan, etc.

Oversight

- Inspections, reporting, corrective action, etc.

Resources

- Outreach, training, tech. assistance, financial assistance, etc.

School IAQ Policy: ELI Resources

ELI Materials:

- Database of State IAQ Laws
- State Policy Updates
- In-depth Policy Reports

Available at:

- www.eli.org/program_areas/indoor_environments.cfm

Contact info:

- Tobie Bernstein – bernstein@eli.org

State Perspectives

Connecticut's State-Based IEQ Initiative:

The Connecticut School Indoor Environment Resource Team

Kenny Foscue, Health Educator, Connecticut Department of Public Health

Program History

- High percentage of school-related indoor air quality calls. Determined a need for a proactive strategy.
    - Solution: The *IAQ Tools for Schools* Program
- Began efforts in 1999 (Connecticut Department of Public Health, U.S. EPA Region 1, CTCOSH).
- Quickly realized need for multi-agency response.

Connecticut School Indoor Environment Resource Team's Partners

- CTCOSH
- CT Department of Environmental Protection
- CT Department of Education
- CT OSHA
- CT Department of Public Health
- CT Education Association
- American Lung Association of Connecticut
- CT Association of Local Health Directors
- CT Association of School Nurses
- CT Interlocal Risk Management Association
- CT Association of Public School Superintendents
- CT Foundation for Environmental Safety in Schools
- AFT - Connecticut
- UCONN Health Center
- U.S. EPA Region I
- Yale Occupational/Environmental Medicine Program
- US Department of Education, Civil Rights Office, Boston
- CT Association of Boards of Education
- CT School Building and Grounds Association
- Southeast CT Indoor Air Coalition
- CT Association of School Administrators
- CT PTA
- American Institute of Architecture
- CT Association of School Business Officials

Rationale

- Schools have competing issues.
- Schools need assistance to implement the *IAQ Tools for Schools* Program.
- The *IAQ Tools for Schools* Program must be implemented at the district-level.
- More partners means more successful outreach.
    - Teachers Unions, Facilities Associations, American Lung Association, etc.
- Multi-tiered approach to school IAQ management.

Strategy

- Aggressive district-based outreach program
- Comprehensive training program:
  - 5 hours Implementation Training
  - Utilize I.H.s, health professionals
  - Refresher, other training programs
- Local health department involvement, follow-up
- Sustaining programming

Resources

- 2 Part Implementation Training Program
- Refresher Workshop
- Advanced *IAQ Tools for Schools* for Custodians Workshop
- “Cleaning for Health” Green Cleaning Consultations
- Train the Trainer Program
- Website

Obstacles

- Schools have competing issues
- Perceptions about IAQ costs
  ("Opening Pandora's Box")
- Lack of IAQ funding for state health Departments
- Present school budget crisis

Accomplishments

- Established core team of expertise, school leadership
- Trained *IAQ Tools for Schools* teams in:
  - Over 800 CT schools (out of approx. 1000)
  - Over 147 CT school districts
  - Over 6,645 staff, parents trained
- Conducted over 450 training workshops
- State policy impact : 2003 School IAQ law

Connecticut School Districts That Have Implemented * EPA's Tools For Schools Indoor Air Quality Program as of July 7, 2010

Connecticut School Indoor Environment Resource Team Member Organizations

American Federation of Teachers
CT American Institute of Architecture
American Lung Association of Connecticut
CT Association of Boards of Education
CT Association of Local Health Directors
CT Association of Public School Superintendents
CT Association of School Business Officials
CT School Building & Grounds Association
CT Council for Occupational Safety & Health
CT Department of Environmental Protection
CT Department of Education
CT Department of Labor, Division of Occupational Safety and Health
CT Department of Public Health
CT Education Association
CT Federation of School Administrators
CT Foundation for Environmentally Safe Schools
CT School Nurses Association
CT Interlocal Risk Management Agency
CT Parent & Teacher Association
Southeast CT Indoor Air Quality Coalition
UCONN Health Center - Division of Occupational & Environmental Medicine Program
U.S. Environmental Protection Agency, Region I
U.S. Dept of Education, Office for Civil Rights
Yale Occupational & Environmental Medicine Program

For additional Information
Contact the Resource Team

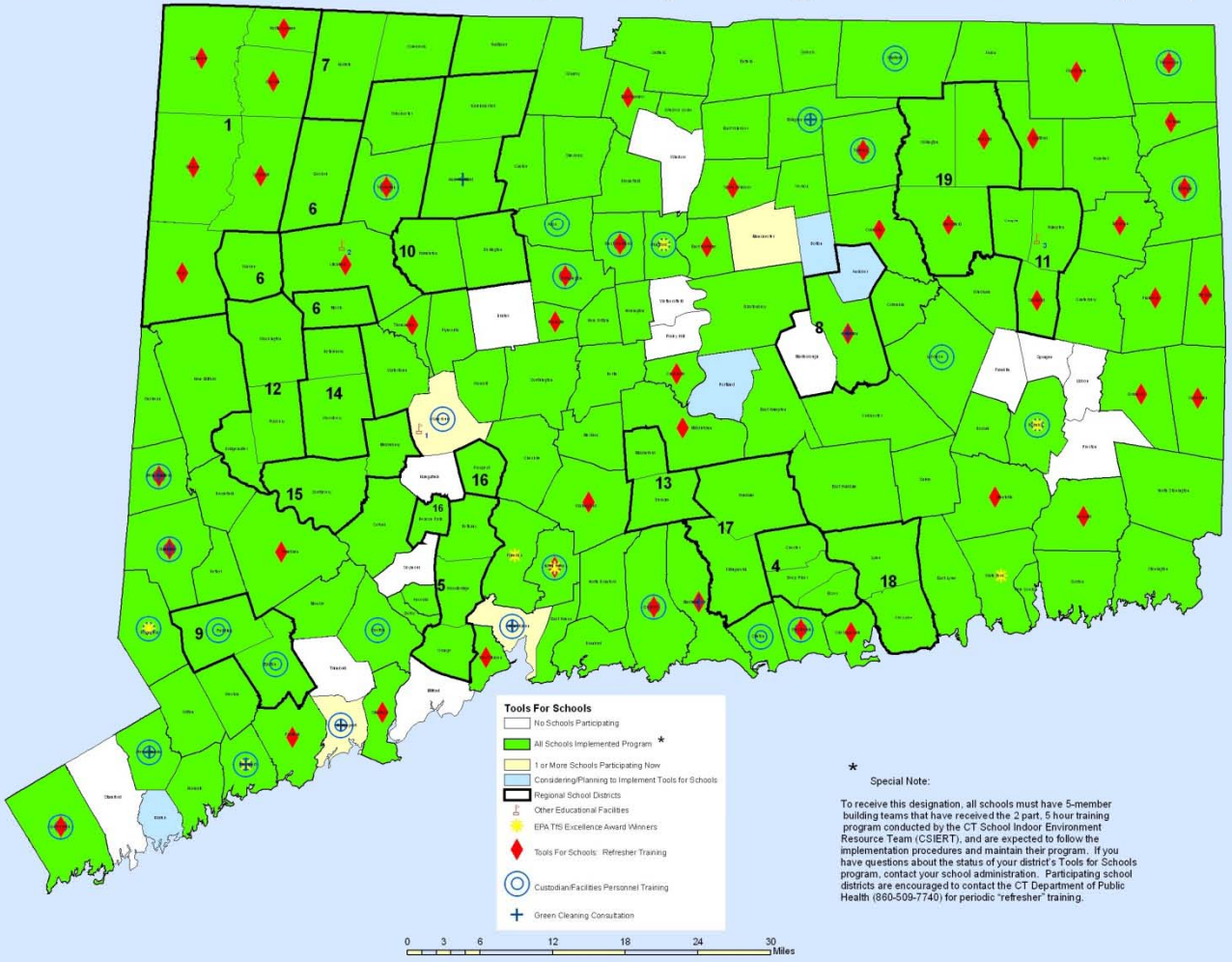
Kenny Foscue
Environmental & Occupational Health Assessment Program
CT Department of Public Health, Environmental Health
410 Capitol Ave, MS # 11CHA Hartford, CT 06134-0308
Phone: 860-509-7740 Fax: 860-509-7785

REGIONAL SCHOOL DISTRICTS	TOWNS
01	CANAAN,CORNWALL,KENT,NORTH CANAAN,SALISBURY,SHARON
04	CHESTER, DEEP RIVER, ESSEX
05	BETHANY, ORANGE, WOODBRIDGE
06	GOSHEN, MORRIS, WARREN
07	BARKHAMSTED,COLEBROOK, NEW HARTFORD,NORFOLK
08	ANDOVER, HEBRON, MARLBOROUGH
09	EASTON, REDDING
10	BURLINGTON, HARWINTON
11	CHAPLIN, HAMPTON, SCOTLAND
12	BRIDGEWATER, ROXBURY, WASHINGTON
13	DURHAM, MIDDLEFIELD
14	BETHLEHEM, WOODBURY
15	MIDDLEBURY, SOUTHBURY
16	BEACON FALLS, PROSPECT
17	HADDAM, KILLINGWORTH
18	LYME, OLD LYME
19	ASHFORD, MANSFIELD, WILLINGTON

Other Educational Facilities

1 Naugatuck Valley Community College, Waterbury, CT
2 Education Connection, Litchfield, CT
3 EASTCONN, Hampton, CT

July 7, 2010



* Special Note:

To receive this designation, all schools must have 5-member building teams that have received the 2 part, 5 hour training program conducted by the CT School Indoor Environment Resource Team (CSIERT), and are expected to follow the implementation procedures and maintain their program. If you have questions about the status of your district's Tools for Schools program, contact your school administration. Participating school districts are encouraged to contact the CT Department of Public Health (860-509-7740) for periodic "refresher" training.

ATSDR

Funded in part by funds from the Comprehensive Environmental Response, Compensation, and Liability Act trust fund through a cooperative agreement with the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services.

http://www.ct.gov/dph/schools

Accomplishments

- *"Tools for Techs" – IAQ Tools for Schools* Program for technical high schools
- Developed *IAQ Tools for Schools* "users" website
- Developed a "*Tools for Offices"* Program based on the *IAQ Tools for Schools* implementation experience
- Most important:
    - Ability to respond to emerging issues (green cleaning, infection control, PCBs)

Positive Health Outcomes

- Waterford
  - IAQ health complaints decrease 66% or greater in 9 out of 13 elementary classrooms
- Hamden
  - Absenteeism cut by > half in one elementary school (484 to 203 days) in 1 year
- North Haven
  - 48% (256) decrease reported cases of respiratory-related illnesses
- Hartford
  - # Of asthma incidents declined 21% after *IAQ Tools for Schools* implementation

Lessons Learned

- Empowerment/collaborative model
- Pool your resources!
- Individual organizational support
- Effective outreach program

Lessons Learned

- Mandatory buy-in from administration
- Training is key to successful committees
- Focus on school systems
- Need for follow-up/sustainability

Successes

- Requiring building-based teams
- Requiring comprehensive empowerment-based training programs
- Ongoing networking and support of CSIERT agencies/organizations

State Perspectives

Minnesota Department of Health, Environmental Health Division, Indoor Air Unit

Dan Tranter
Research Scientist
('School Environmental Health Guy')
daniel.tranter@state.mn.us

Program History

- 1997:Change to Minnesota Department of Education Statute (123B.57)
  - IAQ Plan requirement
  - MDH advised about requirements (based on *IAQ Tools for Schools Program*)
- 2000 – 2006: MDH received an EPA *IAQ Tools for Schools* Cooperative grant agreement
- Special Projects
  - 2004 – 2005: Asthma Triggers and IAQ in Schools Project
  - 2005 – 2007: Preventing Environmental Asthma Triggers in Child Care Project
  - 2007 – 2008: Mold Assessment of Flooded Public Buildings

Outreach

- Trainings
- Surveys
- Presentations
- Special projects
- IAQ consultation services
- Communicating IAQ ‘news’
- Web presence
- Nominating schools for *IAQ Tools for Schools* Awards

Strategy

Current

- Annual IAQ Coordinator trainings
- Best practices development
- IAQ Consultations

Previously

- Surveyed all publics schools
- On-site IAQ Plan Reviews
- Special Projects (asthma triggers, flooded buildings)

Partners

U.S. EPA

- Region 5 (*IAQ Tools for Schools* Cooperative Agreement)
- Headquarters (IAQ Grant)

NGOS

- MN Educational Facilities Management Professionals (MASMS)
- School Private Consultants
- School Service Cooperatives
- Greater Minneapolis Day Care Association

State agencies

- Education
- Pollution Control
- Agriculture
- Human Services

Resources

- Other State Agencies (OSHA, Admin)
- American Industrial Hygiene Association (AIHA)
- American Conference of Governmental Industrial Hygienists (ACGIH)
- Institute for Cleaning, Restoration Certification (IICRC)
- National Academy of Sciences
- Indoor Environments Connection (a newspaper)

Resources

- **Online**
  - Indoor Air Quality Resources for School Staff (fact sheet)
  - Cleaning, Indoor Environmental Quality and Health (report)
  - Indoor Air Quality in Schools (fact sheet)
  - IAQ Management Plan Development Package (best practices)
  - Investigating Mold in Minnesota Public Schools Recommended Best Practices for Mold Investigation in Schools (best practices)
  - Recommended Best Practices for Mold Remediation in Schools (best practices)
  - Model School Environmental Asthma Management Plan (best practices)
    - Companion A New Tool to Evaluate the School Environment (report)

Resources

Journals

- "Indoor Allergens in Minnesota Schools and Child Care Centers" *Journal of Occupational and Environmental Hygiene.* 2009. Vol. 6: 582-591. American Industrial Hygiene Association.
- "Allergens in Settled School Dust: A Review of Findings and Significant Factors". *Clinical and Experimental Allergy*. 2005. Vol. 35: 126-136. British Society for Allergy and Clinical Immunology.

Obstacles

- Funding
- Management support
- Developing expertise
- Useful environmental testing
- Uncertainty of cause of problems or solutions

Successes

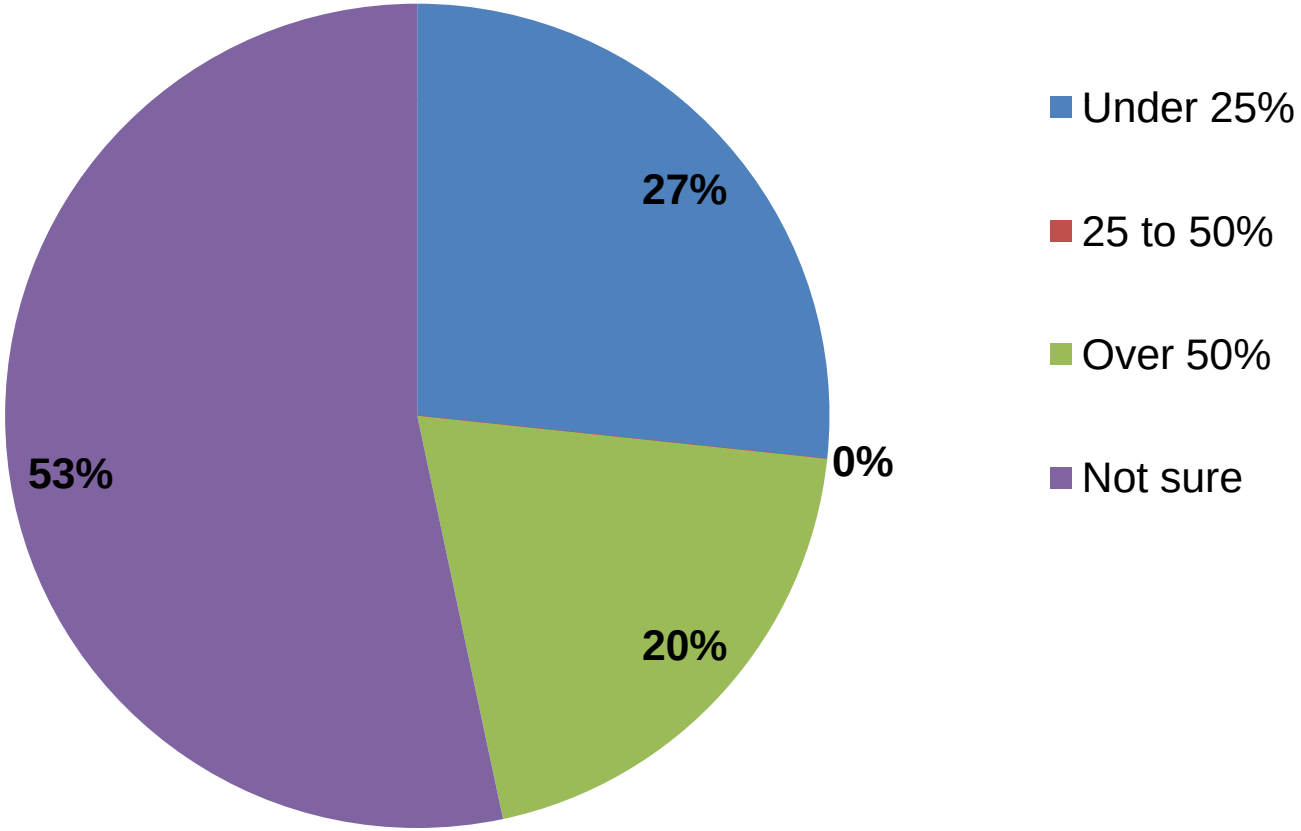
- Identified high number of schools implementing IAQ plans
- Measured impact of IAQ plans
- Received grants
- *IAQ Tools for Schools* Excellence Awards
- Publications

Lessons Learned

- Figure out what schools are interested in
- Work with collaborators
- Find an IEQ service niche that can lead to other IAQ projects
- Offer schools help when you get a complaint
- Offer trainings statewide
- Follow national trends

Polling Question

To your knowledge, what percentage of districts in your state have school-based IAQ management teams?



Final Thoughts

- **Organize** – Empower existing IAQ champions to mentor districts statewide.
- **Communicate** – Work collaboratively with NGOs and other state agencies by communicating the link between their goals and the mission of your state-based initiative.
- **Assess** – Determine what tools and resources are most needed by school districts in your state.

Final Thoughts

- **Act** – Create training programs and "train the trainer" programs to share knowledge about *IAQ Tools for Schools* Framework at the local level.
- **Plan** – Pool resources, foster inter-agency coordination and commit to long-term goals to promote sustainable programming.
- **Evaluate** – Conduct regular assessment of statewide IAQ management in schools, draw connections to positive health outcomes and communicate results with partners.

EPA *IAQ Tools for Schools* Resources

- *IAQ Tools for Schools* Program
  - www.epa.gov/iaq/schools
- *IAQ Tools for Schools* Updates and E-mails:
  - Send an e-mail to: IAQTfSConnector@cadmusgroup.com
  - View archives at: http://www.epa.gov/iaq/schools/bulletins.html
- Schools IAQ Connector Listserv:
  - Send a blank e-mail message to schools_iaq_connector-subscribe@lists.epa.gov or
  - Request subscription online on the Listserv Web interface https://lists.epa.gov/read/all_forums/subscribe?name=schools_iaq_connector. Then, check your e-mail inbox for your confirmation and membership details.

State-Based IAQ Resources

- ELI's "School Indoor Air Quality: State Policy Strategies for Maintaining Healthy Learning Environments"
  - http://www.elistore.org/Data/products/d19_06.pdf

- Additional resources from ELI including a database of state IAQ laws, state policy updates, in-depth policy reports.
  - For more information, visit: www.eli.org/program_areas/indoor_environments.cfm

State-Based IAQ Resources

- Connecticut's online resources
  - www.ct.gov/dph/schools
- CSIERT's online resources
  - http://www.csiert.tfsiaq.com
- Minnesota's online resources
  - http://www.health.state.mn.us/divs/eh/indoorair/schools/resources2.htm

Questions from the audience?