



United States  
Environmental Protection  
Agency



## Welcome to the Communications Guide!

### **Indoor Air Quality**



### **Tools for Schools**

This Communications Guide, a companion to the United States Environmental Protection Agency's (EPA) *Indoor Air Quality Tools for Schools (IAQ T/S)* Kit, offers ideas and resources for developing and carrying out activities that communicate the benefits of participating in an indoor air quality (IAQ) management program.

This practical guide is designed to help members of a school's IAQ team<sup>1</sup> communicate—both internally and externally. The suggested activities will increase awareness of IAQ issues and highlight the team's progress toward a healthier indoor environment. This guide showcases how schools and school districts across the country have promoted IAQ awareness to parents, communities, staff, and students, and tackled bad press that may occur during IAQ crises. During your IAQ improvement campaign, you will likely need buy-in (i.e., support) from the school board or administration. This may become necessary when you need financial support for improvements beyond no-cost and low-cost solutions. Either way, it is essential to be open and frank with school officials, keeping them well-informed during the process.

Good communication helps your team gain the continuing support of key stakeholders, making your team's job easier. Raising awareness of good IAQ practices among your colleagues and students will help eliminate some of the factors that cause IAQ problems. Raising awareness among administrators, school board members, the community, and the local media will build support for your team's efforts to improve trust and collaboration while decreasing liability. Communication is important to everyone, regardless of his or her position in the school community. The important part is to determine how the *IAQ T/S* Program can help everyone achieve his or her goals.

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<sup>1</sup> An IAQ team is a group of individuals (school staff, administrators, school board members, students, parents) working together to address IAQ in the school(s).

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Section One

## Indoor Air Quality Tools for Schools Program Overview



*School officials may fear the consequences of investigating potential IAQ problems, but many schools have successfully communicated their situations to staff, students, parents, and the community.*

### The Problem

Approximately 20 percent of the U.S. population, nearly 56 million people, spends its days in our elementary and secondary schools. In 1999, the National Center for Education Statistics of the Department of Education reported that approximately one in five U.S. public schools had unsatisfactory indoor air quality (IAQ). In addition, ventilation, which impacts IAQ, was reported as unsatisfactory in approximately one in four public schools. Students are particularly at risk for health problems such as asthma and allergies, which have been linked to indoor pollutants commonly found in schools. Diseases like asthma are also becoming increasingly common in school-age children. Because the health and comfort of students and staff are among the many factors that affect attendance and contribute to learning and performance in the classroom, IAQ issues simply cannot be ignored.

Schools that fail to respond promptly and effectively to poor IAQ may experience increased individual short-term health problems, such as fatigue and nausea, as well as long-term health problems, such as asthma. These schools may have to shut down and relocate staff and students to temporary facilities. Poor IAQ may even lead to liability claims and lawsuits that can damage a school's reputation. Additionally, schools that do not catch their IAQ problems in their early stages may end up needing costly repairs. This point is particularly important since the average public school is 42 years old and buildings begin rapid deterioration after 40 years, if not properly maintained.<sup>1</sup> The *IAQ T/S Kit* provides a low-cost solution to prevent high costs from delayed repairs and the dilapidation of school buildings. For example, in a demonstration project in the District of Columbia, an analysis showed that if an elementary school had spent \$364 per year on preventive maintenance over a 22-year period, \$1.6 million in repairs could have been avoided.

<sup>1</sup> Wyons, J.B. 2001. "Do School Facilities Really Impact A Child's Education?" Issuetrak, CEFPI Brief. November 2001.

## The Solution

*IAQ TFS* is a flexible, comprehensive resource for your school building's health. The *IAQ TFS* Kit can help you identify, correct, and prevent IAQ problems. The Kit, provided to schools at no cost, includes easy-to-follow checklists, videos, sample memos and policies, a recommended management plan, and a unique IAQ problem-solving wheel. Using some or all the tools in the Kit, school officials can address IAQ problems

and educate staff, students, and parents about the importance of good IAQ and everyone's role in ensuring a healthy, comfortable learning environment. Armed with knowledge of IAQ and common sense preventive measures, schools can take care of many IAQ problems on their own. After all, ensuring a healthy school is a wise investment in students, staff, and education.



EPA's IAQ TFS Kit was designed to help schools handle most indoor air quality problems with simple, low-cost measures.

## Section Two



## Why Is it Important to Communicate about IAQ?

School and community support is essential to the success of a school-based IAQ campaign.

The IAQ Team can gain support by communicating the importance of good IAQ, the progress of your school's IAQ program, goals for the future, and your dedication to a healthy learning environment. Schools working to improve their indoor environments will not earn support and recognition unless people know about their efforts.

### Improve Health and Comfort

Poor IAQ in school buildings can adversely affect the health and comfort of students and staff members. EPA's Science Advisory Board consistently ranks indoor air pollution among the top five environmental risks to public health. Effective communication can raise the awareness of how IAQ can negatively impact health, educate staff how to identify and prevent existing or potential IAQ problems, and appropriately communicate these problems to school officials.

### Gain Support from Administrators and School Board

The support of the administration and school board is essential to a successful IAQ program. Educating these key decision makers on how IAQ potentially affects their district's liability, teacher and student performance, value of facilities, maintenance costs, and community trust can help to ensure their support of your IAQ program.

### Strengthen Community Relations

By promoting your IAQ efforts to key stakeholders within the community, including parents, taxpayers, local businesses, and organizations, your district can gain community trust. In addition, there may be an opportunity to create valuable partnerships with non-profit organizations, city and county departments, local health organizations, and community activists. Proactively working with local media to promote your IAQ program can strengthen your relationship with the community.

### Reassure School Staff, Parents, and Students

Promoting your program among staff and parents communicates the school's commitment to providing a healthy learning environment. In addition, effective communication can help teach them how to identify IAQ problems in classrooms and at home.

### Encourage Other Schools To Implement IAQ TJS

Your IAQ program provides an opportunity for you to be a mentor and a leader among your peers and help communicate the importance of good IAQ to other schools and districts. Networking with other districts also allows you to share your experiences, avoid pitfalls, overcome barriers, and motivate each other in your IAQ efforts.

### Receive Recognition from EPA

Schools that are committed to providing a healthy environment can reap great benefits through EPA's IAQ TJS Awards Program. Three award categories—**Great Start, Leadership, and Excellence**—honor schools as they progress through various stages of IAQ TJS implementation. Recognition of your IAQ program by the Federal government can lead to invaluable media exposure and raise awareness of your school's exemplary program.

Section Three



## When to Use This Guide

Use this guide to communicate with different audiences throughout the creation and implementation of your comprehensive IAQ plan. The suggestions provided

in the guide can help you capture and inform the public and school community. With your IAQ Team members, identify the communication methods or strategies that best meet your needs.

### Communicate your initial thoughts and concerns:

- Inform your teachers and staff right away in a meeting or a letter about IAQ issues affecting your school and the importance of good IAQ. Invite parents and other concerned community members to the meeting to emphasize your commitment to improving students' learning environment.
- Use the local media to inform the community of your intentions to survey your school's situation, even if your school does not have a pressing IAQ issue. Be honest and open about your problems from the beginning of the process to help build trust with your community.
- Contact other local school districts that have good IAQ management practices for ideas on effective IAQ communication strategies.<sup>1</sup>

- Ask parents and community members to get involved in your IAQ campaign.
- Gain national recognition with a Great Start Award from EPA for making the commitment to address your IAQ problems.<sup>2</sup>

### Promote your ideas as you roll out your IAQ campaign:

- Keep your fellow teachers and staff informed of your decisions and consider their input. Ask them to get involved in your campaign to improve IAQ.
- Gain buy-in from your school administrators and school board by using examples of how your IAQ campaign will improve health, performance, and comfort while helping to avoid (additional) costly IAQ-related problems.<sup>3</sup>
- Set up a Web site or hotline to keep the community and parents informed of your school's progress. (These tools can be particularly helpful when addressing repairs related to IAQ problems.)
- Send parents a letter that outlines your IAQ campaign and how it will positively affect their children.
- Encourage your students to conduct research or complete projects related to IAQ.

<sup>1</sup> Please refer to case study examples and award winners presented on EPA's Web site ([www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools)) for more information on other school districts that have implemented *IAQ TJS*.

<sup>2</sup> Please refer to the section on EPA's *IAQ TJS* Awards Program in this guide for information on how to qualify and apply for an award.

<sup>3</sup> Please refer to the EPA brochure, "*Indoor Air Quality Tools for Schools Program: Benefits of Improving Air Quality in the School Environment*," and case study examples presented on EPA's Web site ([www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools)) for more information on the health and financial benefits of the *IAQ TJS* Program.



### **Advertise when you implement your management plan:**

- With the approval of school administrators and/or the school board, use the local media to help your school broadcast its IAQ activities.
- Involve students in the IAQ learning process by including them in the actions to implement the management plan.
- Explain your IAQ management plan to teachers and staff members so they understand what needs to happen and how they can help the school reach its IAQ goals.
- With the approval of school administrators and/or the school board, the IAQ Team can send a letter to parents explaining the details of your IAQ management plan and what you hope to achieve.
- Communicate your IAQ management plans and pilot projects to the media in television segments, newspaper articles, and radio shows.
- Apply for EPA's Leadership Award to obtain national recognition for your efforts.<sup>4</sup>

### **Highlight your successes after achieving your goals:**

- Use the media to help your school broadcast its successes. Extensive coverage will spread the word and reassure those who may have had concerns for students' health.
- Incorporate your school's successes into the curriculum so students of all ages will understand the importance of IAQ.
- Mentor another local school district and use your experience and success to help other schools improve their IAQ.
- Inform parents, staff, and teachers whenever the school reaches another IAQ goal. This will help convince everyone that the school is moving in the right direction to improve its IAQ.
- Apply for an Excellence Award so EPA, and the nation, can recognize your achievement towards improving IAQ.<sup>5</sup>

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<sup>4</sup> See footnote 2 on page 4.

<sup>5</sup> See footnote 2 on page 4.





#### Section Four

## How to Communicate Effectively

Effective communication is essential to schools and school districts dealing with an IAQ crisis. Many sound communication principles are listed in the *IAQ TJS Kit*:

- Respect the audience.
- Remember that different audiences respond to different communications strategies.
- Be honest and open about IAQ and its effects on health and comfort.
- Avoid technical jargon; provide clear, specific information in the appropriate language (English, Spanish, Korean, Vietnamese, etc.)
- Tell people what you can and cannot do.
- Emphasize actions; make the audience feel like they are part of the process.
- Be responsive; encourage feedback; be prepared for questions.
- Combat rumors with facts.
- Work *with* the media. Think of the media as a pipeline or conduit to a specific audience.
- Stay on the message of IAQ. Repeat the point you want to emphasize.

The Internet can be one of your best outreach resources. If your school does not have a Web site, use the power of teamwork to lobby for one. Need help? Someone in your community who knows Web design may volunteer.

Keep in mind that community members may be happy to volunteer their time to design, write, or produce the materials that you need. Tap into the creativity and energy of your older students, too.

If your school or school district already has a Web site, consider including a link on your home page to EPA's *IAQ TJS* home page at [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools). Also, please remember that staff at your EPA regional office are experienced in communicating with a variety of audiences. (See Appendix A: *Regional IAQ Contacts* for regional office information.)

Section Five

## Proactive Communication

Schools and school districts can reap many benefits from taking a proactive approach to addressing IAQ issues. The positive press that can result from this approach can lead to a better understanding of IAQ in the school and in the community. In addition, catching problems in their early stages can help prevent your school or school district from having to deal with negative press associated with full-blown IAQ problems. Communicating effectively both internally and externally are key elements to a successful proactive approach.

*“The most important benefit of the [IAQ TfS] Program is that it provides a safe, healthy, and comfortable environment for students to learn and teachers to educate. Such a cooperative effort pays off in dollars saved and strained relationships avoided in the event that problems do develop.”*

—Daniel Stoeur, Maintenance Director,  
Goddard Public Schools, Kansas

Some actual school communication strategies are shown below.



**EXAMPLE: Independence School District in Missouri** used several internal and external communication tools to relay information to the community, parents, teachers, and staff members. For example, the health department hosted an *IAQ TfS* Kit training and presented the material to all principals in the district. The teachers, nurses, and principals played different roles in the *IAQ TfS* process, and training is planned for school custodians so they will also understand the importance of good IAQ. In addition, the district reached out to parents and the community in a variety of ways to educate and involve them in its IAQ program.

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**EXAMPLE: Naperville Community Unit School District 203 in DuPage County, Illinois** addressed IAQ issues with the help of the *IAQ TfS* Kit after an IAQ-related lawsuit was filed against the DuPage County



*Schools can experience many benefits by proactively communicating their IAQ efforts.*

Courthouse. To ensure the safety of school occupants and to prevent negative press, Naperville tested air quality in its schools and involved health professionals, teachers, the board of education, the PTA, the County Health Department, parents, and community members in the process. Some parents who work as reporters helped promote the district's efforts by providing positive media coverage. Community education classes and workshops helped win the support of the community.

### Internal Communication

Communicating your team's purpose and goals to those within the school—teachers, custodians, administrators, support staff, the school nurse, students—is key to the success of your IAQ program. Effective internal communications increases the awareness of IAQ issues, motivates teachers, staff, and students to get involved, and helps gain buy-in from administrators and school officials. No matter what their role in the school, people tend to be more supportive if they feel included in the process and have some ownership of the program's success. Your colleagues will value your team's efforts to help improve the learning and working environment.

Ultimately, the school benefits from having a knowledgeable staff that can accurately answer questions from parents, students, or the community.

***“I found that being proactive was well worth the time and effort. Because our IAQ Team represented all the different personnel that make a school work, it was easier for staff to relate to each other.”***

—Jim Stefanik, former Director of Maintenance,  
Chicopee Public Schools, Massachusetts

Schools and school districts should educate in-house staff and students and other community members on IAQ and involve them in activities. Use existing internal communication sources, such as newsletters, staff memos, banners, bulletin boards, and your school or school district Web site to educate the school community on current IAQ activities and successes and to explain the negative impact of poor IAQ on student and staff health.

***“IAQ is a low-key issue now. There are fewer IAQ concerns in our schools because of the increased communication that resulted from using the IAQ TFS Kit.”***

—Bob Austin, Director of Buildings and Grounds,  
West Windsor–Plainsboro Regional School  
District, New Jersey

Many schools and school districts find internal communications to be an essential part of their proactive approach.



**EXAMPLE: Mesa Unified School District No. 4 in Arizona** finds that it is crucial to communicate with school health offices, since these personnel can help schools identify potential problems very early, allowing schools to respond to IAQ problems before they become severe. District-sponsored IAQ training for custodial and facility assistants in maintenance and operations workshops is another critical aspect to promoting internal communication by ensuring that students and staff have access to knowledgeable personnel.



**EXAMPLE: School nurses working in the City and Borough of Juneau School District in Alaska** discuss IAQ issues regularly in their meetings. One school nurse sent an extensive e-mail presenting the results of a walkthrough and later discussed her report and concerns about asthma during staff meetings. The district occasionally conducts an inter-school mailing that allows it to share new IAQ-related information. These strategies for internal communication helped one school prevent chemical and insect problems from getting out of hand.

## Teachers and Staff

Communicating with the school staff is your first step in gaining support and relaying valuable information about your IAQ efforts.



**EXAMPLE: Northwest Air Pollution Authority in Mount Vernon, Washington,** emphasizes that communication is essential to a successful IAQ program. Posting carbon dioxide (CO<sub>2</sub>) test results along with a fact sheet on CO<sub>2</sub> keeps teachers and staff informed, while incorporating IAQ into the curriculum educates the students. Free training workshops and energy efficiency certifications for building operators provide additional opportunities to educate school staff.



Staff involvement is crucial to the success of the IAQ TFS Program because it focuses on prevention and behavior modification. To improve IAQ in your school, staff must be knowledgeable about IAQ issues and the school's overall IAQ plan, including:

- Why the school is concerned about IAQ issues;
- How the school plans to improve its IAQ; and
- What each staff member should do to get involved and help promote good IAQ.



To help your team boost staff involvement, try one of the following:

- Conduct presentations to discuss the school's IAQ program.
- Offer IAQ training for staff and develop policy and safety manuals. Include effective IAQ management practices implemented by the school during IAQ improvements for district-wide reference.
- Communicate your plans through internal brochures, pages in the employee handbook, internal newsletters, and fact sheets.
- Post information about your IAQ prevention and remediation activities, meetings, training, and successes on your school's or school district's Web site. Link your Web site to other useful IAQ sites.
- Produce videos to share school successes.



**EXAMPLE:** The **University of Minnesota** placed a list of frequently asked questions on its Web site in response to IAQ questions generated by Minnesota K-12 school health and safety personnel and school custodians. Visit the site at [www.dehs.umn.edu/iaq/school/](http://www.dehs.umn.edu/iaq/school/).

## Students

*“We are planning on initiating a program early next year to have high school students compile data on our absenteeism rates. We figured it would be an economical way to...track our successes in schools that have implemented IAQ changes. The students who agree to participate in this program will receive school credit for their work.”*

—Art Benton, Facilities and Maintenance Supervisor,  
Clear Creek School District, Colorado

Involving students is a great way to raise their awareness of IAQ issues. They can then apply this knowledge at home as well as in school. Your team's communications

activities with teachers should address ways to teach students about IAQ and provide ideas for projects to involve students in your school's IAQ efforts:

- Develop lesson plans and incorporate IAQ issues into classroom curriculums. This can be done by using educational games and activities, such as conducting building investigations and completing checklists from the *IAQ TFS* Kit, to teach students about sources of IAQ problems, asthma triggers, and health effects.



**EXAMPLE:** The National Safety Council's (NSC) Environmental Health Center has developed a Teacher's Guide to Indoor Air Quality, with units on IAQ. See the NSC Web site at [www.nsc.org/ehc/indoor/iaq.htm](http://www.nsc.org/ehc/indoor/iaq.htm).

- Organize poster contests and educational games.
- Encourage students to assist in completing IAQ checklists, participate in informational meetings, form a student IAQ Team and organize student efforts, and write articles for the student newspaper or newsletter.
- Recognize students who participate in IAQ activities during school assemblies.

These activities will keep students invested in the IAQ program and may even earn them some extra credit. Below are examples of student involvement in the *IAQ TFS* Program:



**EXAMPLE:** Teachers at **Buist Academy** in **Charleston, South Carolina**, used the *IAQ TFS* Kit to encourage students to research and implement various IAQ improvements. In one project, students researched floor covering and conducted fundraising to help them purchase high-performance carpet and linoleum for their classroom. The student report was presented to the school board and the school PTA. Publicity from students' efforts has raised interest in and awareness of IAQ in its own school, other schools, as well as with personnel in the school district.



Even if your school does not have current IAQ-related problems, it is still important to educate staff and students about IAQ to catch future problems in their early stages.



**EXAMPLE: East Dubuque Community School District 119 in Illinois** does not have a history of IAQ problems, but felt it was important to use the *IAQ TFS* Kit to ensure a safe environment for students. The district has started including articles about IAQ in the school newspaper and discussing IAQ in the biology curriculum.

### School Board, District Administrative or Business Officials

At some point during your IAQ improvement campaign, you will most likely need buy-in (i.e., support) from the school board or administration. This may be necessary in the start-up phase of your work, or it may become necessary when you need financial support for improvements beyond no-cost and low-cost solutions. Therefore, it is important to be open and frank with school officials, keeping them well-informed during the process.



***“These types of programs do not go anywhere substantially without the superintendents, board of education, and people they entrust to educate the community to buy-in to the whole idea of an IAQ program.”***

—Barry J. Hemler, Environmental Safety  
Coordinator, Montgomery County Public Schools,  
Maryland

When facing decision makers, your team must be organized, have accurate facts and figures ready, and present its arguments in a compelling manner. The following activities may be helpful in achieving school board buy-in:

- Present an overview of the school’s or school district’s involvement with *IAQ TFS*. Using the PowerPoint presentations on the *IAQ TFS* CD-ROM (also available in PDF format on EPA’s Web site at [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools)), show your school’s success with “before and after” photos. Describe success stories using the *IAQ TFS* case studies from other schools.
- Show video footage of walkthrough or preventive measures already taken by the staff.
- Conduct walkthroughs of different areas of the building for school officials and board members to show them sources of IAQ problems first hand.
- Develop documents, such as an IAQ manual, that can include information about policies for safety and cleaning procedures. This manual can be used to compile the techniques and strategies specifically used by the IAQ Team during IAQ improvements for continued in-house use and to share with other district schools.
- Present graphs displaying statistics about the condition of the school, number of students with asthma and allergies, number of nurse visits per week, absenteeism rates, etc.
- Disseminate general facts and statistics on IAQ in schools nationwide and health effects on students and staff. (For examples, see “Fast Facts” in Section Eight: *Additional Resources*.)
- Keep the decision makers well-informed of findings from the checklists and walkthrough(s), and present a prioritized list of necessary improvements as well as suggested solutions and associated costs.

### External Communication

Gaining support for your IAQ campaign from the community, especially from families of students in your school and the local media, is essential. By informing them during the early stages of the team’s *IAQ TFS* planning and implementation process, you can help prevent any surprises or misconceptions. In

addition, sending direct correspondence to families from the IAQ Coordinator or other school official, instead of relying on students to share information, builds trust. Families who hear directly from your team feel that they, too, are part of the process and may volunteer to serve on the IAQ Team.

Proactive external communication has helped schools and school districts convey a positive school image to parents and the community:



**EXAMPLE:** Schools in **Mesa Unified School District No. 4** in **Arizona** rely on parent groups to communicate their IAQ efforts to parents of children attending their schools. Local newspapers have highlighted positive IAQ results in many schools, and the district has held regional training sessions with schools from all over Arizona to discuss common problems and exchange ideas on possible solutions. In addition, the district and American Lung Association have started working with Indian inter-tribal councils to help them set up IAQ programs on the reservations. This mentoring program has been covered in both the local and national media.

Schools and school districts that have successfully implemented the *IAQ T/S* Program can share their knowledge and experience by mentoring other schools and schools districts in their area. This flow of information can lead to positive media coverage and provide support for schools and school districts that are just beginning to investigate their IAQ issues.

## Parents

A proactive approach with the *IAQ T/S* Program can give parents confidence that schools are doing everything possible to ensure a safe and healthy environment for their children. Parents can often offer their expertise to the school and the IAQ Team, and they are often willing to contribute to projects, meetings, or events that directly benefit their children.

Effective methods for reaching out to families may include the following:

- Post news items on the school's or school district's Web site, with a link to EPA's IAQ

Web site at [www.epa.gov/iaq/schools/](http://www.epa.gov/iaq/schools/).

- Send a direct e-mail to families to provide them with information on the dates, times, and locations of upcoming community meetings.
- Design a colorful flyer or mini-poster for children to put on the refrigerator with a hotline number for questions.
- Present updates at back-to-school night, including a demonstration of preventive measures.
- Develop a handout or talking points for teachers to use at parent-teacher meetings.
- Use the PTA as an effective outlet for distributing information and discussing IAQ issues with parents.
- Invite parents to be part of the IAQ Team. Some parents of students may have specialized training in areas such as mechanical engineering, nursing, architecture, and building maintenance that could add valuable expertise to the IAQ Team.



## The Community

Communities can offer many resources to schools and should, therefore, be informed of and involved in your school's IAQ management plan. Your commitment to good IAQ is important to everyone because community members are the families, neighbors, and friends of the children in your school. As taxpayers, the community expects your school to be a healthy, productive learning environment. Students are the community's investment in the future.

Your community will be pleased to know that you are taking preventive action and fixing IAQ problems. Many talented, experienced people who live in your community may be happy to volunteer their time to design, write, or produce additional IAQ materials.

Schools can reach out to communities and gain their

support with the following activities:

- Create a special IAQ edition of the school newsletter.
- Organize activities, such as a volunteer drive to accept donations of money, services, or building products that involve students, staff, members of local community organizations, and businesses. Foster feelings of community ownership for the school or school district's IAQ program.



**EXAMPLE: Independence School District in Missouri** used several communication tools to relay information to the community. The district informed parents and the community about its IAQ program through television (a local cable channel broadcasted a segment on IAQ), newspapers, flyers in electric bills, PTA newsletters, nursing newspapers, and letters sent home with students. The district also contacted Lowe's Home Improvement, Westlake Hardware Store, and Target for help funding IAQ-related projects, such as installing gutters on buildings, fans to dry wet carpeting, and filters for heating, ventilation, and air conditioning (HVAC) systems.

- Ask students and staff to help design announcements and IAQ fact sheets to post on bulletin boards in the community.

## **Local Media**

Once your school has made noteworthy progress in its IAQ efforts, turn this success into positive publicity and increase community awareness of IAQ issues. Accomplishments that you can publicize include the following:

- Completion of walkthroughs and initial evaluations (sizing up the situation);
- Completion of low-cost building improvements;
- School board approval for improvements, such as installing a new HVAC system, replacing carpeting, or upgrading classroom windows;
- Completion of upgrades and documented improvements in student health or decreases in absenteeism; or

- Receipt of local, regional, or national recognition for your IAQ efforts, such as involvement in EPA's national *IAQ T/S Awards Program*.

Tap into your school's relationships with the local media to emphasize your proactive approach. Invite local journalists and film crews to tour the school, see your progress, and discuss IAQ with the team and other school officials.

Encourage local media to promote IAQ programs:

- Write or place articles in your local or regional newspapers and magazines.
- Produce public interest features for your local news or cable access channels.
- Create print or audio public service announcements (PSAs) for your local papers, radio stations, and TV outlets.
- Share success stories of schools honored with an award in recognition of their IAQ improvements.

Section Six

## Responsive Communication

When schools and school districts are faced with an IAQ crisis (for example, school closings due to mold infestation), it is critical to react quickly and honestly. Schools and school districts should provide full and complete information to the media, striving to reassure students, parents, staff, and the community that the situation will be rectified as soon as possible. With effective communication (as suggested in “External Communication” below), schools and school districts can turn a reactive, negative scenario into a positive and inspiring one. Crises also provide them with an opportunity to educate staff, students, parents, and the whole community on the importance of good IAQ.

In the later stages of a crisis, schools and school districts often become more proactive to prevent the occurrence of another problem and the negative press associated with it.

*“One of the greatest lessons I learned from this [IAQ crisis] is to get in front of the bad press. Don’t try to hide from the accusations. Try instead to show what you are doing to remedy the situation.”*

—Adina Neale, District IAQ Coordinator,  
Saugus Union School District, California

The following schools in California have effectively dealt with difficult IAQ situations and turned a crisis situation into a success:



**EXAMPLE: Saugus Union School**

**District in California** was planning to start an IAQ program when a toxicologist claimed that a student had been exposed to arsenic, formaldehyde, phenol, and mold toxins in a portable classroom. Alarmist stories and frightening headlines appeared when the newspapers discovered that doctors blamed toxins in portable classrooms for poisoning the students and teachers. The school district was viewed as deceitful, uncaring, and unresponsive.

Immediately, Saugus Union School District focused on resolving the issue by using EPA’s IAQ TFS Program to guide the gathering of as many facts and environmental data as possible. In addition,



*Schools should react to an IAQ crisis quickly and honestly.*

they conducted extensive environmental testing and new toxicology examinations for the students and staff that revealed no IAQ problems in the portable classrooms. Additional toxicology tests by the Chief of Occupational Health and Medicine at UCLA were also evaluated by the California Department of Health Services, Environmental Health Investigations Branch, and showed that the original diagnosis was flawed. To head off further negative press and public outrage, the district needed to get the test results to the public as quickly as possible.

District officials were eventually able to regain the trust and confidence of the staff, students, parents, and community by fully implementing the IAQ TFS Program. The district also hired a public information officer who generated positive publicity by inviting reporters on ventilation inspections, contacting them prior to important meetings, and providing them with updates on environmental testing results. Members of the school also worked hard to establish good relationships with reporters. Gradually, positive articles and TV news stories about the district’s IAQ efforts began to appear in the Los Angeles Times, on local TV stations, and in other local media. To keep the staff, public, and media continually updated on Saugus’s IAQ efforts, the district developed a Web site presenting press releases, testing results, reports, IAQ TFS information, letters, and IAQ contacts.





**EXAMPLE:** Soon after the Buchanan Education Center in **Clovis Unified School District, California**, opened its doors to its 5,000 students, two buildings showed signs of water intrusion. The school thought it was a minor problem, but it discovered substantial mold growth in several buildings and portable classrooms. The administration reacted to this information by closing the whole school for seven days.



School officials conducted extensive outreach to the school staff and community with letters, a telephone hotline, media briefings, the school's Web site, and newspapers. The school sought

expertise from doctors, lawyers, and mold experts to help deal with the situation. While repairing the affected buildings, the school conducted an employee health survey and compared the results to those of another nearby school to ensure the safety of the staff and students.

As a result of the school's efforts, the community, health officials, and media all supported the school's actions. Not a single lawsuit or worker's compensation claim was filed, and the district received national and state recognition for its proactive efforts, including a community relations award. The newspapers hailed Clovis' proactive handling of the situation as a "textbook example."

## Internal Communication

Communicate your school's IAQ problems to teachers, custodians, administrators, the school nurse, and students so everyone can work together to understand and overcome the crisis at hand. People will support your IAQ efforts when they are included in the process of solving the problem. Use newsletters, staff memos, bulletin boards, and your school or school district Web site to update the school community on the status of the crisis and to outline potential solutions.

## Teachers and Staff

Provide staff with a clear explanation of the situation and the proposed response to gain its support as soon as a problem arises. Informing staff members will increase their trust and willingness to participate in resolving the issue. School staff should understand, at a minimum, the following items:

- What the problem is and whether health effects have been reported or linked to the problem.
- How the problem will impact them (e.g., they will have to relocate, terminate the use of certain chemicals).
- How the school's detailed plan will resolve the problem.
- What each staff member can do to ensure additional IAQ problems will not arise in the future (e.g., keep air vents and windows free from obstruction, report any sign of moisture or mold growth).
- How concise information will help staff members explain the impending situation to students.

Educated staff members can help the school detect IAQ problems in their early stages. Disseminate updates and information on IAQ in memos, bulletin boards, staff meetings, or letters. Schools and school districts can adapt the sample text on the following page, or text provided in the *IAQ TFS Kit*, to reach out to staff during a crisis.

## Students

Schools and school districts should keep students informed during an IAQ crisis to prevent rumors and ensure their confidence in the administration. Explain the situation, how it will affect students, and how they will benefit from improved IAQ during a school assembly or by posting information on the school's or district's Web site. Show students that you are in charge of the situation and are actively addressing the school's IAQ problems.

**“Staff and students now feel more comfortable informing us of problems knowing that the district will respond immediately to resolve these IAQ issues.”**

—Scott Hagen, IAQ Coordinator,  
Independent School District #88,  
New Ulm, Minnesota

### School Board, District Administrative or Business Officials

To implement many IAQ improvements, buy-in from the school board or administrators is

essential. The administration plays a critical role in resolving IAQ issues, particularly if they require funding. It is important to be open and frank with school officials, keeping them well-informed throughout each stage of the crisis.



#### **EXAMPLE: Burlington High School in Burlington, Massachusetts,** adopted the IAQ TFS Kit after the

Burlington Board of Health convened a public hearing to discuss the IAQ issues at the school. The meeting was very successful in raising public awareness and, as a result, officials unanimously approved \$1.2 million to correct the deficiencies causing IAQ-related problems.

The school board and administrators can often provide schools and school districts with support, credibility, and authority necessary to ameliorate a difficult situation. The following example emphasizes how the involvement of board members can lead to positive press coverage and national recognition, even when a school is facing an IAQ crisis.



### SAMPLE LETTER TO STAFF MEMBER

Dear Staff Member,

In an effort to keep you informed, we are updating you on the current status of the indoor air quality (IAQ) problems at the school [explain your situation concisely and clearly]. The school will address the problems by [removing the chemicals related to the recent illnesses, replacing the building materials contaminated with mold, upgrading the heating, air conditioning or ventilation system, or an appropriate response to your specific problem]. We will keep you updated on the progress of the [repairs or actions taken].

While these actions will resolve the current situation, we will continue to monitor and improve our IAQ by implementing the U.S. Environmental Protection Agency's (EPA) IAQ Tools for Schools Program. [Your school's name] will continue to strive to provide a safe, comfortable, and productive environment for students and staff so that we can achieve our core mission—educating students. Our school will follow the EPA guidance to improve our IAQ by preventing additional IAQ problems and by quickly responding to any new IAQ problems that may arise.

We will be providing you with more information, including checklists, in the near future that will help us identify potential IAQ problems. Good air quality requires an ongoing commitment from everyone in our school, because each of us makes daily decisions and performs activities that affect the quality of the air we breathe. [Your school's name] looks forward to working with the staff on these important issues.

Sincerely,  
[Name and title]



#### **EXAMPLE: North Country Union High School in Newport, Vermont,** began using the IAQ TFS Kit after two

employees filed lawsuits and a student fainted from an allergic reaction to a persistent odor in the building air. The Board of Directors televised its meetings, and several board members created a video outlining the school's renovation plans and their financing. Because of these efforts, newspapers and television and radio stations covered the progress of the renovations. The IAQ Team received recognition from the Vermont American Lung Association and elected state

government officials, including a State Senator, Representative, and Secretary of the State Department of Natural Resources. EPA also recognized their IAQ efforts with a national Excellence Award.

## External Communication

Managing an IAQ crisis in your school is very difficult, but it is crucial to remain direct and honest to your “external” constituents. During an IAQ crisis, there is a chance the media will report your story and you may be expected to respond to negative allegations involving the IAQ problem. You can use this situation as an opportunity to involve your community in the IAQ problem-solving process. By sharing your plans to fix the problem quickly with the community and parents, you will essentially calm any fears they may have about their children’s safety and their learning environment. In turn, this group of people could become your biggest supporters.

*“If a school district isn’t doing anything and a parent or employee has a problem, you get into that situation where the district’s got a credibility gap and it isn’t trusted. If they prove that you’re not doing enough, it gets to be quite a headache and a costly one.”*

—Ken McBride, Regional Industrial Hygienist,  
Texas Department of Health, Texas

The following school was able to avoid detrimental media coverage by immediately communicating its IAQ problem.



**EXAMPLE: Everett School District in Washington** turned to the *IAQ TFS Kit* after closing a middle school when students in a classroom complained of nausea and watery eyes. The district used communication strategies presented in the Kit and was open and honest about its IAQ problems, including insufficient ventilation. By holding meetings throughout the investigation of the problem to update staff, parents, and the press on the status of the closed school, the district was able to gain the trust of the public and community while avoiding negative publicity.

The first two meetings were held for staff members followed by a one-day session to explain the situation to parents.

## Local Media

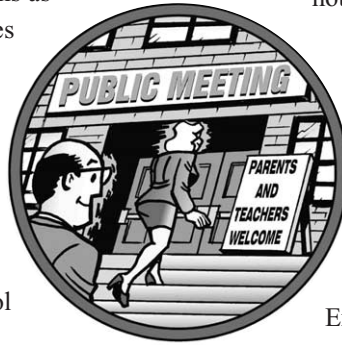
Some crises are unavoidable. Because schools do not always know of, or inform stakeholders about IAQ problems until a crisis occurs, it is important for your IAQ Team to become familiar with reactive media strategies. Generally, there are three cycles in a crisis with the media:

- **First Cycle (0–12 hrs)**—The media wants to know “who” and “what” the crisis is about.
  - Release an initial statement to the press (within the first 2 hrs) that confirms the facts, notes concerns, outlines actions for assistance and accountability, and sets a schedule for updated information. *Note: Web sites and hotlines are helpful in getting the information out quickly.*
  - Hold a news briefing (within the first 6-8 hrs) to provide information and make the leadership of the school or school district available.
  - Set ground rules for media coverage.
  - Offer contact names and sources for updated information.
- **Second Cycle (12–24 hrs)**—The media wants to know “why.”
  - Provide updated information and a schedule for more updates.
  - Offer experts to answer questions.
  - Have a few students or teachers speak to the press.
  - Share a plan to move ahead.
  - Dispel rumors firsthand.



• **Third Cycle (indefinite time line)**—The media wants new story angles.

- Continue to give daily updates through news briefings or fact sheets.
- Offer answers to questions as new information becomes available.
- Show how agencies work together.
- Continue to dispel rumors firsthand.
- Set up tours of the school for media.



Depending on the severity of the problem (such as school closings or student and staff illness), there may be other crisis management protocols already established that must be implemented. It is important to offer support to the parents and establish a regular notification process upfront.

*“We needed to make sure parents were aware of the [school’s IAQ] problems, what we were doing to alleviate them, and that their children were safe.”*

—Tammy Gonzalez, Principal, Crowley Elementary School, Visalia, California

The main focus of a reactive strategy should be on getting the accurate story out as soon as possible, continually providing official, updated information, controlling rumors, and becoming more proactive in the latter stages of the crisis.

## Parents

As word of an IAQ crisis spreads through a community, chances increase that this information will cause fear in the parents whose children attend the school with the IAQ problem, as well as causing fear in parents with children in other schools within the district. It is crucial to communicate with parents as soon as the IAQ crisis becomes apparent. The *IAQ TFS Kit* helped the following school reach out to parents:



**EXAMPLE: Janvier Elementary School**

in **Franklinville, New Jersey**, received bad press when a mold problem was discovered, causing parents to become concerned. In response, the school conducted a walkthrough using the *IAQ TFS Kit* and presented the results to parents to assure them that the problem no longer existed. This experience helped the school understand the importance of communicating with parents and staff and led to the creation of a formalized communication strategy, including notifications to parents about special activities that affect air quality.

Examples of ways to communicate with parents during an IAQ crisis include the following:

- Send out an informative newsletter tailored to the students specifically affected by the IAQ problem and a letter to all parents with children in the school district assuring them that the IAQ problem does not necessarily affect all schools in the district.
- Recommend calling an impromptu PTA meeting to discuss the IAQ problem and explain the actions taking place to address the situation.
- Invite parents to participate in the walkthroughs of the school to see the IAQ problem firsthand and how the school is fixing it.



## **The Community**

Gaining support from the community is essential during an IAQ crisis. Some community members, such as parents and other affiliates of the school, have a vested interest in the school's success as an educational facility. In the event of an IAQ crisis, people may feel as if the school's reputation has been compromised. It is important for the school or school district to maintain open lines of communication with the community. Several ways to keep the community informed include:

- Schedule a weekly IAQ meeting to update and inform community members and, perhaps, the press. Invite contractors and other individuals who are working to alleviate the problem to participate in the meeting. They will be able to answer specific questions, if necessary.
- Provide weekly updates on the progress of the IAQ remediation work using a community e-mail distribution list.
- Create and link a new Web page to your school's Web site that provides updates on the remediation of the IAQ problem.
- Create a voice recording hotline where people can leave messages with questions regarding the incident and can receive status reports about the progress of the remediation. Some schools may already have established hotlines for school closings or cancellations of after-school activities.

## Section Seven

# The Indoor Air Quality Tools for Schools Awards Program



EPA provides opportunities for schools and school districts to gain national recognition for their success in improving IAQ with the *IAQ TFS*

Awards Program. The *IAQ TFS* Program helps schools carry out a practical action plan to prevent and resolve most IAQ problems using straightforward practices and in-house staff. The *IAQ TFS* Awards Program is a tiered system that rewards schools and school districts as they progress through various stages of implementing the *IAQ TFS* Kit.<sup>1</sup> The Awards Program recognizes those schools and school districts that have taken a leadership role, heightened overall public awareness of IAQ issues, and encouraged public support for programs aimed at improving children's health by improving IAQ in our nation's schools.

## What Awards Does EPA's *IAQ TFS* Offer?

### Great Start Awards

Great Start Awards are for schools that have received the Kit and are in the beginning stages of moving forward with the *IAQ TFS* Program. To be eligible for an award, schools and school districts must name an IAQ Coordinator and/or establish an IAQ Team (the first step in the Kit). A letter of intent from the principal or superintendent is also required to demonstrate investment and commitment. In response to these actions, EPA will provide a "Welcome" letter and a "Commitment to School Health" certificate to each committed school and school district. Information about how to access other *IAQ TFS* resources and the *IAQ TFS* Bulletin will also accompany the letter.

### Leadership Awards

Leadership Awards are designated for schools and school districts that have shown substantial progress implementing the *IAQ TFS* Kit. Plaques will be awarded to all schools and school districts that have adhered to the Great Start criteria and have taken the following required steps:

- Completed the School Walkthrough.
- Completed the School Walkthrough Checklist and the Ventilation Checklist.
- Distributed the Teachers, Building Maintenance, and Renovation and Repairs Checklists.
- Developed an IAQ Management Plan that identifies any IAQ problems in the school and prioritizes any needed repairs and/or upgrades.

When schools or school districts receive a Leadership Award without first receiving a Great Start Award, EPA will send them the Great Start Award, in addition to the Leadership Award, along with the "Welcome" letter and "Commitment to School Health" certificate.<sup>2</sup> Information about how to access other *IAQ TFS* resources and the *IAQ TFS* Bulletin will also accompany these awards.

In addition to receiving plaques, schools and school districts will be recognized on EPA's Web site and will receive press kits to help them communicate their success. Award recipients with compelling or interesting success stories may be asked to share their experiences in a case study. The finalized case study will be available on EPA's *IAQ TFS* Web site and as a published document. These award winners are prime candidates for the Excellence Award and will be encouraged to apply.

<sup>1</sup> Schools and school districts are eligible to apply for the Leadership and/or Excellence Awards, without having previously applied in another award category. For example, a school or school district may be doing something related to IAQ, of which EPA is unaware, that makes the school eligible to apply for and receive the Excellence Award, without ever having applied for a Great Start Award.

<sup>2</sup> See footnote 1 above.

## **Excellence Awards**

Candidates for Excellence Awards include schools and school districts that show outstanding achievement, not only in fully implementing a *IAQ T/S* Program but also in their communication and outreach efforts and ability to assess IAQ concerns. Excellence Award winners are selected annually through a competitive process. EPA begins accepting applications for the *IAQ T/S* Excellence Awards in January and presents the Excellence Award Statues at a special recognition ceremony each year. Winners of Excellence Awards receive a press kit to assist them in communicating their achievement, are announced by EPA in a national press release, and are featured on EPA's Web site. Additionally, EPA will prepare a case study on each award recipient. Schools and school districts do not need to receive a Great Start Award or a Leadership Award to be eligible for an Excellence Award.<sup>2</sup>

Recipients of Excellence Awards have attracted the attention of media around the country, including newspapers, television, and radio stations. For example, when CNN ran a short report about the *IAQ T/S* Program, a representative of Montgomery County Public Schools, an Excellence Award winner, appeared in the report. Fort Bend Public School District was highlighted in an article in the *Houston Chronicle* for its Excellence Award and the Weather Channel Web site featured New England schools that received awards for IAQ in a back-to-school story that covered the health effects of poor IAQ.

## **How to Apply for EPA's *IAQ T/S* Awards Program**

Interested candidates should complete an application. Evaluation criteria and applications are available on EPA's Web site. For specific questions, contact (202) 564-9380.

All applications may be submitted by: U.S. mail, facsimile, electronically, or special delivery services (Federal Express, United Parcel Service, etc.). Candidates should use the application form as a template for providing EPA with the essential program information needed to evaluate their candidacy. Specific mailing instructions are available on EPA's Web site at [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools).



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<sup>2</sup> See footnote 1 on page 19

Section Eight



## Additional Resources

### IAQ Communication Activity List

The following is a list of ideas for activities to engage school staff, students, families, and local community organizations and businesses in the IAQ campaign.

#### Media

- Cable channel “round tables” (local channels, public access)
- Editorials (work with media)
- IAQ public service announcement (PSA)
- Letters to editors (written by the IAQ Team)
- Press release
- PSA in sports programs (e.g., Booster Clubs), if they accept advertising
- Radio interviews (local)
- Radio PSAs
- Video news release
- Op-Eds (encourage school principal/superintendent to create and submit an opinion editorial to newspaper)
- Planned call-ins to talk shows (e.g., public radio stations)

#### Outreach

- Bulletin: regular IAQ column in school/parent newsletter
- Bulletin: special IAQ edition of school/parent newsletter
- *IAQ T/S*-related clippings/articles and TV news spots posted on Web sites
- Web listservs and Ednet: communicate with peers
- Arrangements with local/regional advertisers for free space on local buses, billboards, bus stops
- Arrangements with local/regional hospitals for IAQ features in health/pediatric newsletters

- Half-page IAQ fact sheets stuffed in shopping bags at local stores
- Shopping bags at local stores with IAQ recommendations printed on them
- IAQ tips on local company calendars or special school calendar (Boosters/PTA project)
- Posters in school or in windows of local merchants
- An insert to place in mailings to parents
- Internet training session (as IAQ mentor for other schools, community, etc.)
- Letter of encouragement to other schools in your sports conference
- Table at local health fair at the mall/shopping center
- Submission of news to EPA regional office for case study or inclusion on EPA’s Web site
- EPA Great Start, Leadership, and Excellence Awards, to encourage participation in the *IAQ T/S* Program

#### Staff Training

- “Brown bag” lunch training for staff/faculty
- E-mail updates to staff/faculty
- IAQ section in school staff orientation
- Internet training for staff
- Page or section on IAQ in school staff handbook
- Memos

#### Student Participation

- Contests (classrooms or students compete)
- IAQ section in a science or health class lesson plan
- Informational video (created as a student project)
- Special student projects (art students, science projects or fairs, environmental interest groups)
- Student-produced IAQ brochure
- Article in school newspaper



## **Presentations and Events**

- Seasonal window decorating contests on IAQ
- Award ceremonies for staff and students
- Booth/table at annual school fair
- Meeting with other local schools to promote IAQ
- Overhead transparencies for presentations
- Photos (amateur photographers) before and after; slide show
- IAQ component to Earth Day (April 22) celebrations
- IAQ component to World Asthma Day (activities that educate the community about common asthma triggers found in the indoor environment)
- Pop quiz/trivia contest for everyone in the school (pre- and post-upgrade, at the beginning of the program, six months into the program)
- Special plaque for outstanding IAQ that is passed around each month (e.g., school, classroom)

## **Product Design**

- Banner or poster on easel in school entry or gathering area
- Warning flag on a string tied to vents to remind everyone of the need to keep vents clear for good air circulation
- IAQ bookmarks (EPA *IAQ TFS* logo is available at [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools))
- IAQ sew-on patches
- IAQ stickers (for notebooks, backpacks)
- Placemats for use at local restaurants with activities and learning games to teach kids about IAQ (e.g., connect the dots, coloring, word search)
- Mouse pads
- Pencils
- Screen savers for school computers
- T-Shirts or vests for kids participating on IAQ Team

## **General Activities**

- Articles in student school paper
- E-mail IAQ “newsflash” (one paragraph announcement)
- E-mail IAQ bulletin (periodic update, three to four paragraphs)
- FAQs on a poster or pocket card (bookmark)
- Fast Facts on IAQ/asthma/mold/indoor air pollution (Web or one-pager)
- IAQ Web sites (list of relevant information sites for adults/older students)
- An insert in the welcome kit/new student guide/notebook
- Logo on school letterhead or envelopes
- PA announcements
- Sign outside the school
- Statistical update on hallway bulletin boards (colorful bar and pie charts)
- Success stories one-pager (Web or paper)
- Take-home questionnaire
- Ten “to-do’s” (to improve IAQ) on a stand-up card
- Web banner (graphics or text located on a Web site to highlight information)



## **Fast Facts— Indoor Air Quality and Schools**

The relationship between IAQ in schools and the health of students and teachers is important, as your IAQ efforts may affect learning and performance in the classroom, which in turn affects achievement. Following are several “fast facts” that you can use when developing communications and outreach materials described in this guide.

### **The Basics on Indoor Air Quality**

- The U.S. Environmental Protection Agency (EPA) and its Science Advisory Board consistently rank indoor air pollution among the top five environmental public health risks.
- EPA studies indicate that indoor levels of pollutants may be two to five times, and occasionally more than 100 times, higher than outdoor levels.<sup>a</sup>
- Consistently high levels of indoor air pollutants are a substantial risk to public health, considering that the average person spends an estimated 90 percent of their time indoors.<sup>a</sup>
- The United States incurs annual costs and productivity losses estimated at \$10 to \$20 billion related to “sick building syndrome” caused by poor indoor air quality.<sup>b</sup>
- Factors such as mold, mildew, dust, animal dander, volatile organic compounds, radon, tobacco smoke, carbon monoxide, and formaldehyde, directly affect the level of building air quality.<sup>a</sup>

### **Schools and Indoor Air Quality**

- According to the U.S. General Accounting Office, 20 percent of all U.S. schools currently report indoor air quality problems.<sup>c</sup>
- An estimated 56 million people, or 20 percent of the U.S. population, spend their days inside school buildings.<sup>d</sup>
- The average public school is 42 years old, and school buildings begin rapid deterioration after 40 years if not properly maintained.<sup>e</sup>

- Research reports by the U.S. Department of Education suggest that students attending schools in poor condition score 11 percent lower on standardized tests than students who attend schools in good condition.<sup>f</sup>
- Dampness, which often leads to mold problems, has been consistently associated with respiratory symptoms, asthma, and allergies.<sup>g</sup>
- Operational measures to improve indoor air quality can cut energy costs and annual maintenance costs by 10 to 20 percent.<sup>f</sup>

### **Asthma and Indoor Air Quality**

- According to a 2001 report by the U.S. Department of Health and Human Services, between 1980 and 1994, the percentage of preschool-age children with asthma increased 160 percent.<sup>h</sup>
- Asthma is a primary cause of school absenteeism, accounting for 14 million missed school days per year. Absenteeism may affect school funding if funding is based on attendance.<sup>i</sup>
- Measures to control the indoor environment and change current building factors can result in a 10–30 percent reduction in allergy and asthma symptoms and related costs.<sup>j</sup>
- Reports indicate that occupants of homes or schools with evidence of dampness or presence of mold and mildew have a 30–60 percent higher prevalence of asthma or other lower respiratory symptoms associated with asthma.<sup>j</sup>
- An estimated 15 million Americans live with asthma, and between 8,000 and 26,000 new asthma cases arise in children each year.<sup>k</sup>
- Approximately 37 percent of all asthma hospitalizations, of which 20 percent are readmissions, are for patients under age 15.<sup>l</sup>
- Currently, an average of one out of every 13 school-age children has asthma. The percentages are rising more rapidly in preschool-age children than in any other group.<sup>m</sup>

- The National Heart, Lung, and Blood Institute (NHLBI) cited that the total cost of health care and lost productivity due to asthma totaled \$14 billion in 2002.<sup>n</sup>
- According to a report issued by the NHLBI, in 1995, African-American and Hispanic children are more likely to have asthma.<sup>o</sup>
- Asthma accounts for one-third of all pediatric emergency room visits and is the fourth most common cause of visits to the doctor's office.<sup>p</sup>
- The National Academy of Sciences/Institute of Medicine issued a report on asthma and indoor air quality, confirming that dust mites, molds, cockroaches, and environmental tobacco smoke are triggers for asthma.<sup>1</sup>
- Deaths related to asthma in children have nearly tripled over the last 15 years.<sup>q</sup>

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- <sup>e</sup> Lyons, J.B. 2001. *Do Schools Really Impact a Child's Education?* Issuetrak, CEFPI Brief. November 2001.
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- <sup>p</sup> U.S. Environmental Protection Agency. Asthma Facts. <http://www.epa.gov/iaq/asthma>.
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**Appendix A**

**Regional IAQ Contacts**

**U.S. EPA Region 1**

IAQ Contact  
1 Congress St., Suite 1100 (CAP)  
Boston, MA 02114-2023  
(617) 918-1639

**U.S. EPA Region 2**

IAQ Contact  
290 Broadway 28th Floor  
New York, NY 10007-1866  
(212) 637-4025

**U.S. EPA Region 3**

IAQ Contact  
1650 Arch St. (3AP23)  
Philadelphia, PA 19103-2029  
(215) 814-2086

**U.S. EPA Region 4**

IAQ Contact  
61 Forsyth St., SW  
Atlanta, GA 30303-3104  
(404) 562-9062

**U.S. EPA Region 5**

IAQ Contact  
77 West Jackson Blvd. (AE-17J)  
Chicago, IL 60604  
(312) 886-6543

**U.S. EPA Region 6**

IAQ Contact  
1445 Ross Ave. (6PD-T)  
Dallas, TX 75202-2733  
(214) 665-7550

**U.S. EPA Region 7**

IAQ Contact  
901 North Fifth St. (ARTD-RAL)  
Kansas City, KS 66101  
(913) 551-7605

**U.S. EPA Region 8**

IAQ Contact  
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