



STATE OF WASHINGTON
WASHINGTON STATE BOARD OF HEALTH

PO Box 47990 • Olympia, Washington 98504-7990

October 17, 2008

The Honorable Rosemary McAuliffe, Chair
Senate Early Learning and K-12 Committee
Washington State Senate
PO Box 40401
Olympia, WA 98504-0401

The Honorable Kathy Haigh, Chair
Appropriations Subcommittee on Education
Washington House of Representatives
PO Box 40600
Olympia, WA 98504-0600

Dear Chairs McAuliffe and Haigh:

The Washington State Board of Health is required by statute to adopt school health and safety rules as part of a regulatory approach that has been in place for more than a half century. It has been working to modernize its school environmental health and safety rule since 2003, and has been receiving public testimony on school health issues on a consistent basis since the 1990s. The focus of the Board has been to ensure that students and staff are in an environment that is safe and free of significant health hazards. To do anything less would be unacceptable.

The rule making process has been robust, inclusive, and deliberative. The rule proposal is grounded in good process, good science, and good policy. The Board has done everything it could within the existing regulatory framework to address responsibly a variety of complicated issues. It has been cognizant of the financial problems facing schools, local public health, and the state. In several instances, it revised its rules based on the results of an economic analysis. The current draft rule enjoys broad support among stakeholders and the unanimous support of the Board. The only remaining question, in the minds of Board members, is how best to assure successful implementation.

On October 8, the Board amended the published rule and then considered a motion to adopt. Ultimately, however, it agreed to delay a vote on that motion until no later than June 2009. The vote on the subsidiary motion to postpone was 7-2 with one abstention.

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Those who voted in favor of deferring adoption did so with serious reservations. No one on the Board believes this rule should not be adopted. The goal, however, is not to adopt simply for the sake of adoption. The goal is to improve the health and safety of school children. Passing a rule would less likely achieve that goal if there are not adequate resources and political will to ensure implementation. The Board delayed adoption because it believes that working cooperatively with the Legislature, particularly in these financially troubled times, could provide additional opportunities to improve the health and safety of children attending Washington schools.

Many of the barriers to successful implementation of the proposed rule are longstanding, structural problems that the Board cannot address. These mostly have to do with the ways local public health and education are funded at the state and local level. The Legislature has task forces working on basic education, school construction, and school health, and is developing a pilot program to track the condition of school facilities. At the same time, the state's mechanism for school funding is being challenged in court. The Board understands that its rule is part of a policy puzzle that will require integrated solutions. It commends the Legislature for taking a comprehensive look at the school funding crisis, and recommends it devote the same attention to the rapid collapse of local public health.

Several legislators have asked the Board to delay adoption of the school rule so the Joint Task Force on Basic Education Finance might have an opportunity to consider the rules as it develops its recommendations, which are due in December. They also want the Legislature to be able to consider the costs of the rule during the development of the 2009-2011 capital and operating budgets. It is reasonable that the Legislature have an opportunity to deliberate whether, and to what degree, the state should provide funding to cover the cost of this rule. The Board understands that this rule needs to be viewed in the context of three statewide crises—the collapse of local public health, longstanding problems with school finance, and the projected state budget deficit.

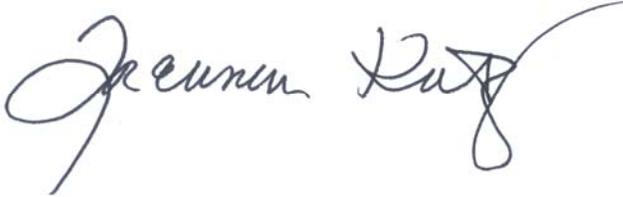
The Board will take the actions of the Legislature into account when it takes up the rule again next year. After the 2009 session, however, it intends to adopt some version of this rule, and quite possibly the version now before it, regardless of whether it is funded fully by the state.

An admittedly lengthy attachment to this letter discusses the evidence that such a rule is needed, the anticipated benefits, the projected costs, the Board's reasons for delaying adoption, and some additional policy recommendations related to school environmental health. We hope you read it in its entirety, especially given the amount of confusion and misinformation there is about this rule.

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Thank you for your interest in this important public health issue.

Sincerely,

A handwritten signature in black ink, appearing to read "Treuman Katz". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Treuman Katz
Chair

Enclosure

cc: House Appropriations Committee, Subcommittee on Education Members
Senate Early Learning and K-12 Committee Members
Joint Legislative Task Force on School Construction Funding Members
Joint Task Force on Basic Education Finance Members
Interim Legislative Task Force on Comprehensive School Health Reform Members
The Honorable Ken Jacobsen, Washington State Senate
The Honorable Karen Keiser, Washington State Senate
The Honorable Craig Pridemore, Washington State Senate
The Honorable Maralyn Chase, Washington House of Representatives
The Honorable Fred Jarrett, Washington House of Representatives
The Honorable Christine Rolfes, Washington House of Representatives
The Honorable Terry Bergeson, Office of Superintendent of Public Instruction
Christina Hulet, Executive Policy Office
State Board of Health Members
Michelle Davis, Department of Health
Craig McLaughlin, State Board of Health

Background and Policy Implications of State Board of Health Environmental Health and Safety Rules

Public testimony

No issue before the Board has generated more unsolicited public comment than school environmental health and safety. Much of the testimony has been, frankly, heart-wrenching. The personal stories we have heard are compelling. For instance:

- Odele La Lemond testified about how her bright, engaged child, deteriorated before her eyes. At one point, her daughter could not remember where her bedroom was after returning from a trip. Other symptoms included extreme fatigue, vocabulary loss, headaches, bellyaches, dizziness, and loss of balance. Drinking water in her classroom was found to contain elevated levels of lead.
- Sue Cramer testified about her son's environmental sensitivities, which were so extreme that he had to wear a gas mask just to function. This reportedly led to embarrassment, isolation, discrimination, and his eventual suicide at the age of 22. Ms. Cramer attributed the onset of his sensitivity to his exposure to solvents during the renovation of his elementary school.
- Rachael Hogan said her son would complain of terrible stomach pains before dinner every night. She later found out his school had high concentrations of copper in its drinking water.

These are just a sample of what we heard from parents, and in some cases, from students. We also heard several stories from teachers who gave up their careers and many of their regular activities because of illnesses that they (and often their physicians) attribute to environmental exposures at work. To provide one example among many, a teacher testified that his wife, also a teacher, had worked in a school that had unaddressed water leaks for a long time and underwent mold remediation in 1998 and 2001. The husband provided documentation that leaks continued in the school after the remediation. In 2003, his wife began suffering from chronic coughing, dizziness, sore throat, extreme fatigue, hair loss, fungal rashes, memory loss, and disorientation. Her blood showed high levels of mold antibodies. She eventually developed a kidney disease and her lungs show evidence of scarring.

The Board does not have the capacity to assess the validity of all the stories it has heard. Some researchers suggest "sick building syndrome" (SBS) and specific symptoms such as headache and memory loss are more likely attributable to stress than to environmental triggers. Stomach aches are common in young people. Clusters of complaints in schools have been attributed in the literature to mass psychogenesis. The science related to SBS and to mold does not lead to clear, definitive answers. The stories, however, are consistent with what we know about the health effects of indoor air quality problems, exposure to mold and moist spaces, and heavy metal contamination of drinking water. They are also consistent with the research related to the condition of our schools.

If you combine these stories with what we know about environmental health, particularly as it relates to school-age children, there can be no question that we—this Board and, indeed, the entire state of Washington—must do more to protect the health and safety of students. By doing so, we have an opportunity, also, to improve the health of the public

employees that teach their lessons, clean their classroom, and serve their meals. As a side benefit, we can also improve student achievement.

Public health justification

In 2003, the Board conducted a small feasibility and scoping study to determine if it should update the rule. It consulted with stakeholders and there was near unanimous agreement that the rule needed to be modernized. The only discouragement came from the Spokane Regional Health District, which expressed a concern that opening up the rule could jeopardize a fragile truce between schools and local public health about whether public health had authority on school campuses.

The notion that schools are often unsafe is supported by the literature. Howard Frumkin, MD, DrPH, a nationally respected senior administrator at the Centers for Disease Control and Prevention, is the lead author and editor of a book called *Safe and Healthy School Environments*. Frumkin and other contributors are unequivocal in their claim that a significant portion of U.S. school facilities pose a threat to student health and safety. One of the most cited studies involves the Los Angeles Unified School District. It found 40 percent of schools did not comply with applicable health and safety regulations.

Many other published studies and on-line reports document systematic reviews of school health and safety conditions. Consistently, these have found problems to be widespread. The Board's staff has not identified any systematic review of school facilities anywhere in the country that found only negligible health and safety problems.

These national findings are supported by experiences in Washington State.

- Local public health jurisdictions with active school health programs report that they regularly identify and help schools address problems, that they are an important resource for schools, and that their programs add significant value.
- For risk management reasons, schools are reluctant to talk about their experiences, but privately many school officials and maintenance personnel have shared some frightening stories, as well as specific examples of how helpful their partnerships with local health have been.
- Clallam County, which does not have an active school program, did an initial survey of its schools and, according to the local health officer, found a number of problems.
- Public Health—Seattle & King County surveyed 83 schools in 13 districts.
 - All used hazardous chemicals; 51% used toxic chemicals.
 - 80% had notable dust and clutter.
 - 47% showed signs of water damage.
 - More than half had rooms with blocked ventilation.
 - Only one in 83 had ventilated laminators.
 - 82% had at least one room with more than 1,000 parts per million of carbon dioxide (an indication of inadequate fresh air).
 - 39% had high levels of carbon dioxide in 10% to 20% of their classrooms.

- Lead testing in 455 schools, mostly elementary schools, statewide in 2004 and 2005 found that 7.2% of samples exceeded EPA recommended maximum lead levels (which many toxicologists believe to be too high) and roughly 1% exceeded levels for copper.
- The Department of Health estimates 30% of schools in this state have at least one drinking water source that exceeds 20 ppb for lead.
- Teachers are so concerned about indoor air quality issues that the Washington Education Association has named it one of its top two priorities and members voted to increase their own fees to fund an indoor air quality initiative.
- There are several instances in Washington of buildings with serious and well-documented indoor air quality and mold problems. Artondale Elementary closed for several months in 2002. Costs to the local school district reached \$1 million.

In terms of the literature on specific threats to children's health that these rules address, the science that has emerged since these rules were opened increases the level of concern. As we learn more about siting schools near freeways, exposing children to mold, the long-term effects of lead exposure, etc., this work becomes dramatically more important.

For example, when we started this work, the literature pointed to lowered IQ for children exposed to lead at a very young age (before school entry). Those findings have been extended since to include ongoing exposure and children four to six years of age. The consequences now include reduced brain size, increased aggression, and a greater likelihood of criminality as a teen and an adult. There are also studies that suggest lead is problematic throughout the lifespan. Scientists are also looking at the risk from lead particles in drinking water, which pose a different set of challenges than leached lead.

The Pediatric Environmental Health Specialty Unit at the University of Washington has reviewed this rule and found it to be consistent with the peer-reviewed medical literature. Moreover, it found that the rule achieved an appropriate balance between protecting children's health and recognizing economic limitations.

Economic and academic benefits

The new sections of the rule primarily address indoor air quality issues, safety in shops and labs, fall protection, playground safety, and drinking water. Interventions designed to improve indoor air quality have been repeatedly shown to reduce symptoms of SBS, asthma, colds, flus, and allergies by 20% to 80%. Looking at Washington's high asthma rates and the numbers of school children with asthma, a mere 10% reduction in asthma symptoms alone would save more than \$1 billion a year in this state. While we do not have enough data to readily identify costs associated with other types of respiratory disorders, there is every reason to believe the savings would be substantial.

The economic analysis of this rule also projects a reduction in injuries from accidents in labs and shops and on school playgrounds. Playground injuries cost the state of

Washington an estimated \$1.6 billion annually, with \$43 million of that resulting from medical expenses.

The analysis looked only at health-related costs, but it should be noted that almost every health issue addressed in the rule also has implications for student learning. Daylighting and indoor air quality, for instance, are strongly associated with academic performance. When considering the cost savings from reducing asthma symptoms, one should also consider the fact that asthma is the leading cause of absenteeism.

At the public hearing and in letters received by the Board, some school officials questioned the need to test for copper, the need for comprehensive lead testing in elementary schools, the need to retest for lead every five years, and the risk to student health posed by poorly maintained and heavily used office equipment. The science base for these rule revisions are explained below. Except for such questions, however, there is little dispute at this point about the benefit of the revised rule. The testimony heard at public hearings on the rule was consistently supportive of the rule draft and the process that led up to the final version. The concern now is, can we pay for it and how?

Cost considerations for schools

There are many ways to frame the cost implications of this rule and various stakeholders and agencies have presented different numbers in different ways. The economic analysis by the Board and the Department of Health looks at costs for a “typical” school and assumes that any new requirement means a new cost, regardless of whether a school is already meeting the requirement.

The Board has heard districts argue that the rule is not needed because schools are already meeting the requirements, while other districts from the same coalition have argued at the same hearings about the dramatic new costs of the rules. Governments create regulations to establish commonly understood standards, set social expectations, and ensure the compliance of those entities, typically few in number, who fail to meet those standards and expectations. This rule is no exception. The actual costs of implementing these rules will vary widely, and costs should be small for schools that are already employing best practices.

There are two broad categories of costs—construction is one and operations and maintenance (O&M) is the other.

Most construction-related costs apply to both new construction and to remodels and additions. The Department of Health estimates that the cost of construction will increase \$4–\$5 per square foot (a 2–3% increase) for a school that is not currently meeting any of the requirements. Grandfathering provisions and implementation dates should protect school construction projects that are already bonded. Requirements that account for roughly half of these costs would not become effective until September 1, 2011. The Puget Sound Schools Coalition estimates that the added cost of these regulations would

be \$2.64–\$3 per square foot (a 1–2% increase) because many of the coalition’s districts are already designing schools to meet these requirements. The Board’s executive director has worked extensively with the Joint Legislative Task Force on School Construction Funding to discuss the rationale for the new construction requirements and the associated costs for each. It is our understanding that both the task force and the Office of Superintendent of Public Instruction are inclined to reflect rule costs in the state match for school construction.

O&M costs can be divided readily into three categories—ongoing, start-up, and drinking water testing. Our analysis suggests that ongoing annual costs for most schools to implement the new requirements should be in the \$7,000 to \$9,000 range. This works out to about \$12 per student system-wide, although it is higher for elementary schools, which have fewer students, and would be lower for upper grades.

The Board believes the O&M requirements of this rule should be part of school practice already, and are so basic they should be expected of schools regardless of funding sources. Consider, for example, the roughly \$8,400 a year projected cost for an elementary school serving roughly 500 students. Approximately \$2,000 of that cost is to monitor for moisture accumulation, water intrusion and mold growth, and to begin remediation within 24 hours if it is found. Costs for schools who do not find problems will be minimal. This is not only an important practice from a student health perspective, but it has the potential of avoiding huge remediation costs down the road. Almost \$3,000 is related to monitoring playgrounds for safety hazards and correcting any problems. Another \$500 to \$1,000 of that is to keep hazardous materials (pesticides and cleaning products) out of the hands of children.

The Board recognizes that no cost is trivial for schools, and it recognizes that the extreme budget pressures schools already experience are likely to increase. One legislator wrote in a letter to the Board, “Asking school districts to choose between educating their students or improving safety measures is an untenable choice.” There is ample evidence that schools have had to make this kind of Sophie’s choice for years, cutting maintenance and custodial positions and deferring maintenance because of structural problems in school funding. The Board did not create this situation. In fact, the sad state of school funding makes adoption of this updated rule more important, since it establishes a floor for health and safety beyond which schools may not go no matter what the budgetary pressures.

Start-up costs will be on the order of a few hundred dollars per school, and mostly derive from requirements to develop policies at the district level. In most instances, schools encouraged the Board to require these policies in rule.

There was discussion of a much higher figure for start-up costs based on a requirement that schools not operate laminators in locations that did not provide a way of exhausting fumes directly to the outside. For schools who do not have workrooms equipped with operable windows or exhaust fans, this could have meant installing exhaust fans at a cost of more than \$10,000 per school. This rule language has been amended. Mechanical

ventilation will no longer be required for all laminators and schools have many alternatives to using lamination products that would require mechanical ventilation. This cost will be removed from the final economic analysis.

Finally, there is the issue of drinking water. The estimated cost of initial lead testing for an elementary school would be \$2,270. Districts would have two years to test elementary schools. They would test middle schools and junior highs the next year, followed by high schools in the fourth year, at a cost of \$745 per school. In the first round, elementary schools would test all water sources regularly used for drinking or cooking. Middle schools, junior highs, and high schools would test a 25% representative sample. All schools would have to retest 25% of fixtures every five years and would be required to do a one-time test for copper, sampling 25% of fixtures. Remediation costs will vary widely.

Some schools challenge the need to test all fixtures in elementary schools. They say 25% representative sample approach is reasonable given current environmental health practice. With small sample sizes, however, this practice cannot ensure schools will identify all drinking water sources that exceed lead limits. Given the particular sensitivity of children six years old and younger to lead, and given an incremental, one-time cost of roughly \$1,500, the Board believes it is prudent to err on the side of caution for the youngest pupils. Some schools also challenge the need for repeat testing. Repeat testing is required for two reasons. First, the composition of the water coming into the building could change and cause more leaching. This happened recently when Washington, D.C. began adding chloramines to its water supply. Second, there is increasing attention being paid to particulate contamination when solder containing lead breaks down (as opposed to lead leaching from solder into the water). While leaching tends to lessen with the age of a fixture, break down could increase with age. If the first round of repeat testing does not identify new threats, the Board will revisit this requirement.

Finally, some schools still question the need for copper testing. Copper has long been recognized as a distribution system contaminant of public health importance. Copper testing is required of drinking water systems and the U.S. Environmental Protection Agency's lead and copper rule at one time required all schools to test for lead and copper. This federal mandate was thrown out by the courts because it encroached on the authorities of states, not because of a challenge to the scientific basis for the requirement. The Board has sought to minimize the financial burden of this requirement by limiting testing to a one-time, representative sample using water already collected for lead testing.

Cost considerations for public health

The Board's school environmental health and safety rules are implemented by both schools and local health jurisdictions. The financial challenges local public health is facing are as severe as those schools are facing. Local health jurisdictions throughout the state are also looking at budget and staffing cuts this year in the 15-30% range.

Nearly all jurisdictions currently fulfill the site review and plan review requirements of the rule, but only nine out of 35 have school health inspection programs. Like all environmental health programs, school programs are fee-supported. For a variety of reasons, local health jurisdictions typically have a difficult time recovering the administrative costs for environmental health through fees. Mature school programs can be stable and partially self-supporting, but even they can contribute to the longstanding structural problems with the way environmental public health is funded in this state. The Board's intent when it opened the school rule was to develop a rule that worked better for existing programs and made it easier for other jurisdictions to expand their programs and come into compliance with the rule. It will be very difficult in today's financial climate for local health jurisdictions to launch any new program. During the ramp-up period they would not be able to recover the cost of hiring and training new personnel.

Policy considerations

The State Board of Health must operate within a policy framework that has been on the books for at least a half century. This is a local control state—both the State Constitution and state statutes provide local autonomy to school districts and local health jurisdictions. Board rules are typically implemented by local health jurisdictions. The line of authority runs from the Legislature to the Board (through authorizing statutes) to local health officers (through Board rules) to local health workers (through health officer delegation).

There are clear limitations to the Board's authority to require accountability. Failure to enforce a Board rule is a misdemeanor punishable by a \$50 to \$100 fine (depending on which statute is cited). The fine has been the same since the beginning of the 20th century. A misdemeanor must be witnessed by a law enforcement officer. Health code violations typically are not a priority for law enforcement or prosecuting attorneys. If a health officer or health jurisdiction administrator refuses to obey a Board rule, the Board can investigate, but its only recourse is to remove the health officer or administrator. It is not intended to be an oversight agency or adjudicative body.

The Board was asked by members of the Interim Joint Task Force on Comprehensive School Health Reform to recommend whether it needed additional enforcement powers. The Board is not asking for greater enforcement authority at this time. Instead it would prefer to work collaboratively with local health and schools to encourage wider and more effective implementation of this rule.

During the rule process, parents and teachers asked that some state body be identified and empowered to hear complaints and appeals when school health issues are not addressed to their satisfaction at the local level. The rule does not address that, largely because the Board does not have authority to require that a state agency assume that kind of role.

The Board also recognizes the need for coordination between various efforts to improve health and safety conditions in schools and to address school and public health funding issues. The Legislature has task forces underway working on basic education funding, school construction, and school health, and is developing a pilot program to track the

condition of school facilities. At the same time, the state’s mechanism for school funding is being challenged in court. In addition, the Office of Superintendent of Public Instruction is revisiting its “2% percent” rule for maintenance and considering an alternative program that may require a maintenance plan and annual inspections. The Board believes these efforts should be coordinated to ensure effectiveness and efficiency. One of the reasons for agreeing to postpone adoption until after session is to allow the Legislature an opportunity to consider not only the costs of implementing the rule, but also ways to address these kind of policy issues (which are outside the scope of the Board’s authority) in a comprehensive and integrated manner.

The Board looks forward to working with the Legislature and other partners to address some of these “big picture” policy issues before resuming consideration of its school environmental health and safety rule.