

CT Foundation for Environmentally Safe Schools

ConnFESS Addendum to 2005 Report

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Introduction

The purpose of this addendum is to provide an updated assessment of how Section One of Connecticut's 2003 PA 03-220: An Act Concerning Indoor Air Quality in Schools (CT General Statutes 10-220 (a)) is and is not working. Since the release of our initial report in June 2005 numerous events and publications have added further context and perspective to this ongoing discussion.

On June 6, 2006 PA 06-158: An Act Concerning Authorization of State Grant Commitments for School Building Projects and Other School Construction Provisions was signed into law by Governor Rell. This new law includes a provision that reduces the frequency of reporting on the condition of school facilities and action taken to implement an indoor air quality (IAQ) program. Such reporting by local or regional boards of education is submitted to the State Department of Education (SDE) using the ED050 School Facilities Survey. These survey results are compiled by SDE into a report that is subsequently presented to the Education Committee of the CT General Assembly and posted on the SDE website. Rather than being mandated each year, these reports will now be required every other year. This change from an annual to a biennial basis means IAQ issues in schools will be evaluated only half as often as the original language of PA 03-220 had specified. Therefore, this is not a minor change and has ramifications to be further analyzed later in this addendum.

In January 2006, Environmental Health Perspectives published a study by the US Environmental Protection Agency (EPA) which examined the extent to which US schools are implementing indoor air quality programs. Information was gathered to assess the use, administration, implementation and benefits of IAQ programs. One of the most important points made in this study was that simply having an IAQ program is not equivalent to implementing effective IAQ policies and procedures. The distribution and use of checklists like those in the EPA's Indoor Air Quality Tools for Schools (TfS) kit was named a key indicator of an effective IAQ program. The benefits of implementing an effective IAQ program identified by the authors of this EPA study are: "improved workplace satisfaction, fewer asthma attacks, fewer visits to the school nurse and lower absenteeism."

The Connecticut School Indoor Environment Resource Team (CSIERT) sent out a press release in honor of National Healthy Schools Day on April 24, 2006. The press release celebrated the measurable improvements in indoor air quality demonstrated by Tools for Schools teams in Waterford, Hamden, North Haven, Chester and Hartford. These improvements included reductions in absenteeism, student inhaler use and the number of asthma incidents. Clearly, the use of such optimal IAQ programs is one of the most cost effective ways to improve the learning environment for Connecticut's public school children and especially those with asthma.

Recent research on the impact of poor air quality on human health continues to support the efficacy for using optimal IAQ programs in schools. The latest example is the first study to show a relationship between exposure to airborne fungal spores and an increased risk for developing multiple allergies later in life. Researchers from the University of Cincinnati published a new study in 2006 in Pediatric Allergy and Immunology that found that infants exposed to airborne penicillium, aspergillus and alternaria spores were more likely to develop allergies to mold, dust mites, pet dander, pollen and certain foods.

In August 2006 a landmark worker's compensation and personal injury settlement was awarded to Kathy Symonds, a former physical education teacher in the Amity school district. Exposure to poor IAQ where she was once employed has seriously damaged her health and ended her career. Her settlement does not include a confidentiality clause so she can tell her entire story. Her experiences will assist other health impacted school employees seeking to hold school systems accountable if they do not take timely and responsible action to prevent and remediate IAQ problems.

As was stated in the 2005 ConnFESS report, the primary goals of the 2003 IAQ for schools law were 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 healthy school buildings

Evidence continues to reinforce the critical importance of achieving these goals. This addendum will further examine how well the implementation of PA 03-220 is accomplishing these goals by responding to the following questions:

1. What problems raised in the 2005 ConnFESS report have been addressed and resolved?
2. What problems raised in the 2005 ConnFESS report have not been addressed?
3. What new problems have developed since the ConnFESS report was released?
4. How can all of these problems be resolved?

Question 1: What problems raised in the 2005 ConnFESS report have been addressed and resolved?

The CT State Department of Education (SDE) did acknowledge that the 2003 ED050 (School Facilities Survey) was not in compliance with PA 03-220 because it did not require schools districts to report on actions taken to implement an IAQ program. The 2005 ED050 (School Facilities Survey) does ask school officials to indicate what specific ventilation, source reduction and moisture incursion issues are:

1. not a problem
2. identified as a problem, but not yet addressed
3. identified as a problem and scheduled for repair
4. was a problem, but has been corrected

This revision significantly improved the 2003 version which only required school officials who had given a school an overall IAQ rating of a 1 or 2 (poor IAQ) to identify the presence or absence of ventilation, source reduction and moisture incursion issues. The addition of such information makes it possible to compare the overall IAQ rating of a school with how 17 specific IAQ issues such as obstruction of vents, carpet removal needed and plumbing problems are ranked.

Question 2: What problems raised in the 2005 ConnFESS report have not been addressed?

The language of PA 03-220 specifically put SDE in charge of reporting to the Education Committee of the CT General Assembly on the condition of school facilities and action taken by school districts to implement an IAQ program. From the signing of the bill into law in 2003 to the present, SDE staff and officials have vigorously resisted embracing any role involved in the oversight and enforcement of this law. SDE claims this is not their jurisdiction and that they lack the resources, staff and expertise. At the same time, the Commissioner of Education has never requested additional support to address IAQ issues in the SDE 2006-2007 or 2007-2008 budget. In 2005 ConnFESS submitted a proposal to the CT General Assembly to establish and fund a new position of School Environment Management Plan Coordinator designed to resolve the majority of the

problems raised in the 2005 ConnFESS report and this addendum. We continue to believe that such a position in conjunction with a multidisciplinary task force is needed in the face of the current oversight and enforcement vacuum. Someone must be ultimately responsible at the state and local levels for compliance with this law. The buck must stop somewhere.

Section 8 (pgs.53-61) of the SDE report is entitled Indoor Air Quality. The complete report can be found at www.state.ct.us/sde/dgm/sfu/reports.htm. Page 53 summarizes how the overall IAQ of each school was rated using a 1-4 scale. ConnFESS has constructed a chart that compares these results in 2003 to 2005.

Table 1: Comparison of IAQ Ratings 2003 vs. 2005 (1026 schools reporting)

IAQ Rating	2003	2005
4 – No issues or complaints of any significance	177 schools (17.2%)	452 schools (44.1%)
3 – A few minor issues or complaints which are currently being addressed	718 schools (70%)	386 schools (37.6%)
2 – A few <u>outstanding</u> issues or complaints of <u>significant</u> impact but <u>not so significant to require closing the school</u>	126 schools (12.3%)	42 schools (4.1%)
1 – <u>Major</u> concerns involving <u>several</u> outstanding issues and/or <u>unresolved</u> complaints of <u>significant</u> impact. <u>The school may have to be closed until the issues are resolved.</u>	5 schools (.5%)	146 schools (14.2%)

The most dramatic shift from 2003 is in the number of schools rated as a 1 (Multiple, major concerns of significant impact that may require the schools to be closed) that increased from 5 schools (.5%) to 146 schools (14.2%). This SDE report attempts to justify this result by stating “At this point it is unclear whether the significant increase is due to new IAQ conditions that have been there all along and are now being identified and reported. We would tend to think the increase is due to a greater understanding of IAQ issues and a greater ability to analyze and understand IAQ issues.”

A brief review of the 146 schools that were rated as a 1 quickly raises more basic questions as to the validity of this SDE report. The overall IAQ rating should be consistent with the way 17 IAQ concerns were also rated. These IAQ concerns include

items such as obstructions of vents, carpet removal needed or a roof problem. They are rated using the following scale:

1. not a problem
2. identified as a problem, but not yet addressed
3. identified as a problem and scheduled for repair
4. was a problem, but has been corrected

Therefore, if a school has multiple, major concerns of significant impact that may require the school to be closed, it should include some 2's and 3's when problems are identified. School systems with one or more schools with the poorest possible IAQ rating of 1 and no IAQ concerns include:

- | | |
|------------------|-------------------|
| 1. East Lyme | 11. West Haven |
| 2. East Windsor | 12. Wethersfield |
| 3. Granby | 13. Willington |
| 4. Milford | 14. Wilton |
| 5. New Fairfield | 15. Windham |
| 6. Norwich | 16. Windsor Locks |
| 7. Pomfret | 17. Woodstock |
| 8. South Windsor | 18. District 4 |
| 9. Wallingford | 19. District 6 |
| 10. Westbrook | 20. District 18 |

Some schools who rated themselves with an overall IAQ rating of 1 may have only acknowledged one problem and such problems that are very unlikely to prompt a school system to close down a school. For example, in South Windsor, Eli Terry School had one reported environmental problem: outdoor air intakes need improving. Another example is South Windsor High which named two issues: 1) general cleaning needs improvement and 2) carpet cleaning or removal is needed.

As one can see from the chart below, 54 schools with an overall rating of 1 had no IAQ issues. These 54 cases, which account for 37% of the schools rated with a 1, cannot possibly be accurate. Another 35 schools with an overall 1 rating only had one unresolved IAQ issue. Many of the remaining schools in this category have inconsistencies between their rating of 1 and the IAQ issues reported.

Table 2: Number of *Unresolved* IAQ Issues Actually Reported by the 146 Schools with a 2005 IAQ Rating of 1/ MAJOR MULTIPLE ISSUES

# of unresolved IAQ issues	0	1	2	3	4	5	6	7	8	9	10	11	12	14	17
# of schools w/1 IAQ rating	54	35	16	14	4	2	2	4	2	4	1	3	2	2	1

At the opposite end of the spectrum are the 452 schools with an overall IAQ rating of 4 which should have no issues of significance. A number of school districts have rated a school a 4 and have acknowledged multiple IAQ concerns. For example, Branford High School, while rated as a 4, lists IAQ concerns that have been scheduled for repair as follows:

1. HVAC units need cleaning
2. Art/Science rooms need ventilating
3. Radon remediation needed
4. Asbestos remediation needed
5. Carpet cleaning or removal needed
6. Pesticide use remediation
7. Classroom animal dander exposure
8. Leaks
9. Plumbing problems

Roofing problems and removal of water damaged materials were identified as problems, but not yet addressed.

Many school systems rated a school or schools with a 4 (no issues or complaints of significance), but like Branford High, list multiple concerns. Those with 3 or more concerns include:

1. Branford (Branford High School)
2. Bridgeport (Park City Magnet School)
3. Chester (Chester Elementary School)
4. Cromwell (Cromwell Middle School)
5. Essex (Essex Elementary School)
6. Fairfield (Osborne Hill)
(Roger Ludlowe High School)
(Fairfield High School)
7. Greenwich (Old Greenwich School)
8. Hamden (Dunbar Hill School)
(Alice Peck School)
9. Killingly (Killingly Intermediate School)
10. North Haven (North Haven Middle School)

- 11. Norwalk (Columbus Elementary)
(Jefferson Elementary)
(Kendall Elementary)
(Tracey School)
(Nathan Hale Middle School)
(Roton Middle School)
- 12. Oxford (Quaker Farms School)
(Great Oak Middle School)
- 13. Waterbury (Barnard School)
(Wendell L. Cross School)

Overall, 292 schools with a rating of 4 did not identify any of the 17 IAQ issues. This makes sense. The other 160 schools who did rate their IAQ with a 4 and had anywhere from 1 – 13 unresolved IAQ issues have some explaining to do. These 160 schools represent 35.4% of the schools rated with a 4.

Table 3: Number of *Unresolved* IAQ Issues Actually Reported by the 452 Schools with a 2005 IAQ Rating of 4/ NO ISSUES

# of unresolved IAQ issues	0	1	2	3	4	5	6	7	8	9	10	13
# of schools w/4 IAQ rating	292	88	37	13	9	1	4	3	1	2	1	1

Such obvious inconsistencies should have been picked up and addressed when the 2005 ED050s were submitted to the State Department of Education. Follow up was warranted. We had expected that more thorough proofreading and analysis would be applied when preparing a document that the law specifically requires in order to keep members of the Education Committee of the CT General Assembly current regarding facility conditions related to school IAQ. Instead, this flawed information, posted on the SDE website, will be erroneously referenced by members of the Education Committee as well as by other agencies and organizations.

The use of the problematic 1 – 4 rating scale has been used in both the 2005 and 2003 ED050 forms to evaluate a school building’s overall indoor air quality. This rating system is too vague and subjective and yet this overall score plays a predominant role in assessing CT’s school IAQ as it is reported to the Education Committee. If such a rating is used in the future it needs to be more specific and correlated to the rating of the 17 IAQ concerns listed on the ED050. The most rare and distinctive categories should be 4s (Facilities without issues or complaints of any significance) and 1s (Facilities with major issues that may lead to closing the school). Ratings of 3 and 2 should be the most common, but clearly delineated from each other.

Another unresolved problem is the absence of a mechanism for validating and following up on the ratings and reports of these school officials, especially when they do not match those of parents, teachers and the news media. All of these unresolved problems stem from a lack of oversight and accountability in assuring proper implementation of PA 03-220.

These problems are further compounded by the fact that the original language of the 2003 IAQ for schools law did not clarify:

1. What an acceptable IAQ program should include or look like
2. By what deadline all schools must adopt and implement such a program
3. Who is responsible for checking to be sure all schools have effective IAQ programs
4. What recourse the public has if no IAQ program is being implemented.

Question 3: What new problems have developed since the 2005 ConnFESS report was released?

In the summer of 2005, the ED050 (School Facilities Survey) was revised in order to begin to address the mandates of Section Two of PA 03-220 (CT General Statutes 10-220 (d)). Section 2 requires that school buildings constructed, extended, renovated or replaced on or after January 1, 2003 undergo a comprehensive inspection every five years. Such a comprehensive inspection should evaluate HVAC systems, radon levels, use of pesticides, plans for removal of hazardous substances, plumbing, water drainage and more.

The new question “Has the district provided a uniform inspection and evaluation of the indoor air quality in this building, such as the Environmental Protection Agency’s Tools for Schools, Y/N? (Not required until January 1, 2008)” created much confusion. This confusion had several consequences.

First, after the new ED050 form was distributed many school officials inferred (as ConnFESS had predicted) that schools did not have to have any IAQ program until 2008. Next, school districts throughout the state began cancelling previously scheduled Tools for Schools training offered at no cost by the CT Department of Public Health. Then the growing list of cancellations forced the Commissioners of Education and Public Health to send out a letter to rectify the situation. A letter detailing what school district personnel must do to be in compliance with the school indoor air quality law was distributed to superintendents, facility directors, business officials, boards of education and directors of

health. It stressed the fact that all school districts have been required to "... 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" since PA 03-220 was enacted in July 2003. This fact has been obscured by the confusing design of the 2003 and 2005 ED050 forms.

Adding to this confusion, SDE released its Annual Report on the Condition of Connecticut's Public School Facilities 2005 in March 2006. It continues to erroneously assert that "... at this point no school district is required to conduct inspections and evaluations". This directly contradicts the policy as described by the Commissioners of Education and Public Health distributed the very same month. This misinformation was given to the members of the Education Committee of the CT General Assembly and remains posted on the SDE website.

It is impossible to implement any IAQ program without conducting a basic walkthrough inspection. The 2006 US EPA study published in Environmental Health Perspectives essentially states this and stresses that the distribution and use of checklists like those in the Tools for Schools kit is central to implementing an effective program. It also emphasizes that simply claiming to have an IAQ program is not equivalent to implementing effective policies and procedures.

If one is not conducting a basic walkthrough, one cannot be in compliance with Section One of PA 03-220. The type of inspections and evaluations listed in Section Two of PA 03-220 describe a more comprehensive inspection that should be done every five years in schools constructed, extended, renovated and replaced after January 1, 2003.

A new threat to the effective implementation and enforcement of PA 03-220 is presented by the passage of PA 06-158: An Act Concerning the Authorization of State Grant Commitments for School Building Projects and Other Construction Provisions in May 2006. The enactment of this 2006 law decreases the number of reports on school IAQ made available to the public by fifty percent. This significantly weakens the language of PA 03-220 intended to ensure some type of oversight.

This new law does nothing to improve the quality of these reports on school facility conditions. ConnFESS reports have identified numerous improvements needed in the IAQ section. PA 06-158 only succeeds in cutting SDE work on reporting school IAQ issues without demanding that these reports be meaningful or accurate.

ConnFESS is asking for valid and accurate reporting on school IAQ on an annual basis. We can appreciate the amount of work involved in distributing and tabulating the results of the School Facilities Survey which leads to publishing a 70 – 80 page summary report. Frankly, much of the information requested by the ED050s such as the number of desks in a room and how well shrubs and lawns are kept does not need to be scrutinized

from year to year. However, keeping track of school air quality is a completely different kind of issue. More and more research proves that indoor air quality impacts the health of school occupants as well as the quality of education taking place in our schools.

Requiring biennial rather than annual reporting of school IAQ does not convey the critical importance of identifying and remediating potential health hazards in a timely manner. Biennial reporting does not keep pace with the public's need to know when IAQ issues exist as well as when and whether they have been rectified. Testimony at public hearings from 2000-2003 established the statewide problems related to deferred maintenance and a lack of public access to information regarding school IAQ. The practice of cutting building maintenance budgets and postponing repairs had created health hazards, liability issues and increased costs for remediation in the long run. Delayed reporting encourages a return to a mindset that helped cause the sick school epidemic in the first place. Has the testimony of children, parents and teachers adversely affected by poor IAQ presented in March 2003 already been forgotten? Biennial reporting will reinforce complacency rather than an ongoing vigilance to maintain healthy and safe school environments. Ultimately, this promotes a crisis management rather than a proactive approach.

Another logistical complication created by not maintaining annual school IAQ reports is that it will make it more difficult for schools constructed, extended, renovated or replaced on or after January 1, 2003 to comply with Section 2 of PA 03-220. The first series of more comprehensive evaluations are due in 2008. This raises several new concerns:

1. Will the next biennial report begin in 2007 and then be followed in 2009?
2. If a school needs to provide a comprehensive report in 2008 or 2010, does that mean those reports will not be available until a year later?

Again, biennial reporting weakens the intended oversight and accountability that was deliberately written into Sections One and Two of PA 03-220. The IAQ section of the SDE report is only 8 – 10 pages and needs to be done every year.

Question 4: How can all of these problems be resolved?

In this addendum we have identified the significant problems that need to be resolved in order to improve the implementation and enforcement of PA 03-220: An Act Concerning Indoor Air Quality in Schools. They are:

1. The School Facilities Survey section on IAQ does not ask the most pertinent questions needed to determine how well local boards of education are in compliance with the law.
2. SDE staff has not adequately proofread or corrected obvious errors before recording raw data that was used to generate the report to the Education Committee. The 2005 report contained more of these errors and therefore was even more obviously flawed than the 2003 report.
3. A significant number of school officials have not followed directions or were confused by the instructions when filling out the ED050 School Facilities Survey.
4. The overall IAQ criteria used to rate each school remains too vague and subjective to be meaningful. Yet, this questionable score plays a predominant role in the SDE report summary.
5. SDE staff and officials have written and distributed information that misrepresents both the letter and intent of the law. The SDE website still erroneously states "...at this point no school district is required to conduct inspections and evaluations" in the March 2006 report on school building conditions.
6. Biennial reporting of IAQ issues complicates compliance with Section Two mandates scheduled to begin in 2008. Clarification of basic versus comprehensive inspections is needed.
7. Biennial reporting of school IAQ issues does not keep pace with the public's need to know when IAQ issues are identified and corrected. Research shows long term health consequences (development of multiple allergies and lung diseases) can result from short term exposure to poor IAQ.
8. There still is no mechanism for validating or following up on the ratings and reports filed by school officials. Some of these reports are very different from those of teachers and parents.
9. The original language of PA 03-220 still needs to clarify:
 - What an acceptable IAQ program should include or look like
 - By what deadline all schools must have adopted and implemented such a program
 - What recourse the public has if an effective IAQ program is not in place
 - Who is ultimately responsible at the state and local level for guaranteeing an effective IAQ program is in place

10. SDE has vigorously resisted embracing an enforcement or oversight role related to school IAQ issues since PA 03-220 became law in 2003.

Problems numbered 1 through 5 in this list speak to the need to establish a process that will make it possible to produce a valid and useful report on the IAQ conditions in CT public schools for the next reporting period. These steps are:

1. The ED050 must be reviewed and revised by a multidisciplinary panel or task force before August 2007. SDE must not be allowed to release another report that creates confusion and misunderstanding about the requirements of PA 03-220.
2. Local officials responsible for filling out ED050s should be part of the revision process for the ED050s. Their feedback as to why so many errors were made and how to make forms more user-friendly should be solicited. When the final version is established, follow-up workshops should be made available to those required to fill out ED050s.
3. When ED050 forms are completed by school districts in 2007, they will need to be screened for obvious inconsistencies and returned if they are not filled out correctly.
4. The IAQ section of the SDE report should emphasize the number of schools who have adopted an IAQ program and have identified specific IAQ concerns using a scale that matches the one used throughout the rest of the form.

If these recommendations are not followed in a timely manner, there is little hope of ever fulfilling the legislative intent and letter of the IAQ for schools law. If nothing changes before the next ED050 forms are distributed, another flawed SDE report on the IAQ conditions in CT schools will be presented to the CT General Assembly. ConnFESS has already drafted a revised ED050 form that resolves the problems named in this report.

It is ConnFESS's position that biennial reporting on Sections 1-7 in the SDE school building conditions report (non-IAQ issues) is probably adequate. Section 8, the part of this SDE report dealing with school IAQ, is approximately ten pages in length. It needs to be done on an annual basis and we would like PA 06-158 amended to reflect this change.

All ten problems present barriers to the effective implementation and enforcement of An Act Concerning Indoor Air Quality in Schools. All ten problems point to one cause: No one has assumed responsibility at the state or local level for ensuring compliance. ConnFESS does not support relieving SDE of its obligation to provide some oversight and enforcement of PA 03-220. We believe this state agency must participate in this process. The position of School Environment Management Plan Coordinator that ConnFESS proposed be established during the 2005 legislative session does not have to be housed at

SDE. In fact, such a position would serve as a coordinator for efforts required by SDE, DPH and DEP to comply with all laws related to improving the environmental quality of schools. This would include Connecticut laws regarding pesticides, bus idling and IAQ in schools.

Greater efficiency, cooperation and commitment among state agencies must be encouraged. ConnFESS recommends a formal study of compliance with all school environmental laws by:

1. Analyzing current DPH, SDE and DEP staffing
2. Formalizing in writing related roles and procedures to be carried out by each state agency
3. Identifying when new staff is needed to guarantee compliance and enforcement of school IAQ, pesticide and bus idling laws

Finally, ConnFESS hopes a new legislative working group will be convened to strengthen the language of PA 03-220 and amend the language of PA 06-158 so IAQ reporting is done annually. Maybe then we can say that the State of Connecticut has finally done its best 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 facilities
3. Hold school officials and public agencies accountable for what they do or do not do to maintain safe and healthy school buildings