

**CT Foundation for Environmentally Safe Schools**  
A nonprofit organization dedicated to promoting policies, practices and resources that  
protect school occupants from environmental health hazards  
[www.pollutionfreeschools.org](http://www.pollutionfreeschools.org)

## Improving the Implementation & Enforcement of

Section One of PA 03-220:

### An Act Concerning Indoor Air Quality in Schools

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*June 2005*  
*All Schools Should Be Pollution Free*

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## **Introduction:**

In the summer of 2002 parents, educators, environmentalists and health professionals throughout CT formed the Canary Committee, an ad hoc grassroots organization. The purpose of this group was to pass an indoor air quality (IAQ) for schools law after previous attempts in 2001 and 2002 had failed. Many of our founding members have been personally impacted by the sick school epidemic. Our cumulative experiences have demonstrated that far too often the discovery and remediation of indoor environmental problems does not occur until after school occupants are harmed. It is unacceptable to treat children and school staff as though they are “canaries in a coal mine.”

By 2002, our sense of urgency was underscored by the increasing number of permanently disabled school staff and children removed from sick schools in ambulances. Physicians linked these serious illnesses to unhealthy school environments. In fact, a number of these cases were documented in the article Health Effects of Mold Exposure in Public Schools by Dr. John Santilli. This article appeared in the peer reviewed medical journal, Current Allergy and Asthma Reports in 2002. In addition, the University of Connecticut Health Center’s Division of Occupational and Environmental Health had determined that since 1998, educators have had the highest rate of occupational asthma when compared to other professions.

The Connecticut Academy of Science and Engineering (CASE) released a sentinel report on Indoor Air Quality in Connecticut Schools on July 25, 2000. The Environment Committee of the CT General Assembly had commissioned this investigation to:

1. Assess the health hazards to school children and adults from indoor air pollution in CT’s schools
2. Identify protective measures
3. Assign priorities among these measures.

One of the most salient points made in this report was the distinction between “sick building syndrome” and “building related illnesses.” Symptoms of sick building syndrome such as eye, nose and throat irritation and feelings of lethargy are temporary and occur for the most part while one is in a sick school. On the other hand, “building related illnesses” are serious conditions that are caused or exacerbated by indoor air pollutants. Some of these immunological diseases include asthma and hypersensitivity pneumonitis. Hypersensitivity pneumonitis impairs the ability of the lungs to absorb oxygen and eliminate carbon dioxide. Building related illnesses do not go away after the school occupant no longer attends a sick school. This distinction explained to the public that unhealthy schools could cause significant, long-term health problems and not just mild, transient symptoms.

The pervasiveness of unhealthy school facilities was acknowledged in the CASE Report when it noted that 68% of CT schools have reported indoor environmental problems. This expert panel recommended that legislators “require schools and school districts to establish indoor air quality management plans and operational manuals, and designate an Indoor Air Quality Coordinator for each school or school district.”

In March 2003, thirty members of the Canary Committee testified on behalf of indoor air quality legislation for schools. Nine courageous students presented compelling accounts of how indoor air pollution had adversely affected their lives. Members from across the state consistently and passionately showed their support via phone calls, e-mails, letters and weekly visits to the Legislative Office Building.

Finally, our efforts were rewarded when PA 03-220: An Act Concerning Indoor Air Quality In Schools was passed overwhelmingly in the House (147 to 1) and Senate (35 to 1). Now, CT law explicitly requires boards of education to keep school facilities clean and in a state of good repair. The law enacted in July 2003 requires that an indoor air quality program be implemented by every local or regional school board. It also requires school boards to report annually to the Commissioner of Education on implementation of this IAQ program. These are two of the most important steps toward a prevention-based approach.

In 2003, the Canary Committee was renamed the Connecticut Foundation for Environmentally Safe Schools or ConnFESS. We have become the voice for the growing number of students and school employees suffering from debilitating illnesses because of exposure to polluted air in a school. We also represent an expanding network of concerned citizens committed to improving how our schools are sited, designed, built, maintained and renovated. Overall, our mission is to promote policies, practices and resources that protect school occupants from environmental health hazards such as mold, lead, radon, pesticides and asbestos.

Section One of PA 03-220: An Act Concerning Indoor Air Quality in Schools (CT General Statutes 10-220(a)) consists of three specific mandates that highlight the critical importance of using effective indoor air quality programs. They are as follows:

1. Each local or regional board of education “shall adopt and implement an indoor air quality program that provides for ongoing maintenance and facility reviews necessary for the maintenance and improvement of the indoor air quality of its facilities...”
2. Each local or regional board of education “shall report annually to the Commissioner of Education on the condition of its facilities and the action taken to implement its long-term school building program and indoor air quality program...”
3. The Commissioner of Education shall use these reports “to prepare an annual report that said Commissioner shall submit in accordance with section 11-a to the joining standing committee of the General Assembly having cognizance of matters relating to education...”

This ConnFESS report assesses how well Section One of PA03-220: An Act Concerning Indoor Air Quality in Schools has been implemented since it was enacted in July 2003 to the date of this publication, June 2005. It discusses current barriers to compliance while emphasizing ways to improve its implementation and enforcement. ConnFESS intends to track the progress of this law’s implementation and update this report on an ongoing basis.

The language of PA03-220 explicitly assigns the State Department of Education (SDE) with the task of meeting the mandates of Section One. In response, SDE staff revised the School Facilities Survey in 2003. Unfortunately, this attempt to incorporate these mandates resulted in a fundamentally flawed questionnaire. This report will explain in detail how the 2003 ED050 failed to fulfill the letter and legislative intent of this law.

This report is divided into sections that will answer the following questions:

1. What evidence emerged after the law was enacted to further support the efficacy of establishing IAQ programs and management plans?
2. How has the State Department of Public Health assisted school systems in adopting the Tools for Schools (TfS) program?
3. How effectively have the mandates of Section One been implemented?
4. What systems or best practices currently in place may serve as role models for improving the implementation of Section One?
5. Why is State Department of Education participation in the implementation of school environmental health laws necessary?

These questions are followed by conclusions and recommendations.

## **Question 1:**

### **What evidence emerged after the law was enacted to further support the efficacy of establishing IAQ programs and management plans?**

The rationale and purpose for an IAQ management plan is eloquently summed up in the Safe and Healthy Schools Project produced by the American Lung Association of Maine. This document explains how a coordinated IAQ management plan should:

- “ - provide documented, defensible decisions
- increase early detection of problems
- help ensure that resources are used most productively
- help assure regulatory compliance
- build credibility for health and safety decision-making
- improve communication with the community and
- provide a planned approach to resolving environmental quality problems.”

IAQ management plans developed for CT schools will ideally accomplish all these things while emphasizing the protection of school occupants from environmental hazards. The booklet, Indoor Air Quality Tools for Schools Program: Benefits of Improving Air Quality in the School Environment (Published by Environmental Protection Agency (EPA) in 2003) cites numerous real life examples of U.S. schools that have demonstrated a reduction in health complaints, and increased comfort for students and staff working in buildings after the Tools for Schools (TfS) program was implemented.

On May 26, 2004, the Institute of Medicine (IOM) published a review of existing scientific literature on the health effects of indoor dampness and mold ([www.nap.edu](http://www.nap.edu)) that demonstrated a relationship between wet buildings and respiratory illnesses in children and adults. When the report states “Damp conditions and all they entail may be associated with the onset of asthma, as well as shortness of breath and lower respiratory illness in otherwise healthy children”, it speaks to our responsibility to protect students from preventable health hazards. This report also concludes that there is significant evidence that certain respiratory problems such as adult-onset asthma and hypersensitivity pneumonitis are associated with exposure to damp conditions and mold.

The IOM report acknowledged that dampness in different types of buildings is a widespread problem requiring action at local, state and national levels. Such action, we would suggest, should begin by establishing an IAQ management plan in every school in the country.

In October 2003, A Survey of Asthma Prevalence in Elementary School Children was published by Environment and Human Health Inc. ([www.ehhi.org](http://www.ehhi.org)). One of its findings was that nearly 50% of the 700 participating CT elementary schools reported more than one roof leak. The survey identified risk factors that are associated with elevated asthma rates in children. Schools in CT with the highest asthma rates were more likely to:

1. Be located at the bottom or side of a hill
2. Have more roofs described as flat
3. Have more roof leaks
4. Have carpets in classrooms
5. Have more cockroaches and rodents
6. Do renovations with children present.

Based on information from school nurses, the survey found 9.7% of K-5 students in CT have asthma. More research is needed to determine whether the onset of asthma in children can be attributed to school building conditions such as carpeting or leaky roofs. However, reducing asthma triggers in schools should be a priority of any IAQ management plan. Some of the final recommendations of the survey were to fix leaky roofs as soon as possible and adopt a Tools for Schools program.

The Environment and Human Health report also discusses exposure from bus idling and pesticides. Although CT law forbids school bus idling for more than three consecutive minutes, data from this study showed that more than 50% of schools surveyed have buses idling outside their buildings in violation of this law. Even though CT has a law to reduce pesticide use, this study also found more than 20% of the 700 schools responding to this survey still use pesticides on a regular basis even when there is no pest problem. Both bus idling and pesticide management have a significant impact on the environmental quality of a school and can be addressed in a comprehensive IAQ management plan.

The importance of protecting students from indoor pollutants was stressed in a report recently published by the U.S. Department of Education. The authors of A Summary of Scientific Findings on Adverse Effects of Indoor Environments on Students' Health, Academic Performance and Attendance (April 2004) stated in the Executive Summary that "...the overall evidence strongly suggests that poor environments in schools, due primarily to the effects of indoor pollutants, adversely influence the health, performance, and attendance of students."

In January 2005, the abstract Work Related Asthma in Teachers in Connecticut: Association with Chronic Water Damage in Schools was published in the journal Connecticut Medicine. Its authors, Dangman, Bracker and Storey wrote: "Workplace exposures in water damaged schools are risk factors for the development of work related lower respiratory disease in school teachers and staff." The lower respiratory diseases to which they refer include: asthma, hypersensitivity pneumonitis and sarcoidosis. In their study, patients diagnosed with "interstitial lung disease" worked in schools with documented water intrusion problems. These authors also noted that the symptoms of school staff in their study "varied according to the workplace environment, with more patients from water damaged (vs. dry) workplaces having upper respiratory symptoms (76% vs. 45%) and asthma (45% vs. 23%)". Upper respiratory symptoms include sinusitis and rhinitis. This study was done with adults only.

ConnFESS is aware of two children ages 12 and 16 who have been diagnosed with hypersensitivity pneumonitis that has been directly linked to mold contamination in their schools. They attended different schools in different towns. Both were isolated from their peers because they could not go to school in these sick buildings and had to be tutored in alternate settings.

The bottom-line is this: students, teachers and staff are at risk of suffering chronic and even life-threatening illnesses if problems creating them (water intrusion, bacteria and mold contamination) are not detected and corrected at an early stage. This early detection of potential health hazards is one of the primary goals of having an effective, ongoing IAQ management plan.

In summary, since PA 03-220 was enacted the evidence supporting the importance of establishing effective, ongoing IAQ management plans has continued to accrue.

Our research has found that the most evolved and effective IAQ programs use the EPA's Indoor Air Quality Tools for Schools Kit as well as a written management plan developed and implemented by a trained IAQ coordinator and school-based IAQ team. The use of an IAQ management plan promotes a proactive rather than a crisis management approach when safeguarding school occupants from environmental hazards. When an IAQ program like Tools for Schools is used, the sources of poor IAQ are pinpointed and resolved using in many cases simple, cost-effective remedies.

## **Question #2:**

### **How has the State Department of Public Health assisted school systems in adopting the Tools for Schools program?**

Tools for Schools (TfS) is an IAQ program developed by the Environmental Protection Agency. Forty-two percent of schools in the United States have an IAQ management program and nearly half of those schools use the US EPA's Tools for Schools program. The EPA's TfS has been described by the Connecticut School Indoor Environment Resource Team (CSIERT) as a "low or no-cost, proactive strategy to address IAQ problems through collaborative efforts involving school staff and parents. The program should not be viewed as a 'quick fix' remedy, but rather an ongoing, preventative strategy."

The EPA has developed a "tool" kit of useful materials to assist schools in implementing an IAQ program. Information in the kit helps the public to understand why an IAQ program should be established in every school as soon as possible. The kit explains that half of our nation's 115,000 schools have problems linked to indoor air quality and indoor air pollution remains one of the top five risks to human health. According to the EPA failure to address these problems can:

1. "Increase the potential for long term health problems for students and staff."
2. "Result in an unfavorable learning environment for students, reduce the performance and effectiveness of teachers and staff, increase absenteeism."
3. "Generate negative publicity damaging the school's and administrator's image and effectiveness."
4. "Strain relationships between parents, teachers, administrators and facilities staff."
5. "Create liability problems."
6. "Accelerate deterioration and reduce the efficiency of the school's physical plant and equipment."

Implementing an IAQ program such as Tools for Schools (TfS) also contributes to a fiscally responsible approach to facilities management. An EPA analysis of repairs done at one elementary school showed that if \$370.00 had been spent annually over a 22- year period on preventative maintenance, 1.5 million dollars could have been saved. Indoor air quality problems cost less if prevented or remediated early. They cost significantly more if they are deferred.

In 1999 the Connecticut School Indoor Environment Resource Team (CSIERT), headed by Kenny Foscue, was formed in by the CT Department of Public Health (DPH) as well as other agencies and organizations including the American Lung Association of CT. CSIERT is partially funded by an EPA grant to train school districts in Tools for Schools (TfS). The "Resource Team" trains members of school teams to identify problems, understand ventilation basics, and conduct site walkthroughs. Once a committee of

administrators, teachers, maintenance staff, health staff and parents investigates and prioritizes indoor air hazards, both short and long term strategies are developed to solve IAQ problems.

In 2001, CSIERT was recognized by the EPA with an Excellence Award for being a national leader in improving IAQ in schools. As of April 2005, CSIERT has completed TfS training for 493 schools in 82 school districts with a total of 2,400 trained IAQ members. School communities throughout CT are indebted to CSIERT for providing this important public service at no cost to local districts.

### **Question #3:**

#### **How effectively have the mandates of Section One been implemented?**

The first mandate of Section One states that local and regional boards of education “shall adopt and implement an indoor air quality program that provides for ongoing maintenance and facilities reviews...” Unfortunately, the law does not specifically explain:

1. What an acceptable IAQ program should include or look like
2. By what deadline schools must adopt and implement such a program
3. Who is responsible for checking to be sure schools have an IAQ program
4. What recourse the public has if the program is not being implemented or there is no program.

The second mandate of Section One requires that local and regional boards of education “report annually to the Commissioner of Education on the condition of its facilities and the action taken to implement its long term building program and indoor air quality program.” This language implies that local boards of education will be held accountable in some way by the State Department of Education (SDE) for complying with Section One.

Here, SDE has a significant opportunity to assist in reducing the suffering and serious consequences generated by unhealthy school facilities. In order for this to occur, SDE must have the necessary resources as well as the dedication and commitment to the goal of making CT schools safer and healthier places. For SDE to contribute to this process in any meaningful way, ConnFESS proposes that this agency develop and use a reporting mechanism that clearly demonstrates which schools have:

1. Established and trained an IAQ coordinator and/or committee
2. Produced an IAQ management plan that identifies short and long term priorities
3. Carried out the action plan while responding satisfactorily to occupant concerns and complaints

4. Provided ongoing education and communication to the school community on the progress of the IAQ management plan.

For several reasons, the importance of these reports cannot be overemphasized. These reports are a vehicle for helping parents, teachers and staff evaluate the environmental health conditions in their schools. Such information needs to be readily accessible to those who are most directly affected by a school's indoor environment.

Another reason these reports must be accurate and reliable is that they provide the data from which an annual report to the CT General Assembly is written. The third mandate of Section One stipulates that the Commissioner of Education "prepare an annual report" to be submitted to the "joint standing committee of the General Assembly having cognizance of matters relating to education." The language of PA 03-220 does not elaborate on:

1. What specific information is most useful to members of the CT General Assembly
2. How this information will be utilized
3. When these annual reports are due
4. What happens if the annual reports are not submitted in a timely fashion.

After the law was enacted in July 2003, SDE staff decided that an expanded version of ED050 (School Facility Survey) would become the reporting mechanism for the part of Section One that calls for local officials to report on the progress of their indoor air quality program. PA 03-220 states: "Each local or regional board of education shall report annually to the Commissioner of Education on the condition of its facilities and actions taken to implement its long term school building program and indoor air quality program."

To fulfill this mandate, ED050, the School Facilities Survey was amended to include questions relating to IAQ in schools. On page 7, item #33 of ED050, school officials were asked to determine the "overall indoor air quality for each school" using the following scale:

1. Major concerns involving several outstanding issues and/or unresolved complaints of significant impact. The school may have to be closed until the issues are resolved.
2. A few outstanding issues or complaints or complaints of significant impact but not so significant to require closing the school.
3. A few minor issues or complaints which are currently being addressed.
4. No issues or complaints of any significance.

When a school official rated a school as a 3 or 4, he or she was not required to identify specific problems listed under Ventilation (e.g., obstruction to air vents), Source Reduction (e.g., Carpet Removal Needed) or Moisture Issues (e.g., Plumbing Problems).

When a school official rated a school as a 1 or 2, he or she had to indicate what kinds of IAQ problems need to be addressed (e.g., removal of carpets). Even when a school was rated as a 1 or 2, the ED050 form only described the condition of its facilities and never addressed actions taken to implement its indoor air quality program as stipulated by Section One. There was no place for the school official to comment on the actions taken to solve any IAQ issues.

ED050 2003 fails to fulfill the legislative intent of the law and does not provide a format conducive to accurately characterizing the overall picture of how schools are managing their IAQ issues throughout the state. If the information that is collected for these reports is vague or inaccurate, the annual report to the CT General Assembly will only be, at best, useless and, at worst, misleading.

In December 2004, the ED050 forms for each public school in each CT school district were posted on the State Department of Education (SDE) web-site. These are the results of surveys distributed for 2003.

The 2003 ED050 reports are riddled with inconsistencies. For example, some schools that were rated as a 1 have no or only a few problems listed. Clearly, some schools received a higher rating than they deserved. For instance, so far only schools in Plainville, Oxford, and Seymour have applied for and received IAQ emergency certification funding (another provision of PA 03-220). Two of these three school districts reported that all of their schools were rated as 3s or 4s. The ED050 reports do not indicate anywhere that IAQ emergency certification funding was received. These forms do not facilitate the documentation of action taken to resolve IAQ problems. In fact, these problems were not even noted because such notification is not required with the 3 rating.

Another example of a school receiving a higher score than it deserved is Samuel Staples Elementary School in Easton. This school, which was shut down in June 2005 as a result of poor environmental conditions, was rated as a 3. In December 2004, the superintendent permanently evacuated and relocated more than four hundred staff and students from their classrooms because of long standing health complaints and the detection of health hazards including stachybotrys contamination.

In the fall of 2004, the National Institute of Occupational Safety and Health (NIOSH) released a report that demonstrated an unusually high level of illnesses among the staff at Staples Elementary and was a catalyst for the public outcry in support of this evacuation. For example, 87 out of 115 staff members have reported upper respiratory problems such as chronic rhinitis and sinusitis. Of those 87 staff members, 68% (59 staff members) state their symptoms improve after being away from the building. Other health problems have included the development of numerous cases of adult onset asthma, face swelling, welts, stomachaches, headaches and vomiting, which have been linked by physicians to conditions in this school. Does that sound like a building “with a few minor issues or complaints which are currently being addressed”?

In December 2004, the SDE published its Annual Report on the Condition of Connecticut's Public School Facilities 2003. Pages 56-58 (Section 8) focuses on Indoor Air Quality. Based on the completion of the 2003 ED050 that reports states "of the 1,026 public school facilities, over 87 percent (895 facilities) reported either no IAQ issues of significance or only a few minor issues that are being addressed. One hundred twenty-six (12.3 percent) facilities were reported as having a few major issues, while five schools (one-half of one percent) were reported as having multiple concerns of significant impact that may require that the school be closed".

This SDE report submitted to the CT General Assembly in 2004 lacks credibility and reflects the problems inherent in this incomplete, self-reporting process. Its findings that 87% of CT Schools had no or only minor IAQ problems cannot be reconciled with all the other reports, surveys and statistics previously cited from the CASE report, EPA or Environment and Human Health in this ConnFESS report.

Most troubling is that after compiling all this data, it is still impossible to answer the question: What districts and schools have adopted and implemented an effective IAQ program? By law, there is no definition of what constitutes a satisfactory IAQ program. There is ongoing confusion as to what an IAQ program must include and exactly what is required of school districts. Frequently the public does not understand the difference between an IAQ program and IAQ testing reports. On several occasions, when our members have asked school administrators for information about the existing IAQ program, they were handed a stack of IAQ tests. In another case, a school official claimed in a public meeting that his school district had a TfS program. What they had was an unopened TfS Kit that was collecting dust. There had been no training in TfS and no IAQ committee or program had been established.

The free TfS Kit by itself is not an IAQ program. It is an excellent educational tool that assists IAQ committees to identify, resolve and prevent IAQ problems. The Connecticut School Indoor Environment Resource Team (CSIERT) can tell you how many school districts have completed the two part, five hour Tools for Schools training program they provide. Neither CSIERT nor the CT Department of Public Health has the regulatory authority or tracking system to determine what school districts have or have not actually adopted and implemented an effective IAQ program.

#### **Question #4:**

#### **What systems or best practices currently in place are role models that suggest ways to improve the implementation of Section One?**

Within CT, the town of Ridgefield has made a significant effort to comply with the mandates of An Act Concerning Indoor Air Quality In Schools. Before this bill was signed into law, Ridgefield Schools were already participating in the Tools for Schools program. The decision to hire a part time TfS Coordinator and HVAC specialist in August 2004 demonstrates an outstanding commitment to making Ridgefield Schools safer and healthier.

The IAQ coordinator coordinates all nine TfS teams in its district. Each team consists of a school administrator, school nurse, teacher, head custodian and parent. Walkthroughs are

conducted in the fall and spring. Teams discuss and fill out ED050 forms under the supervision of the IAQ Coordinator before they are submitted to the SDE. The IAQ Coordinator's role ensures conformity throughout the district and provides retraining or additional training to team members as needed.

In addition, an HVAC specialist oversees the heating, ventilation, and air conditioning systems in Ridgefield Schools. This role is key to providing superior indoor air quality in schools. The HVAC specialist maintains these systems (e. g., checks to be sure filter changes occur at regular intervals) and is best suited to verify compliance with the mandates in Section 7 of CT's IAQ in Schools law.

In the state of Minnesota, an effective IAQ management plan is defined as a "comprehensive, district specific set of policies and procedures established to maintain and improve indoor air quality." Since 2001, the Minnesota Department of Public Health (MDH) and the Minnesota Department of Education (MDE) have been tracking and posting on the MDH website which school districts are in compliance with EPA's TfS criteria as well as more stringent Minnesota IAQ Management Plan criteria. As a result of a collaborative effort between MDH and MDE, a definitive consensus of what constitutes an effective IAQ management plan has been made clear to all school stakeholders. Minnesota requirements for an effective IAQ management plan consist of the following twelve requirements:

1. A designated IAQ coordinator certified through state sponsored training
2. Completion of walkthrough inspections for every instructional and administrative building during the last year
3. Evaluation of classrooms using TfS teachers' checklist (or an equivalent method)
4. Evaluation of ventilation system(s) using TfS checklist (or equivalent method)
5. Evaluation of maintenance practices using TfS maintenance checklist (or equivalent method)
6. Identification and contact information of the IAQ Coordinator
7. Communication Policy
8. Plan to address the issues identified through inspections and evaluations
9. Operations and maintenance schedule
10. At least one other policy which addresses IAQ issues specific to school district (such as pest management or bus idling)
11. An explicit IAQ concern/reporting and resolution process
12. School board approval.

To receive TfS compliance status, a school district must meet the first five criteria and also have a written plan. The precise content of a written IAQ management plan is not included in the EPA's TfS program.

A color-coded map displaying compliance status for each of Minnesota's school districts is divided into the following categories:

1. Meets both MN and EPA criteria
2. Meets EPA criteria only
3. Meets neither MN or EPA criteria
4. Survey not received

A bar graph on the MDH website shows the number of schools implementing IAQ management plans continually improving from 2001-2003. In 2002, 64% of school districts had met EPA criteria while 52% had met more stringent MN criteria. In 2003, 77% had met EPA criteria and 71% had met MN IAQ management plan criteria. For further information, go to the website: <http://www.health.state.mn.us/divs/eh/indoorair/schools/progress.htm>

Another exemplary model that could be adapted by CT is the Maine Schools Facility Maintenance Plan (MeSFMP). This facilities management template was established by the Maine State Department of Education in 1998. Its purpose is to:

“Enable districts to comply with the requirement that schools have a Maintenance Plan.

Enable the districts to report, electronically, to the Department, annually, on their progress in meeting maintenance standards set by the Department and Bureau of General Services.

Provide the Department with data to support legislation on behalf of school funding.

Provide local districts with data to support facilities budgets.

Provide local districts with standards of care for school facilities.

Provide local districts with concise and updated lists of statutory requirements for facilities issues,

Provide local districts with current information relevant to best practices, recognized guidelines and background information for school facilities management.”

Please see first page of template for Maintenance Services. To view the website, log onto: <http://www.state.me.us/education/const/FMHomepage.htm>.

## **Question #5:**

### **Why is State Department of Education participation in the implementation of school environmental health laws necessary?**

In 2004, National PTA published a powerful fact sheet that detailed the severity and prevalence of the problems caused by poorly maintained schools. Some of these compelling facts were:

1. One-third of all public schools are in need of extensive repair or replacement.
2. In 2001, the American Society of Civil Engineers reported that school facilities were in the worst shape of any infrastructure [including prisons].

The fact sheet also cites several studies that demonstrate the impact of building conditions on academic performance:

1. “Students learning in better buildings earn 5% to 17% higher test scores than students in substandard buildings.”
2. “In Washington, DC’s public schools, students in buildings in poor condition scored 11% below students in buildings that were in excellent condition on standardized achievement tests.”

A public school is the center of a community and neighborhood. Even with the best curriculum, class sizes and qualified teachers, a school cannot offer its children a quality education if the building does not have excellent air quality. Dr. Betty Sternberg, Commissioner of Education, has suggested CT lengthen the school day and school year. This can only make sense if school facilities are definitely environmentally safe. Otherwise, expanded days and school years could mean increased exposures to common sources of indoor air pollution such as mold, lead, radon, carbon monoxide and volatile organic compounds (VOC’s) like formaldehyde. (ConnFESS does not support or oppose the lengthening of schools days or years.)

The term “in loco parentis” emphasizes that educators are the legal guardians of CT’s school children when they spend approximately thirty-five hours a week in a school. As legal guardians, teachers, administrators, superintendents and boards of education have a legal and moral responsibility to protect children from the physical and psychological harm exposure to indoor air pollutants can cause. Educators need to be especially aware that by virtue of children’s size and development, they are more susceptible to these exposures, yet lack “OSHA-like” standards to safeguard them.

In the fall 2003 issue of the Children’s Health Environmental Coalition (CHEC) Report, Dr. Philip Landrigan, Professor of Pediatrics at Mount Sinai School of Medicine,

delineated three main reasons why the effects of indoor air pollution can take a harder toll on children than adults. They are as follows:

1. “First, children’s airways are smaller in diameter, meaning a pollutant that only slightly irritates an adult’s airway can significantly irritate and narrow the airway of a child. This can produce wheezing, reactive airway disease (hypersensitivity to allergens), or asthma.”
2. “Second, because children are more active and have much more active metabolisms than adults, they take in more air relative to their size than adults do. They breathe more rapidly, and inhale more pollutants per pound of body weight.”
3. “And third, children’s lungs are still growing (their lungs don’t reach maturity until about age 20). Repeated exposure to air pollution and repeated bouts of asthma can limit the growth of a child’s lung and predispose them to chronic lung disease.”

Dr. Landrigan goes on to write, “Reducing exposure to the agents to which a child might be sensitive is the most important step parents can take.” It is ConnFESS’s position that reducing exposure to allergens that may harm the normal maturation of a developing child’s lungs and predispose them to chronic lung disease is one of the most important steps that school aged children’s legal guardians (“in loco parentis”) must take. It is one of the primary reasons for using an IAQ program like Tools for Schools.

Another important principle that professionals must uphold is their duty to provide their students with a free and appropriate education. When a lack of proper maintenance or remediation creates a sick school, students ultimately pay a heavy price. Students attending classes in an unhealthy facility receive a substandard education. Poor air quality has been shown in numerous studies to adversely influence student performance, health and attendance. (See US Dept of Education report released in April 2004).

ConnFESS knows of numerous students who have had to take several prescription medications in order to tolerate a sick school. Often, they only needed medications for school and not in other environments. In other cases, students ended up needing ongoing treatment and medicines because they have developed an allergy or lung disease as a direct result of ongoing exposure at a school. This process is referred to as “sensitization.”

Over the last few years, ConnFESS has become familiar with more than twenty students whose exposure to indoor air pollution in a CT school resulted in their removal from school by a medical professional for homebound tutoring. Long term homebound students usually receive minimal, inadequate instruction. Most often tutors are not certified teachers. Sections of curriculum are deleted and some subjects aren’t taught at all. By the time many students’ cases reach a “due process” hearing, the student has missed a year or more of school and has been isolated from his/her peers throughout this ordeal. If we are to be convinced, as the SDE’s website claims, that it is “committed to the success of all Connecticut students,” this agency must demonstrate a greater commitment to ensuring that every school is using an IAQ management plan. Such a plan is one of the best ways to prevent more of these tragic situations.

It is ironic that CT educators continue to be at the greatest risk of developing occupational asthma at a time when there is mounting concern about a teacher shortage. The SDE has a responsibility to do all it can to preserve the well being of school employees and prevent teaching careers from ending in disability or premature retirement.

Far too much rhetoric has stressed school accountability for academic standards without an evenhanded emphasis on the accountability of boards of education, public health officials, maintenance departments, superintendents and state agencies to ensure that our schools are free of preventable health hazards. They all must do their part in a multidisciplinary approach.

In the spring of 2005, the members of ConnFESS in conjunction with the CT Parent Teacher Association (CT PTA) submitted a proposal to the Appropriations Committee of the CT General Assembly to establish and fund a new position of School Environment Management Plan Coordinator. This position would fulfill the mandates of Section One of PA 03-220 and also track and enforce the implementation of school bus idling and pesticide laws. This particular job would not require an indoor air quality specialist or industrial hygienist. Basic background knowledge in indoor air quality issues and related legislation is all that is needed.

Every year SDE awards local districts with millions of dollars to construct and renovate school facilities. Building and maintaining schools requires a significant investment of financial and community resources. Poor management of IAQ issues (e.g., failure to replace a leaky roof for a decade or more) can cause serious human health and financial consequences. In the long run, those school districts who adopt and implement IAQ programs catch problems early when they are significantly less expensive. Not adopting an IAQ program contributes to fiscally irresponsible behavior. Residents of Easton and Fairfield have experienced this first hand. Each of these communities has had a sick school as a result of deferred maintenance. Eventually the poor environmental conditions in these schools (McKinley Elementary and Samuel Staples Elementary) resulted in:

1. the evacuation of school occupants during the school year
2. permanent closure of the schools
3. the need to build new schools
4. an increase in taxes to pay for new schools.

Taxpayers at both local and state levels are impacted monetarily in these cases. Therefore, it is incumbent upon the staff at the School Facilities Unit of SDE to be more aware and involved in the oversight process that was mandated in PA 03-220 in July 2003.

## Conclusions and Recommendations:

In 2000, an expert panel commissioned by the CT General Assembly told legislators that they needed to “require schools and school districts to establish indoor air quality management plans and operational manuals, and designate an Indoor Air Quality Coordinator for each school or school district.” In 2003, after a three-year struggle, the IAQ for school’s law mandated that school systems adopt and implement an IAQ program. September 17, 2003, our nonprofit grassroots organization celebrated the enactment of this law with an upbeat press conference. Senators Williams, McKinney and Prague as well as Representatives Godfrey, Giannaros, Willis, Stone, Tymniak and Orange were among the 100-plus people who attended this special event. The signing of PA 03-220 into state law was profoundly meaningful to our members as many of us have been irrevocably harmed by indoor air pollution in a school.

At that time, we were encouraged by the fact that CT had one of the most comprehensive laws dealing with indoor air quality in schools in the nation. Later in February 2004, we were gratified when our attorney general, Richard Blumenthal wrote: “In passing An Act Concerning Indoor Air Quality in Schools by a virtually unanimous vote, our state legislature unequivocally expressed the policy of the state, the quality of air in CT’s schools is of paramount importance and that the environmental health of students and teachers cannot and will not be compromised without consequences.”

Translating what the Attorney General called “the express policy of the state” into reality has proved to be an unnecessarily slow and challenging process. Our enthusiasm was tempered when the policies, regulations and structure essential to implementing the basic mandates of Section One failed to materialize.

At the same time, there are signs of progress. The Ridgefield Tools for Schools program is being touted as a role model for schools in CT and throughout the nation. The request for TFS training dramatically increased following the passage of PA 03-220 in 2003. As of April 2005, CSIERT has completed TFS trainings for 493 schools in 82 school districts, with a total of 2,400 trained IAQ team members.

ConnFESS calls upon every member of school communities throughout CT to become more involved and informed about the use of IAQ programs in their school district. Whether you are a student, parent, educator, school nurse, secretary, custodian, educational assistant, administrator, superintendent, PTA president or member of a board of education, ConnFESS encourages you to ask the following questions:

1. Does every school in your district have an IAQ program?
2. What does the IAQ program look like?
3. Who is in charge of implementing the IAQ program?
4. What short and long term goals does it address?
5. How are IAQ problems resolved?

6. What actions have been taken to improve IAQ?

The Connecticut Foundation for Environmentally Safe Schools (ConnFESS) has identified four priority needs that we strongly believe must be addressed in a timely manner. In order to correct problems found in the implementation of Section One of PA03-220, ConnFESS recommends that a task force be convened to accomplish these four goals:

1. Define what an IAQ program must include
2. Revise and replace the ED050 school facility survey section dealing with IAQ issues
3. Formalize in writing the roles and procedures to be carried out by state agencies as they relate to compliance and enforcement of school environmental health laws.
4. Analyze the use of current state agency staff and determine needs for new job positions.

The achievement of these four goals would greatly advance efforts to:

1. Guarantee school children and employees a safe environment, free of preventable health hazards
2. Provide school community stakeholders access to accurate and reliable assessments of school facility conditions
3. Hold school officials and public agencies accountable for what they do or do not do to maintain safe and healthy school buildings.

There is too much at stake in terms of wasted money and human potential for anyone to justify delaying, neglecting and ignoring the proper implementation/enforcement of Section One of PA 03-220 and other school environmental health laws. Hard won experience and a body of research have reiterated over and over again that an IAQ coordinator, committee, written management plan and Tools for Schools program is what is needed in every school in CT. ConnFESS looks forward to a time when both the legislative intent and the letter of the law for Section One are finally realized.