

Coalition for Healthier Schools

Healthy Purchasing for Healthy Schools Guidance Memo

webcast
August 8, 2013

Jerry Lamping Comments re Costs/Benefits

Environmentally Preferable Purchasing Practices are an important factor for achieving a clean and healthy school. My District started an IAQ Program in 2006-2007 School Year.

The Northeast (TX) Independent School District implemented the EPA's IAQ Tools for Schools (TfS) Voluntary Program.

The IAQ TfS Action Kit provides a Framework for Success that includes Key Drivers and Technical Solutions for implementing the program's recommendations at a school.

In addition to improving HVAC, using IPM, and controlling Moisture, the EPA IAQ TFS technical solutions require

- 1 An Effective Cleaning program,**
- 2 A Smart Material Selection process, and**
- 3 An Aggressive Source Control policy**

Effective Cleaning Program: the District converted to **certified green custodial products**. All cleaning products and most custodial supplies were Green Seal labeled.

Smart Material Selection: the District purchased **green labeled/certified furniture, fixtures or other equipment**. All FF&E specifications included certification requirements by Green Guard, BIFMA, SCS Global Services, or MAS Certified Green.

Aggressive Source Control Policy: the District initiated **Classroom Environmental Health Assessments** and School Clinic Visit Data Analyses.

RESULTS – healthier kids, greater revenues, lower costs:

In 2011 the District achieved the EPA IAQ Tools for Schools Model of Sustained Excellence Award. So far the IAQ Program has resulted in:

- 1 a six-fold decrease in VOC levels in classrooms and lower reliever inhaler usage by kids with asthma;
- 2 a 0.8 % increase in Total Average Daily Attendance which increased state funding by over \$2 million; and,
- 3 a 30% reduction in custodial operating costs with lower supply costs and reduced payroll costs due to fewer work absences.

Bill Fisk and Mark Mendell of the Lawrence Berkeley National Labs (UC/Berkeley) have performed detailed economic analyses of healthier classroom environments. They report that the economic benefits of measures that improve performance and decrease absences will far out weigh the implementation costs of these measures. (Mark Mendell, Ekaterina Eliseeva, Molly Davies, Michael Spears, Agnes Lobscheid, William Fisk and Michael Apte, "Association of Classroom Ventilation with Reduced Illness Absence: A Prospective Study in California Elementary Schools", *Indoor Air*, vol 23, issue 3, April 2013.)

The August 2013 issue of the ASHRAE Journal has a technical feature on proved IAQ measures and for creating positive change in indoor environments. The authors call for a shift in thinking from a goal for indoor environments that are acceptable to the occupants to a goal for indoor environments that are truly healthy and productive. (*William P. Bahnfleth, Ph.D., P.E., et al., Shaping the Next: Indoor Air Quality, ASHRAE Journal, vol. 55, issue 8, August 2013, page 50ff*). Healthy Purchasing

Green Labeled Product Standards and Specifications that are used in this award-winning district:

- 1 GREENGUARD Gold (UL Environment)
- 2 The Business and Institutional Furniture Manufacturers (BIFMA)
- 3 Green Seal
- 4 SCS Global Services
- 5 MAS Certified Green
- 6 The California Department of Public Health (CDPH) Standard Method V1.1

Practices such as outlined in the *Healthy Purchasing for Healthy Schools* Guidance Memo can help to achieve this new goal for indoor environments.

Classroom Environment Health Assessments:

The District conducts routine environmental health assessments that are based on safeguarding the health of students and staff by monitoring the environmental conditions within the classrooms. The five potential elements of environmental health are assessed as follows:

Occupant: clutter, stuffed animals, plants, furry animals, blocking of air supply/return grilles, etc.

Custodial: high touch cleanliness (ATP Measurement), dust practices, infection control measures, etc.

Facilities: roof and plumbing leaks, HVAC and lighting systems, air filters, exhaust fans, grounds, pests, rain water drainage, building envelop, wall coverings, etc.

Chemical Storage: NIOSH high school lab standards

Indoor Air Quality Summaries: Particle counts, CO2 levels, temperature, and relative humidity

During periodic walkthroughs, airborne contaminants, such as particles and volatile organic compounds (VOCs), are measured as primary indicators of the room environment using portable IAQ test instruments.

An Environmental Health Assessment Score is obtained for each classroom based on predetermined, agreed upon standards by area:

- 100 – (acceptable) no action required
- 50 – (ok) room for improvement
- 0 – (concern) education/action needed (work order generated)

Also, school health clinic visit data are collected and analyzed. In particular, the reliever inhaler usage by children with asthma and IAQ-related symptoms they experience are recorded and tracked. If there is a high rate of reliever inhaler usage, it is a red flag that there may be an environmental issue and an environmental health assessment is conducted.