



5th Annual IAQ TFS Symposium

Communicating About Indoor Air Quality

E-Newsletter

April 2005, Volume 1

A Note from the Director

Welcome to a special supplement of the *IAQ Tools for Schools (IAQ TFS)* Bulletin highlighting EPA's 5th Annual *IAQ TFS* National Symposium. This event was held at the Grand Hyatt Hotel in Washington, DC, on December 2-4, 2004. We are grateful for the outstanding group of speakers who helped make this conference a grand success, the positive responses we've received from the Symposium participants, and the solid and positive media attention this conference gained for improved *IAQ* in schools.

Each year, the *IAQ TFS* Symposium provides a great opportunity for school officials, health professionals, administrators, facility managers, teachers, parents, and community representatives to network and learn from national experts about how to create a healthy indoor learning environment in our Nation's schools. Once again, conference attendance was full to capacity, as more and more influential people who care about schools act on the need for healthy indoor air quality for children, faculty, staff, and administrators. At the Symposium they find useful contacts and solid information about key issues. A highlight of the conference was the Awards Reception, held to recognize and honor schools that have demonstrated sustained, exemplary *IAQ* programs and that have actively communicated the importance of good indoor air quality.

We hope you will join us at the 6th Annual *IAQ TFS* Symposium, scheduled for January 12-14, 2006, in Washington, DC. Whether you have attended a Symposium previously or are new to the field of indoor air quality, you are welcome to expand collegial networks and gain up-to-date, valuable information on how to address *IAQ* in schools. For those of you who came to Washington this past December, we look forward to hearing about your progress over the coming year applying the learning you gained during the Symposium.

We look forward to January 2006, when we expect another overflowing crowd who will collaborate with us here at EPA on creative action to bring clean, healthy indoor air to our Nation's schools.

Sincerely,

Thomas E. Kelly
Director, Indoor Environments Division
U.S. EPA

Attendance Surpasses Expectations at EPA's 5th Annual IAQ TFS Symposium



More than 540 people attended EPA's 5th Annual IAQ TFS Symposium, surpassing expectations for registration. Attendees from around the country and across the world represented 44 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Canada, Chile, Australia, and the United Arab Emirates! School board officials, administrators, nurses, teachers, facility managers, planners, community advocates, and health and education associations joined together to learn about the importance of creating and maintaining healthy indoor air environments in schools.



Through the plenary and breakout sessions, networking lunches, awards reception, and other networking opportunities, attendees and speakers shared information on a range of issues related to indoor air quality in schools. Speakers presented on key issues during sessions that were both new to the Symposium and those that were offered again by popular demand.

Once again, the outstanding group of presenters, including several students involved in indoor air quality projects, made this experience extremely valuable and entertaining for all involved. The presenters' contributions, along with the enthusiasm and dedication of the attendees, ensured another successful and rewarding event for the IAQ TFS Program!



IAQ TFS Symposium Garneres Substantial Media Coverage

Due to the outreach efforts and energy generated before and during the Symposium, numerous media personnel covered the issue of indoor air quality in schools. Several school participants from the Washington, DC-area opened their doors and allowed the media to get a firsthand view of implementation of the IAQ TFS Program in a real-world environment. Some highlights of the media coverage are listed below.

On Friday, December 3, 2004, FOX affiliate WTTG-TV (Channel 5) in Washington, DC, conducted a live remote interview during FOX Morning News (8:00 AM) at Beverly Farms Elementary School in Potomac, Maryland, a school in the Montgomery County Public Schools system (a 2002 IAQ TFS Excellence Award winner). Co-Anchor Lark McCarthy interviewed Elizabeth Cotsworth and discussed the benefits of EPA's IAQ TFS Program and how EPA is working with schools across the country to help implement successful IAQ programs and improve the health of staff and students.

On Friday, December 3, 2004, NBC affiliate WRC-TV (Channel 4) in Washington, DC, aired a story during the 5:00PM newscast that featured a walkthrough of Beverly Farms Elementary School led by Richard Cox, an IAQ Building Maintenance team member for Montgomery County Public Schools. The walkthrough demonstrated improvements made during the school's IAQ assessments. The story also featured interviews with Elizabeth Cotsworth, Laura Siegelbaum (Principal, Beverly Farms Elementary School), Richard Cox, and student Adam Mackey. The story highlighted features of EPA's

IAQ Tools for Schools Kit and the importance of *IAQ* in schools. Principal Laura Siegelbaum discussed the success of the school's *IAQ* efforts, as her staff and students have noted resulting benefits. Student Adam Mackey talked about how much more comfortable the school has been since *IAQ* improvements.

On Friday, December 3, 2004, Telenoticias' affiliate WZDC-TV (Channel 64) in Washington, DC, which reaches a wide Spanish-speaking audience, aired a story during the 6:30PM newscast from Beverly Farms Elementary School. Reporter Douglas Meji'a participated in a tour of the school and interviewed a teacher and a student about the school's *IAQ* program. Interviews focused on the improvements and the level of comfort experienced as a result of the *IAQ* improvements. WZDC also attended the *IAQ TFS* Symposium and interviewed EPA's Carmen Torrance, who spoke about the benefits of EPA's *IAQ* program, and Desiree Diez, Hispanic Outreach Coordinator for the Allergy and Asthma Network*Mothers of Asthmatics, who discussed the number of asthma-related illnesses in the U.S. and addressed how *IAQ* programs in schools can help to improve the health and learning environment for staff and students.

On Friday, December 3, 2004, FOX affiliate WBFF-TV (Channel 45) in Baltimore, Maryland, aired a story during the 10:00PM newscast featuring Churchville Elementary School, a school in the Harford County (MD) Public Schools system (a 2003 *IAQ TFS* Excellence Award winner). Interviews with Pat McCarthy, Assistant Principal and *IAQ* Coordinator, and Charlie Taibi, Harford County Transportation Supervisor, discussed the school's *IAQ* efforts and featured a walkthrough that demonstrated improvements made by the school. The interviews also highlighted the school's participation in EPA's Clean School Bus Program.

On Friday, December 3, 2004, Hearst-Argyle television featured a story on the *IAQ* at Beverly Farms Elementary School. *IAQ*-related stories generated from this effort have since been broadcast in 19 media markets across the country through Hearst-Argyle's network of cable stations.

EPA garnered additional broadcast coverage for the *IAQ TFS* Program on CBS-affiliate Eyewitness News in Hartford, Connecticut, on December 2, 2004; WB-affiliate Channel 54 news in Baltimore, Maryland, on December 3, 2004; and FOX-affiliate Channel 45 morning news in Baltimore, Maryland, on December 6, 2004.

On Sunday, December 5, 2004, the Baltimore Sun newspaper published an article that highlighted EPA's *IAQ TFS* Symposium, discussed Harford County Public Schools' *IAQ*-related programs, and quoted Pat McCarthy, Charlie Taibi, Elizabeth Cotsworth (Director, EPA Office of Radiation and Indoor Air), Teri Kranefeld (Director of Education, American Lung Association of Maryland), and Nancy Sander (Founder, Allergy and Asthma Network*Mothers of Asthmatics).

The outstanding positive media attention surrounding the Symposium further encourages schools to prioritize *IAQ*, validates school *IAQ* as a real and important issue, and provides a wide audience with the message that programs like *IAQ TFS* offer schools step-by-step, low-cost solutions to *IAQ* problems. EPA greatly appreciates the support received from the media community and the schools that opened their doors for the media to discuss their *IAQ TFS* programs.

EPA Honors Schools and Individuals at the 5th Annual *IAQ TFS* Awards Ceremony

During the Symposium, EPA hosted the 5th Annual *IAQ TFS* Awards Reception to honor schools and individuals for exemplary *IAQ* programs and achievements, implementation of the *IAQ TFS* Kit, dedication to improving the health of students and staff, mentoring, and strategic communication of *IAQ* issues. Jeff Holmstead, EPA Assistant Administrator for the Office of Air and Radiation, presented awards to 22 recipients from 13 states. Among those being honored were 12 school districts that received the prestigious *IAQ TFS* Excellence Award, the highest level of recognition for school *IAQ* programs.

IAQ TFS Excellence Awards



Milwaukee Public Schools and Jeffrey Holmstead



Jefferson County's IAQ team and Elizabeth Cotsworth



Rapid City's IAQ team and Jeffrey Holmstead

IAQ TFS Excellence Award winners are determined through a competitive process. Applicants are evaluated not only for their outstanding, sustainable IAQ programs in schools, but also on proactive and effective communications with staff, parents, students, the media, and the community; materials; school, student, and community involvement in IAQ efforts; training; outreach; mentorship and leadership; and other IAQ-related endeavors. The 2004 IAQ TFS Excellence Award recipients include:



Burlington School District, Burlington, VT

Burlington School District overcame tight budgets and aging facilities to become a statewide leader for IAQ and a mentor for other IAQ programs. Burlington emphasizes broad cooperation, clever, low-cost fixes, and good communication while implementing their IAQ program. The district established an anti-idling policy, including direct communications and coordination with vendors, to help resolve IAQ problems resulting from two school loading docks being located near an air intake. Burlington utilized available grants to purchase HEPA vacuum cleaners and to make improvements to several school HVAC systems. A new emergency response system allows school or community members to report IAQ concerns quickly and easily, enables the district to respond quickly, and has established a detailed tracking system. The effects have been remarkable, demonstrated by a drop in one school's annual absenteeism rates among asthmatic students from 31 days to 2 days in just one year.

Contact: Betsy Liley, (802) 865-5383



Charlotte-Mecklenburg Schools, Charlotte, NC

One of the nation's 25 largest school districts with nearly 117,000 students, Charlotte-Mecklenburg Schools (CMS) is growing rapidly and facing unique challenges. The district comprises 148 schools, half of which have established IAQ programs and half of which are set to have IAQ programs in place by Summer 2005. With nine new schools constructed over the past two years, new building design is another priority for the district. CMS strives to build healthy, high-performance schools by following the guidance of EPA's IAQ Design Tools for Schools Program. The district developed a formal IAQ manual, emphasized training to promote broad participation, and has procedures in place to respond immediately to all indoor air quality concerns. CMS worked closely with the University of Tulsa, an EPA grantee, to put these training programs and procedures in place.

Contact: Kenny Boggs, (980) 343-8632



Cypress-Fairbanks Independent School District, Houston, TX

Cypress-Fairbanks Independent School District (CFISD) is one of the 50 largest school districts in the country. CFISD has overcome many challenges by developing significant in-house expertise. Being located in an area particularly susceptible to mold growth, the district trained 17 employees in mold assessment and remediation, an effort that saved the district substantial funds and allowed mold remediation efforts to take place in the summer while building up the team's skills. By applying the full range of *IAQ TFS* recommendations, this program has established credibility and confidence in the district's ability to address *IAQ* issues. Teachers, staff, parents, and administrators know that their *IAQ* concerns are heard and acted upon in an effective and timely manner.

Contact: Jim Foxx, (281) 897-4195



Elk River Area Schools, Elk River, MN

Elk River Area Schools have been pioneers in *IAQ* program design, having spent more than \$20 million over the past ten years to improve *IAQ* and maintain healthy schools. They have established a dedicated source of funds through bond issues, and have implemented proactive *IAQ* management practices such as annual *IAQ* reminders to all staff (including how to register *IAQ* concerns) and conducting regular walk-through inspections of school facilities. In recent years, Elk River has emphasized research and resource development. Their efforts were the subject of a University of Minnesota School of Medicine study that measured CO₂ reduction and the affects of improved ventilation on student and staff health. With support from the Minnesota Office of Environmental Assistance, the district created a guidebook for school board members. These efforts, along with direct consultations with other districts, help spread positive practices well beyond Elk River.

Contact: Dr. Ron Bratlie, (763) 241-3402



Jefferson County Public Schools, Birmingham, AL

Jefferson County Public Schools (JCPS) experienced and overcame a serious and expensive *IAQ* problem when, during a roof replacement, smoke and chemical backup led to a \$450,000 cleanup effort and medical treatment for students and staff. Administrators and teachers responded immediately to this crisis, working together and establishing proactive communication. The American Federation of Teachers (AFT), an EPA Partner, brought *IAQ TFS* to the attention of the district administrators and, along with the National Education Association (NEA), provided grant funding for *IAQ* training. Initial walk-through inspections revealed technical problems, such as closed dampers and clogged filters. Adequate classroom ventilation and asthma triggers became high priorities once channels of communication had improved and response procedures were in place. JCPS is focusing on the future by introducing their Best Practices for *IAQ*, implementing an EPA "A Breath of Fresh Air" grant, and implementing a "Green Cleaning" pilot program in eight schools. They are also serving as an *IAQ* mentor for other Alabama school districts.

Contact: Dr. Rafael McDaniel, (205) 379-2197



Kent School District, Kent, WA

Having received an *IAQ TFS* Leadership Award in 2003, Kent School District (KSD) continued to build and improve their program and received a 2004 *IAQ TFS* Excellence Award. Their success is largely a result of constant and innovative

communication. *IAQ* information is included in the orientation program for new administrative staff, custodians receive semi-annual *IAQ* training, and all employees receive a weekly electronic newsletter featuring tips on preventing and identifying *IAQ* problems. Engaging parents has also been a priority. When an *IAQ* issue has a potential impact on a group of students, parents are notified by letter and automated phone message with key medical information and a clear explanation of how the problem will be addressed.

Contact: Beth Gilbertson, (253) 373-7052



Mankato Area Public Schools, Mankato, MN

Mankato Area Public Schools established their *IAQ* team and program under the mentorship of 2000 *IAQ TFS* Excellence Award recipient New Ulm School District. Training and communications are keys to their success. All administrators and principals receive an annual overview of the district's *IAQ* program, while frontline personnel receive regular detailed updates. Mankato engaged the entire staff in the process of identifying and resolving *IAQ* issues. In addition to a convenient and efficient complaint process, the district sends an annual survey to each employee, resulting in the discovery of issues that had not been previously detected through *IAQ*-related complaints or health symptoms.

Contact: Joe Meixl, (507) 345-5311



Milwaukee Public Schools, Milwaukee, WI

A large district with aging facilities, Milwaukee Public Schools (MPS) established an air quality committee in 1996 and was among the first school districts to adopt the *IAQ TFS* Program. In 1998, the MPS Facilities Division augmented its existing air quality activities with the EPA's *IAQ TFS* Program. The district utilizes grants from EPA Region 5 to facilitate health fairs and train teachers on *IAQ* issues. Teachers in ten schools are participating in a classroom survey pilot program in conjunction with Fight Asthma Milwaukee, and have experienced an 80 percent response rate. The result has been a sense of empowerment by the teachers and staff to take charge of their own indoor environments to promote good indoor air quality and reduce absenteeism.

Contact: Robert Helminiak, (414) 475-8057



North Haven Public Schools, North Haven, CT

North Haven Public Schools (NHPS) experienced mold problems in 2002 and 2003 that resulted in adverse publicity and a notable increase in absenteeism. Quinnipiac Valley Health District provided assistance and encouraged NHPS leaders to implement *IAQ TFS*. After a series of walk-through inspections revealed problem areas, such as cleaning methods and equipment calibration, *IAQ* issues were addressed. Today, open and proactive communications is a major aspect of the NHPS *IAQ* program. Findings from inspections are immediately reported to parent-teacher organizations, district officials have appeared on local access television to explain their *IAQ* program, and a parent sits on each school-based *IAQ* team. Community trust has improved, and the leadership of the teachers' union has praised the district's quick response to *IAQ* issues.

Contact: Jack Levine, (203) 239-2581



Pinellas County Schools, Largo, FL

Florida's climate presents special challenges for *IAQ*, an issue of which Pinellas County Schools (PCS) is well aware. More than ten years ago, a major mold outbreak in a one-year-old elementary school caused an epidemic of bronchitis, headaches, and ear infections, forced the school to close for 18 months, and cost \$1 million to repair. Located in Florida's most densely populated county, PCS also faces tight budget constraints, and is forced to rely on temporary buildings. Today, PCS has an established *IAQ* management plan and a coordinator responsible for *IAQ* response. The emphasis is on prevention and prioritization. Integrated Pest Management, radon screening, and other procedures help to avoid future problems.

Contact: Thomas C. Ladun, (727) 547-7180



Rapid City Area School District No. 51-4, Rapid City, SD

Rapid City Area School District No. 51-4 (RCAS) exemplifies the importance of resourceful champions and community relationships. Leah Lutheran took on the issue of *IAQ* in schools as a private citizen. When she was elected to the RCAS school board in 1998, *IAQ* management became a mainstream policy and procedure. For their *IAQ* efforts, the district has established many strong relationships and draws upon a variety of available resources. The South Dakota Lung Association provided the district with their initial *IAQ TFS* Kits. The American Association of School Administrators (AASA) sponsored a six-member delegation to attend the 2002 *IAQ TFS* Symposium. EPA Region 8 was instrumental in assisting with the implementation of *IAQ TFS* in the school district, providing a grant and sponsoring a workshop for administrators, nurses, and custodial staff. The district has already seen results. For example, two schools that performed HVAC system upgrades documented a decline in absenteeism by nearly five percent.

Contact: Ron Mincks, (605) 390-2604



Spokane Public Schools, Spokane, WA

Spokane Public Schools (SPS) faces challenges of old school buildings with similar designs and chronic *IAQ* problems stemming from inadequate ventilation and other design issues. In the early nineties, the tensions caused by continual *IAQ* issues affected staff morale and the learning environment. With the introduction of the *IAQ TFS* Program in 1995, SPS identified many solutions for new and existing buildings, and made efforts to reduce allergy triggers. School nurses focus on health issues for students and a Citizen's Advisory Committee includes members from each school. Spokane's involvement with AASA's Urban Resource Coalition rejuvenated the *IAQ* management process in the district. The growing public understanding of the nature of *IAQ* problems facilitated the passage of bonds to finance long-term solutions through HVAC and other capital upgrades.

Contact: Larry Hagel, (509) 353-5274

In addition to the Excellence Awards, EPA recognized individuals and organizations with Special Achievement awards and the new Distinguished Service and the Mentor of the Year awards:

Special Achievement Awards

IAQ TFS Special Achievement Awards are presented to individuals who have played an integral role in assisting their communities and schools with implementing the *IAQ TFS* Program. Recipients of this award are nominated; there is no application process.

EPA selected Dale Dorschner and Tim Hardin for the 2004 Special Achievement Awards to recognize their state-wide support for the *IAQ TFS* Program. These gentlemen have demonstrated support for good *IAQ* in schools that goes far beyond their day-to-day work as state Department of Health employees. Mr. Dorschner and Mr. Hardin regularly provide expert technical *IAQ*-related advice, offer specialized support, and conduct trainings for schools and school districts throughout the states of Minnesota and Washington, respectively.

Dale Dorschner, State of Minnesota Health Department; (651) 215-0887

Tim Hardin, Washington State Department of Health; (360) 236-2257



[ALA award recipients and Elizabeth Cotsworth]

EPA selected Teri Kranefeld, Emily Lee, and Angie Testa, all with the American Lung Association, as recipients of a 2004 Special Achievement Award to recognize their efforts as health advocates and grassroots leaders. These individuals have experienced great success with their outreach and communication efforts to establish and implement *IAQ TFS* Programs in schools throughout their home states. Their efforts have utilized creativity, innovation, and determination to help initiate community-wide changes in attitude about the importance of health and *IAQ* in schools.

Teri Kranefeld, ALA of Maryland; (410) 560-2120

Emily Lee, ALA of Ohio; (216) 524-5864 ext. 308

Angie Testa, ALA of Connecticut; (860) 289-5401



[Students with teachers and Elizabeth Cotsworth]

EPA selected the East Valley School District Air Quality Controllers and the Ephrata High School Environmental Health Student Organization for 2004 Special Achievement Awards to recognize student participation in identifying *IAQ* as an important environmental health issue and researching and establishing *IAQ* management programs in their districts. The student groups' efforts and findings were presented to the school boards and were used, in part, to develop *IAQ* guidance and educational materials for district personnel. Initially starting their research in their own schools, these student-led groups each expanded their efforts to become proactive, district-wide *IAQ* programs. Participating students and their mentors presented information on their programs during the opening session at the Symposium and received overwhelming response and admiration from all attendees and staff.

East Valley School District Air Quality Controllers, Spokane, WA;

Contact: Shelley Harding, (509) 924-1830

Ephrata High School Environmental Health Student Organization, Ephrata, WA;

Contact: Chip Halverson, (509) 754-5285

Distinguished Service Awards



[Dave Blake, Rich Prill, and Elizabeth Cotsworth]

EPA selected Dave Blake and Rich Prill as recipients of the first Distinguished Service Award to recognize stellar performance, dedication, and mentorship to schools, school districts, and the community to provide a safe and healthy learning environment. Mr. Blake and Mr. Prill have committed their life's work to providing good *IAQ* in our nation's schools. Their understanding of the wide variety of issues surrounding *IAQ* in schools and their dedication to establishing comprehensive school-based *IAQ* management plans has been instrumental not only in the Pacific Northwest, but nationwide.

Dave Blake, Northwest Air Pollution Authority, Mount Vernon, WA; (360) 428-1617 ext. 212

Rich Prill, Washington State University Cooperative Extension Energy Program, Spokane, WA; (509) 477-6701

Mentor of the Year Award



[Beth Marolf and Jeffrey Holmstead]

EPA selected Beth Marolf as the recipient of the first Mentor of the Year Award to recognize her outstanding achievement in promoting the *IAQ TFS* Program. As the *IAQ TFS* Project Coordinator for ALA of Kansas, Ms. Marolf has provided comprehensive training and technical assistance to schools and formed *IAQ* management partnerships with hospitals, health clinics, and county health departments. She utilized a variety of methods to communicate the benefits of the program, such as public marketing through local media, health fairs, conferences, and specialty publications developed for school administrators, maintenance staff, and parent-teacher organizations. Ms. Marolf also utilized an interactive satellite network to reach dispersed populations and to train facilitators and school personnel in remote locations about the importance of *IAQ* management in schools.

Beth Marolf, ALA of Kansas; (785) 272-9290 ext. 120



[Detroit Public Schools *IAQ* team representatives and Barnes Johnson of EPA]

In addition to the awards presented at the Symposium, EPA recognized Detroit Public Schools (DPS) with a Great Start award for their commitment to implement *IAQ TFS*. With more than 170,000 students and 271 schools, DPS is one of the largest school districts in the nation. EPA applauds DPS for prioritizing *IAQ*. The district recently developed a Comprehensive Health and Safety Plan to supplement their implementation of *IAQ TFS*, which has helped them to identify and resolve a variety of *IAQ* and related health problems.

Award Winners Making Headlines

Several recipients of the 2004 *IAQ TFS* awards received local, state, and national attention for their efforts.

Burlington School District (VT) received press coverage for their "Exceptional Indoor Air Quality Program," boasted Business and Legal Reports Web site. The article, posted in the environmental section

on December 6, 2004, highlighted the district's Excellence Award, described their *IAQ* accomplishments, and featured a statement from the regional administrator of EPA's New England office commending the district for its *IAQ* efforts. See <http://enviro2.blr.com/display.cfm/id/52870>.

Cypress-Fairbanks Independent School District in Houston, Texas, was featured in an article published in the Houston Chronicle on January 25, 2005. The article highlighted the district's receipt of the 2004 Excellence Award and included a quote from Jim Foxx, the district's *IAQ* Coordinator. During a school board meeting on January 18, 2005, Mike Miller, *IAQ TFS* contact in EPA's Region 6 office, discussed the district's accomplishments and recognized Jim Foxx for his successful leadership and direction of the district's *IAQ* program.

Elk River Area School District (MN) was featured in Star News on January 11, 2005. The article highlighted the district's award and briefly described *IAQ* improvements in the district. Dr. Ron Bratlie, who accepted the award on behalf of the district, presented the *IAQ TFS* Excellence Award to the school board on December 14, 2004. See <http://www.erstarnews.com/2005/January/11epa.html>.

Jefferson County Schools (AL) was highlighted in The Birmingham News on December 17, 2004, for their Excellence Award and *IAQ* efforts. The article included a quote from the Jefferson County American Federation of Teachers and noted that the county Board of Education approved \$20,000 to resolve mold problems at a district high school.

Kent School District (WA) was featured in the King County Journal on December 6, 2004. The article described the district's air quality program and acknowledged the district's recognition from the EPA for air quality successes and the *IAQ TFS* Excellence Award. See <http://www.kingcountyjournal.com/sited/story/html/180173>.

North Haven School District (CT) was highlighted in a "Year in Review" article in the North Haven Courier on December 30, 2004, acknowledging the district's receipt of EPA's Excellence Award.

Dale Dorschner (MN Department of Health), Elk River Area School District (MN), and Mankato Area School District (MN), were highlighted in the January 2005 edition of What's New With *IAQ*?. This newsletter recognized their accomplishments and commitment to improving indoor air quality and their receipt of the Special Achievement and Excellence Awards. See http://www.health.state.mn.us/divs/eh/indoorair/newsletter/newsletter_01_05.pdf.

EPA Offers New Sessions and Popular Favorites at the 5th Annual *IAQ TFS* Symposium

With the abundance and variety of issues affecting schools and children, each year EPA promises a Symposium with a wide variety of sessions touching on the key hot topics of the moment relating to schools while also bringing back popular favorites and the fundamental topics.

Below is the list of all new sessions offered at the 5th Annual Symposium. Click on the title to view the session description.

- [Benefits of Effective Cleaning and Maintenance Practices for Healthy Schools](#)
- [Beyond the Basics: Proactive *IAQ* Management](#)
- [Building Healthy Schools from the Ground Up](#)
- [Creating Lasting Leadership](#)
- [Energy Efficiency and *IAQ*](#)
- [High Performance Schools: Building a Healthy Environment for Students](#)
- [HVAC Systems for Healthy Schools](#)

- [Kids Making a Difference: Making a Difference for Kids](#)
- [Managing Pesky Pests in Schools](#)
- [Perspectives on Children's Environmental Health Issues](#)
- [Radon in Schools: Health Risks and Solutions](#)
- [Strategies for Mold Prevention and Management](#)
- [Tomorrow's Buses for Today's Children: EPA's Clean School Bus Program](#)

NEW SESSION DESCRIPTIONS:

Benefits of Effective Cleaning and Maintenance Practices for Healthy Schools



[David Frank]

This session discussed the importance of "green" cleaning practices for the sustainability of schools and the well-being of occupants. Presenter David Frank offered an overview of the impact that environmental factors can have on buildings and discussed how clean schools and cleaning practices can affect occupant health. Common barriers for schools were noted, including inadequate funding, poor building design, lack of accountability, and untrained workers, supervisors, and managers. Mr. Frank also shared information on cleaning technology for "green" buildings and published reports that show the benefits of "green" and improved cleaning practices. Mr. Frank highlighted a variety of resources and guidance available from EPA's Environmental Preferable Purchasing Program, the U.S. Green Building Council LEED Green Building Rating System, and the Green Seal Program that developed standards for "ecolabeling" of products and encourages the purchase and manufacturing of products that have less impact on the environment.

Presenter: David Frank, President, KnowledgeWorx.

Beyond the Basics: Proactive IAQ Management

Proactive *IAQ* management enables schools to identify potential problems before they arise or before they become major issues. Presenter John Gayetsky discussed the costs and consequences associated with a reactive *IAQ* management program, specifically the impacts on health, human performance, operating expenses, repairs, renovations, and potential loss of public trust that often results from negative media coverage. The session discussed several factors important to *IAQ* management in schools and strategies for establishing an effective *IAQ* management plan using resources and guidance from the *IAQ TFS* Kit. Mr. Gayetsky noted the importance of communicating with decision makers and highlighted examples of communications activities, both internal and external. In closing, Mr. Gayetsky shared 20 valuable strategies for implementing a proactive *IAQ* management program to improve the quality of the learning environment.

Presenter: John Gayetsky, Industrial Hygienist, Ohio Department of Health

Building Healthy Schools from the Ground Up

This session offered strategies for designing new school facilities and renovating existing facilities utilizing good *IAQ* practices and for integrating key *IAQ* activities in school design, construction, renovation, operations, and maintenance. Presenters Loren Belida and Ray Bordwell discussed key elements of *IAQ* (i.e., thermal comfort, ventilation, and moisture), the evolution of building design, and the importance of creating a building form that best meets the purpose and goals of the community. They also highlighted factors that most affect building comfort (e.g., ventilation, thermal comfort, daylighting, materials, design) and how to use these factors to create a high-quality learning environment with low maintenance costs.

Presenters: Loren Belida, Senior Vice President of Architecture, HL Turner Group. Raymond Bordwell, Architect, CSO Programming, Planning, and Design.

Creating Lasting Leadership



Effective leadership is the key to any successful *IAQ* program. Recognizing and encouraging leadership within the school and community contributes to the success of any *IAQ* program. This session offered examples of effective leadership and provided methods for recognizing and demonstrating leadership skills in oneself and others. Presenters Tracy Enger and Bill Long shared current successes, examples of great leadership, and ideas for motivating people to participate in an *IAQ* program. In addition, the speakers encouraged participants to recognize examples of leadership communicated in earlier Symposium sessions.

Presenters: Tracy Enger, Outreach Specialist and Bill Long, Environmental Specialist, U.S. EPA's Indoor Environments Division.

Energy Efficiency and *IAQ*

Energy efficiency and indoor air quality often go hand in hand. This session discussed how both issues affect the design, operation, maintenance, and sustainability of school facilities. The presenters shared information on creating and sustaining energy-efficient facilities with good *IAQ*. Mr. Rovi discussed low cost/no-cost strategies for improving *IAQ* (e.g., behavior modification) and financing options for energy efficiency and *IAQ* improvements through operations budgets, bonds, lease-purchase agreements, performance contracts, grants, and other methods. Ms. Appel discussed the U.S. Department of Energy's EnergySmart Schools Program (<http://www.energysmartschools.gov>), high performance schools, examples of EnergySmart Schools projects, and a variety of publications available for energy efficiency and high performance schools.

Presenters: Julio Rovi, Senior Engineer, The Cadmus Group, Inc. Margo Appel, National Federal Coordinator for EnergySmart Schools, U.S. DOE.

High Performance Schools: Building a Healthy Environment for Students

This session discussed the planning, design, and renovation of high performance schools. Presenter Robert Kobet discussed competing components of "high performance" schools, such as energy efficiency, indoor air quality, daylighting, and materials selection. In addition, the session provided strategies for gaining buy-in from superintendents and school boards to fund building improvements with "high performance" features.

Presenter: Robert Kobet, President, Sustainaissance International.

HVAC Systems for Healthy Schools

This session discussed the technical aspects of school heating, ventilation, and air conditioning (HVAC) systems. Presenter Bob Thompson discussed the importance of proper design, commissioning, maintenance, and operations of school equipment in order to create and maintain a healthy environment for school occupants. He discussed the relationship between a school's HVAC system and other important *IAQ* issues—such as children's health, resources, and maintenance—and how HVAC systems impact the overall air quality in buildings.

Presenter: Bob Thompson, Chief, Indoor Environments Branch, U.S. EPA Office of Research and Development.

Kids Making a Difference: Making a Difference for Kids

Symposium attendees were energized and motivated by student presenters Mary Senn, Carly LaPlant, and John Marlow and their mentors. During this session, the speakers described aspects of their school *IAQ* research projects and how their efforts to raise awareness of *IAQ* issues resulted in school board and administrative support for comprehensive *IAQ* management programs. The students offered testimony on benefits they experienced as a result of their participation in school *IAQ* programs. The students' enthusiasm for these projects effectively demonstrated the importance

and value of including students in school projects to address *IAQ*.

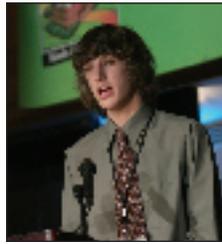
Presenters: Mary Senn and Carly Plant, Students, Ephrata High School in Ephrata, Washington. Chip Halverson, Teacher, Ephrata High School in Ephrata, Washington. John Marlow, Student, East Valley School District in Spokane, Washington. Shelley Harding, School Staff Member, East Valley School District in Spokane, Washington.



Student Speaker:
Carly LaPlant



Student Speaker:
Mary Senn



Student Speaker:
John Marlow

Managing Pesky Pests in Schools

This session described how an integrated pest management (IPM) system can help to create and maintain a healthy and pest-free facility with minimal use of harmful pesticides and other chemicals. Presenter Carl Olson discussed specific actions to keep pests (e.g., insects, rodents, etc.) out of schools. Mr. Olson explained key aspects of IPM and how IPM fits into a comprehensive *IAQ* management plan.

Presenter: Carl Olson, Entomologist, University of Arizona, Tucson.

Perspectives on Children's Environmental Health Issues

This session provided important information regarding the nationwide priority issue of children's environmental health. Presenters offered a variety of viewpoints on the importance of children's health as it relates to *IAQ*. In addition, they emphasized the importance of eliminating risk factors and creating healthy environments at home, at school, and at play.

Presenters: Dr. Ben Gitterman, Children's National Medical Center. Nancy Sander, President and Founder, Allergy and Asthma Network Mothers of Asthmatics. Dr. Barbara Sattler, Director of the Environmental Health Education Center and Associate Professor at the University of Maryland School of Nursing.



Ben Gitterman



Nancy Sander

Radon in Schools: Health Risks and Solutions



Bill Bell

This session provided an introduction to radon and discussed its potential effects on a school's indoor environment. Presenters highlighted existing school projects that address radon, discussed methods for addressing radon issues in schools, and identified funding sources available to help schools lower elevated radon levels. The speakers also presented sets Department of Public Health. protocols for determining radon levels and for assessing radon safety in schools.

Presenters: Susie Shimek, Radon Program Team Leader, U.S. EPA Indoor Environments Division. Bill Bell, Radiation Scientist, Massachusetts Department of Public Health.

Strategies for Mold Prevention and Management

Presenter Terry Brennan offered an entertaining and fresh approach to mold prevention and management. During this session, he described a variety of mold problems that can affect schools and health problems that may result from exposure to mold spores. The session provided expert information on mold basics, as well as strategies for effective mitigation, practical solutions for mold issues, and proactive and positive methods for addressing community concerns during a mold crisis. In addition, the presentation discussed financial impacts of mold contamination and the potential for negative publicity and resulting loss of credibility within the community.

Presenter: Terry Brennan, President, Camroden Associates.

Tomorrow's School Buses for Today's Children: EPA's Clean School Bus Program

This session described EPA's Clean School Bus Program, including "how to's," challenges, benefits, lessons learned, and ongoing activities to reduce children's exposure to harmful diesel exhaust from school buses. Presenters discussed proven links of this exposure to incidents of asthma, respiratory illness, heart disease, and cancer. Presenters highlighted several current projects to retrofit and replace older school buses with new fleets that use cleaner fuels with better emissions.

Presenters: Jennifer Keller, Environmental Specialist for EPA's Office of Transportation and Air Quality. Justin Greuel, Air Quality Engineer, Western North Carolina Regional Air Quality Agency.

Back by popular demand, the 2004 Symposium offered the sessions listed below as it has in previous years.

- [Asthma-friendly Schools](#)
- [Communications: A Key to Successful IAQ Management](#)
- [How to Use the IAQ TFS Kit Effectively](#)
- [IAQ and Performance](#)
- [IAQ in Schools: Where the Buck Stops and Litigation Begins](#)
- [The Right Stuff: Choosing and Maintaining School Flooring](#)
- [Understanding IAQ in Schools](#)
- [Networking with IAQ TFS Mentors](#)

SESSION DESCRIPTIONS:

Asthma-friendly Schools



Susan LaCombe

Asthma affects 6.3 million children in the U.S. and accounts for more than 14 million missed school days each year. Since several manageable asthma triggers—such as mold, dust mites, pests, and animal dander—are common in schools, school staff must strive to minimize exposure to these triggers. This session described asthma's effects on children, common asthma triggers found in schools, practices for identifying and controlling triggers, and methods to help children control their asthma in school. In addition, presenters discussed strategies for creating an "asthma-friendly" school. A highlight of this session was a video about Los Angeles Unified School District's (LAUSD) efforts to address IAQ and asthma through interviews conducted with staff and students.

Presenters: Sarah Merkle, Coordinator, Asthma Program, Centers for Disease Control and Prevention's Division of Adolescent School Health. Susan LaCombe, School Nurse, Los Angeles Unified School District.

Communications: A Key to Successful IAQ Management

Communicating effectively with all school stakeholders (i.e., students, staff, administrators, local and national media, community activists, other school districts, state/county/city personnel, etc.) is an essential factor in the success of any *IAQ* program. This session described fundamentals of developing an effective communications plan at the school and district levels, methods for proactive and reactive communications, tips for working with the media during *IAQ* crises, and strategies for attracting positive media coverage of *IAQ* successes.

Presenters: Kristy Miller, Public Affairs Specialist, U.S. EPA Indoor Environments Division. Betsy Liley, Grants and Special Projects Director, Burlington Public Schools.

How to Use the IAQ TFS Kit Effectively

This practical, "how to" session described various strategies for using the *IAQ TFS* Kit. Presenter Dr. Richard Shaughnessy discussed the process of implementing the *IAQ TFS* Program in a single school and throughout an entire district. In addition, the session offered suggestions for developing an *IAQ* management plan and tips for school staff at various stages of implementing an *IAQ* program.

Presenter: Dr. Richard Shaughnessy, Program Manager, Indoor Air Research, University of Tulsa's Center for Environmental Research and Technology.

IAQ and Performance

The effect of *IAQ* on performance is a key issue of debate for *IAQ* scientists, educators, and others. Available information, facts, and studies that relate *IAQ* and performance were presented during this informal breakfast session. Presenter David Mudarri discussed general considerations for measuring student performance and the effects of *IAQ* on concentration, memory skills, absenteeism, test scores, and other performance parameters. Solid correlations are not easily proven, as *IAQ* is only one of many variables that can affect performance.

Presenter: David Mudarri, Senior Analyst, U.S. EPA's Indoor Environments Division.

IAQ in Schools: Where the Buck Stops and Litigation Begins

This session provided a frank and compelling discussion of potential liability and legal concerns related to indoor air quality, asthma, and mold issues in schools. Presenter Sarah Gibson has provided substantial legal support and advice to schools with *IAQ*-related liability issues. She shared powerful practices, tools, and resources for helping schools avoid costly *IAQ*-related problems and related litigation. In addition, Ms. Gibson shared strategies for managing legal action, should the need arise.

Presenter: Sarah Gibson, Attorney, Law Offices of Sarah Gibson, MA.



Tom Bates

This session provided guidance for selecting appropriate flooring to meet various needs in schools. The presenters offered a well-rounded discussion of available flooring options, emphasized the importance of maintenance for every type of school flooring, and shared effective, *IAQ*-friendly maintenance techniques for both carpeting and hard flooring.

Presenters: Tom Bates, Managing Principal, BLRB Architects. Tom Ellis, Vice President, Tandus. David Frank, President, KnowledgeWorx.

Understanding IAQ in Schools

With 56 million people spending their days in U.S. elementary and secondary schools, this session is a must for all attendees. Presenter Mike Miller discussed the fundamentals of *IAQ*, health effects, sources, and the importance of *IAQ* in schools. Attendees reviewed key aspects of the *IAQ TFS* Kit and approaches for *IAQ* management in schools. This session offered essential information on the why, what, where, and how of *IAQ* in schools. In addition, this session emphasized the importance of proactive *IAQ* management plans in schools.

Presenter: Mike Miller, Environmental Engineer, U.S. EPA Region 6 (Texas).

Networking with *IAQ TFS* Mentors

Since its launch in 2002, the *IAQ TFS* Mentor Network has served as a forum through which school professionals and activists for healthy school environments can share their experiences addressing *IAQ* concerns. The 5th Annual *IAQ TFS* Symposium offered a venue for attendees and new *IAQ* program implementers to network with current Mentor Network participants who, in turn, shared their *IAQ* implementation and management experiences. This year an entire breakfast session was dedicated to the Mentor Network, opening lines of communication between Symposium attendees and Mentor Network participants. Current Mentors and past award winners (such as, Dave Blake, Pam Boyer-Pfersdorf, Jim Foxx, Greg Lookabaugh, Rich Prill, Betsy Liley, and 2004 Mentor of the Year award winner Beth Marolf) led small group discussions with Symposium attendees on various topics (e.g., how to fund necessary indoor air quality improvements, how to gain top-level administration and school board support for your *IAQ* program, how to establish baseline conditions and monitor your progress). The Mentor Network Breakfast session resulted in 15 attendees joining the Mentor Network and 23 requesting specific guidance from current mentors. For further information about the *IAQ TFS* Mentor Network please contact Michele Guarneiri at guarneiri.michele@epa.gov.

Closing

If you have not yet done so, please visit the Symposium Web site at www.IAQsymposium.com to download presentations offered this year or to submit an evaluation for the 5th Annual Symposium (it's not too late). We encourage you to comment on what you liked and to suggest improvements and new topics that you would like EPA to address at the 6th Annual Symposium.

Please watch the Symposium Web site for updates on the plans for the 6th Annual Symposium that will be held January 12-14, 2006, at the Grand Hyatt Hotel in Washington, DC. Registration information will be available this summer. Please remember to register early, space is limited!