HEALTH & SAFETY
IN SCHOOLS

MASSACHUSETTS TEACHERS ASSOCIATION

A DIVERSE UNION *of* EDUCATION WORKERS

> “Pray for the dead and fight like hell for the living.”
>
> – MARY HARRIS “MOTHER” JONES

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Prepared by the Massachusetts Teachers Association’s Environmental Health & Safety Committee and Communications Division.

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Solving Health and Safety Concerns Through Effective Health & Safety Committee Communication

Health and safety are primary functions of our union. A health and safety committee gives the local association a powerful voice focused on student and adult safety. The MTA Environmental Health and Safety Committee encourages and supports the formation and engagement of health and safety committees in all MTA local associations, to protect member health and safety, to coordinate with regional and statewide union health and safety campaigns, and to build union participation and power.

A health and safety committee can be any size. In some cases, it may be initiated by a single person acting in coordination with the association's leadership. A joint labor/management health and safety committee should have its activities, responsibilities and procedures clearly described in its collectively bargained labor contract. The local association can also have similar language in its bylaws to describe an independent union member-only health and safety committee. The union member-only health and safety committee allows committee members to speak freely without management present, discuss concerns, analyze data and reports and create an agenda for the next joint labor management committee.

Health and safety initiatives are a mandatory subject of bargaining under state law and federal law. Safety is a common concern for educators, parents and students and is a powerful tool in the court of public opinion. Parents and students care about the school environments. Protecting children's health is a great organizing issue. The press is quick to write a story about building conditions in schools and poor student and staff health. Starting a health and safety committee will give members a way to be heard and a seat at the table with policymakers. Locals can first organize an "union-only committee," create an agenda and request a meeting with management in a joint committee structure. A union-only committee can be a district-wide or a building-wide committee. The primary function as an organizing tool is to seek member feedback and create a communications network. Surveys and checklists distributed to members will help them focus on environmental hazards, such as indoor air quality, mold growth, exposed asbestos, uncomfortable temperatures, construction and renovation hazards, radon, rodents and other pests, violence, stress and communicable diseases such as COVID-19. The MTA has a variety of survey tools available to local unions, including surveys on Indoor Air Quality environmental and symptom concerns, stress, violence, heat and pests. To access these tools, talk to your field representative (or visit the MTA EH&S website). After survey results are completed, always provide members with outcomes. This begins a two-way communication network and builds trust in leadership.

- Engage members by using the School OSHA safety checklists, provided by the state Department of Labor Standards. (See OSHA section.) Under state law, health and safety committees have a legal right to information on exposures to hazards (MGL.Ch 150E), a right to know the chemical hazards that people are exposed to, and records of maintenance and training required by OSHA and job safety protections.
- Information on incidents of violence can also engage union members.
- Survey members on incidents of workplace assaults, including by students.

IN SUMMARY

- Members-only committees educate, engage and organize an infrastructure of activists in each building.
- District-wide/campus-wide joint labor/management health and safety committees put safety on everyone's agenda. Make sure the union has broad representation on the committee (each building should have at least one member.) Nurses and facilities staff have valuable information and perspective. Management representation should have policymakers on the committee with access to budgets. Invite members of the school committee to attend or observe. The committee structure can be negotiated into the contract and the MTA has model language available for review.
- Employers have a legal duty to supply information on environmental and health issues.
  - The local association has the right to all reports under state law, MGL Chapter 150E.
  - The association has the right to access the building to conduct its own health and safety inspection. The health and safety organizer, an MTA staff member, is qualified to inspect buildings, issue professional work environment reports and interpret findings from other professionals. The field rep for the association will provide access to the appropriate form to access the health and safety organizer's services. Associations or their health and safety committees also have the right to conduct their own assessments, such as walk-through inspections and mold testing to document building conditions.
  - Under G.L. c. 66 S 10, the state public records law,, public school or university administrators must provide the right to inspect or provide copies of documents created by or sent to the school or campus within 10 work days. The employer may charge a reasonable fee for retrieving and copying the requested materials, and may charge 5 cents per page for copies of documents. The employer must give the requestor an estimate of the cost of producing the records within 10 days of receiving the request. Work with your MTA field representative.
  - Employees are protected against retaliation for concerted activity under the law.
- Legal consultations are available to each local through MTA grants.
- Members injured on the job are eligible to receive MTA legal representation in appealing a denial of workers' compensation benefits.

RESOURCES

The MTA EH&S Resource webpage has links to information on: the mental health crisis in schools, collective bargaining for health and safety, public health and safety rights, information on how health and safety committees work best, organizing a health and safety committee, OSHA rights enforced by the state Department of Labor Standards and an MTA presentation on public sector OSHA rights.

The New Jersey Education Association has prepared a document outlining the different types of health and safety committees. In addition, a fact sheet is available on the roles of health and safety committees. The New Jersey association also has compiled a 10 Steps to School Health and Safety document.

Collective Bargaining for Health and Safety is a handbook published by the University of California at Berkeley that prepares local unions for bargaining, summarizes the legal rights of workers' unions, and discusses hazards, remediation options and protective measures.

To file a request for health and safety testing, the president of the local and the field representative organizer may complete a Request for Services form and apply for a grant.

Department of Labor Standards OSHA Enforcement

THE MASSACHUSETTS STATE PLAN

The Massachusetts Department of Labor Standards is responsible for the implementation of the Massachusetts State Plan for Workplace Safety and Health Programs. This plan covers all state and local government workers. The initial approval took place on Aug. 18, 2022. The law requires all public sector employers to implement methods of reducing work-related injuries and illnesses that meet the minimum requirements provided under the federal Occupational Safety and Health Act of 1970. Employers are required to provide procedures, equipment and training to prevent work-related injuries and illnesses.
OSHA regulations that apply to schools include, but are not limited to:

General Duty Clause: "Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

To cite this section (Section 5a1), OSHA must prove that:
1. The employer failed to keep the workplace free of a hazard to which its employees were exposed.
2. The cited hazard was recognized by the employer, the employer's industry, or common sense.
3. The hazard was causing or likely to cause death or serious physical harm.
4. A feasible and practical method to correct the risk was available.

An assault by a student on a school or university employee, under certain conditions, may be covered by the General Duty Clause.

School custodians
Topics covered by OSHA include: electrical, emergency egress, fire prevention, ladders, shelves, slip and trip prevention and asbestos material.

Kitchen and cafeteria workers
Topics covered are: deli slicers, dough mixers, electrical, emergency egress, fans and temporary cooling, fire prevention, hazardous chemicals, knife safety, lockout tagout, personal protective equipment, shelves, sink disposal, slip trip prevention, walk-in refrigerator and training.
Employees who have OSHA training requirements in school include: teachers and Education Support Professionals; workers in athletics and the cafeteria, crossing guards, workers in facilities maintenance, electricians, custodians, nurses, workers in the theater and art departments. Proof of attendance is required.

DLS has developed checklists with the OSHA regulation noted.

Employee injury reporting requirements include: fatal or catastrophic incidents, workers' compensation incidents, Near Miss of First Aid Incidents, OSHA 300 logs. The OSHA 300 log is a form used by employers to record work-related injuries and illnesses. It is part of OSHA's recordkeeping requirements for workplaces with more than 10 employees, helping to track and maintain safety standards. However, education (NAICS codes 6111 to 6116) and educational support (NAICS code 6117) are exempt from the OSHA 300 reporting requirement. An example would be if a school district subcontracts a transportation system to run its school buses. An injury to such a bus driver is a required OSHA 300 log entry, while an injury to a teacher or

instructional assistant in the same district is not. The subcontractor is responsible for logging the bus driver's injury.

Per 29 CFR Part 1904, all employers shall report work-related injuries and illnesses that result in an employee's fatality, amputation, loss of an eye or in-patient hospitalization to DLS within eight hours.

DLS has the authority to conduct inspections of workplaces during normal work hours. Employer and employee representatives may accompany the DLS inspector.

A brief summary of the Massachusetts State Plan is included in the Code of Federal Regulations at 29 CFR 1952.29, Mass. Gen. Laws ch. 149 section 6½ and 454 Code of Massachusetts Regulations section 25.00 et seq. OSHA retains the authority to monitor the State Plan under Section 18(f) of the OSHA Act.

ENFORCEMENT

The DLS may issue a written warning which contains an "order to correct" when an inspection reveals a condition that could cause a work-related injury or illness. DLS may issue a civil citation with civil penalty in circumstances when the employer repeatedly allows an unsafe condition to occur, the condition has already caused a serious work-related injury, or if the employer has ignored a previous written warning. A state or local government employer may contest a civil citation, penalty or abatement period at an informal conference and administrative hearing.

Public employees or representatives (their unions) may file a complaint about safety and health conditions at their workplace by contacting DLS at 508-616-0461 or by emailing safepublicworkplace@state.ma.us.

See this DLS worksheet for preventing employee injury to student violence in K-12 schools and also Elements of a Violence Prevention Program in K12 Schools.

Ventilation and Air Quality

The MTA believes that staff and students deserve to be in a healthy and safe learning environment. The MTA believes that measures should be taken to guarantee that physical conditions of buildings are maintained so as to conform to the highest possible standards for health and safety, in full compliance with all building codes and safety regulations of the state.

The MTA urges that school committees and boards of trustees must improve school mechanical ventilation systems to assure that school spaces' air quality is sufficient to diminish as much as possible the risk of airborne infections from indoor pathogen from any source, (viral, bacterial and molds), and bring them in line with best practices and current scientific recommendations. As of 2022, this would require mechanical ventilation systems (Heating Ventilation and Air Conditioning) to provide a minimum of 5 air changes per hour in each classroom — based on supplied outside clean air. The MTA further urges that school committees provide for safe usage, proper storage and transfer and disposal of all toxic and/or hazardous substances used in school buildings and on school grounds. The MTA strongly supports the enforcement of the Occupational Safety and Health Act on behalf of all employees in the public sector. The MTA believes that all educational facilities must be safe from all environmental and chemical hazards, including lead from water pipe systems, asbestos, and PCBs. Physical hazards such as inadequate ventilation, inadequate climate control, particulate pollution, mold and wet environments should also be addressed to achieve adequate air quality in classroom environments.

Local safety committees can consult the links listed in this manual that address methods to request that school administration and board of trustees adopt the regulatory policies that currently address air quality, as established by OSHA, the EPA and DLS. Other links identify accepted ventilation and air-quality guidelines from the American Society of Heating, Refrigerating and Air-Conditioning Engineers and mold recommendations from the New Jersey Education Association.

It is strongly recommended that safety committees coordinate ventilation and air quality improvement demands with MTA Field Representatives.

RESOURCES

This document provides guidance when making a risk assessment of the HVAC systems ability to diminishing COVID and other virus risk through ventilation:

Harvard Healthy Schools Ventilation Guide

Proven Strategies to Improve Indoor Air Quality in Schools, Environmental Protection Agency.

EPA Ventilation Checklist.

Air Cleaner Recommendations.

EPA Webinars on IAQ in Schools.

EPA IAQ Framework for Success.

ASHRAE Recommendations for Reducing Airborne Exposures, American Society of Heating, Refrigeration and Air Conditioning Engineers.

Indoor Air Quality and Ventilation in America's K-12 Schools, U.S. Department of Education.

How to Evaluate Building Ventilation Using Carbon Dioxide Monitors, NEA.

C-6 Healthy and Safe Schools

C-7 School Facilities: Design, Construction and Function

Understanding Mold Investigations and Interpreting Environmental Reports

There are no Massachusetts or federal standards for acceptable levels of indoor mold spores. Therefore, all evidence gathered by an assessor is important and taken into consideration. Evidence includes, but is not limited to: visible mold growth, the detection and quantities of mold species on surface samples, the number of spores and types of species detected in air samples, dank or moldy odors, moisture readings, relative humidity levels, evidence of water stains on ceilings and walls, efflorescence staining, thermal imaging evidence and occupants' health complaints.

If visible mold is observed, along with other evidence such as dank or moldy odors, high levels of humidity or elevated moisture, it's often not necessary to test. Professional judgment is important. But harmful mold spores can be invisible to the eye and mycotoxins and mold hidden behind materials detected by instruments during the testing process provide added information. Testing surfaces also can verify if what appears to be visible mold is actually staining, dirt or grime. Post-remediation surface testing is also useful to determine whether remediation has effectively removed or reduced spores.

When samples are taken, a professional assessment should include air and surface samples at each sample site. The combination of air and surface samples gives a broader view of the level and species in the air at the time, or settled out over time on surfaces. Air samples are a snapshot of only 5 to 10 minutes. The assessor should take an outside air sample as a comparative control sample. Follow American Conference of Governmental Industrial Hygienists (ACGIH) and American Industrial Hygiene Association testing protocols. Surface samples indicate spores that were in the air and settled out onto surfaces over time. Surface sampling gives some history of the level of spores over time in a space. Post-remediation testing is generally useful. The lab used by the assessor should be a third-party licensed laboratory. Look to see if the lab is accredited by the AIHA. Assessors should follow ACGIH and AIHA testing protocols.

A poorly functioning HVAC system may not filter out particulates, including mold, from the environment. Carbon dioxide levels in an occupied space provide information on the performance of a HVAC system. A walk-through of the building, and visual inspection of the condition of the roof and moisture-level readings in the slab, are also useful. Photos taken by occupants of visible mold and moisture events are powerful tools and informative to the assessor. Moisture mapping is commonly used on surfaces in the building to help identify the source of moisture.

When deploying methods to interpret air sample findings, and determine if mold is growing inside, take several factors into consideration.

One common industry practice is to evaluate the quantity of indoor air levels often in spores per cubic meter (spores/m3) and species detected, and compare it to the outdoor quantities of spores and types of species. For air samples, if there is a higher count of spores/meter3 of a given species present inside, and a lower count outside, then growth and amplification may likely be occurring, and further evaluation and perhaps sanitization or remediation is recommended. If there is a different species present on the inside, and not found outdoors, then growth and amplification may also be occurring.

In addition, inside total spore counts are considered independently when determining the extent of mold growth. An industry standard that MTA uses is anything >500 spores/m3 is an

action level. Many professionals consider < 500 total spores/m3 normal and "no action needed," while 500 – 999 spores/m3 indicates intermediate levels and remediation is needed, and >1,000 spores/m3 is high and a remediation is required.

Mold species also have different characteristics. Some are more toxic at lower levels. For instance, many professionals believe a count of 48 spores/m3 of Stachypotrys or Chaetomium in air samples is unusually high because these species are not usually airborne. Their presence on surfaces is also a health concern and an indication of continuous wet surfaces and a required remediation. Always ask for the actual lab report and don't settle for the consultant entering the data from the report into an Excel format.

You have a right to the original lab report under the law. Some labs (ex., Eurofins) also include what's called a "mold score." A mold score is a rating assigned by the lab, rated from 100 to 300. A rating of less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate probability of indoor fungal growth.

When interpreting surface sample findings, mold growth is ranked into five categories, from <1+ to 4+. Less than 1+ is evidence of very light growth observed on the sample as indicated by spores of one type seen with underlying mycelial and/or with their sporulating structures found in less than10 percent of the microscopic fields examined. Plus-1 is evidence of light mold growth indicated by spores of one type seen with underlying mycelial and/or sporulating structures found in 10 to 25 percent of the microscopic fields examined.

Normal trappings are made when the mix of spore types is present with the same general distribution as is usually found outdoors.

Hyphae are composed of hypha, which are long filamentous branches found in fungi and bacteria. Hyphae are important structures required for growth in species, and together are referred to as mycelium. Hyphae indicate active mold growth is present.

High levels of relative humidity are evidence of a problem increasing the probability of mold growth in a building. High levels of humidity are a breeding ground for mold growth. The AIHA recommends between 40 percent and 60 percent relative humidity. A poor air exchange in spaces also supports an environment for mold growth. High levels of carbon dioxide indicate stale air, which may contain particulates, including mold, because the particulates in the air are not exhausted from the space, and fresh air is not entering the space to replace it adequately. This gives the space the opportunity to accumulate elevated levels of mold and moisture. The Massachusetts Department of Public Health recommends measurements no greater than 800 parts per million (ppm) of CO2 in a fully occupied space. In an unoccupied space, readings should be much lower, closer to outside levels. When reviewing consultants CO2 measurements, it's important to note if the room was fully occupied or not.

Of utmost importance, identify the location of mold growth and the source of moisture in the recommendations section of an environmental report. The report should make recommendations to eliminate moisture from entering the indoor environment.

The MTA recommends that remediators follow the Institute of Inspection, Cleaning and Restoration Certification (ICRC R520) guidelines for content, structural and systems remediation. Scott Fulmer, the MTA health and safety organizer, also is available to help. He can be reached at sfulmer@massteacher.org or at 617-878-8330.

GUIDANCE DOCUMENTS

The Industrial Hygienist Guide to IAQ Investigations, American Industrial Hygiene Association.

This booklet provides guidance that states, among other things, that comparing the type and level of spores inside to those outside is an accepted method of determining if there is mold growing independently inside. The American Conference of Governmental Industrial Hygienists**,** Bioaerosols Assessment and Control indicates that an exposure may be considered unusual when indoor concentrations and significantly higher than those outdoors, or when the types of mold spores detected indoors vs. outdoors differ markedly.

Enzcycle Lab, LLC Interpretation of Test Results. This publication provides methods of assessing indoor air quality and its effects on building occupants. It includes a literature review of indoor mold spores and proposes action levels for mold colony forming units and guidance for levels of mold spores per cubic meter (mold/m3), provided by the American Conference of Governmental Industrial Hygienists (Air Sampling Instruments for Evaluation of Atmospheric Contaminants, 1995). Guidance on reading and interpreting mold reports also is provided.

IICRC R520-2015 Reference Guide For Professional Mold Remediation, third edition**.** This guide is intended to provide information about the remediation of mold-contaminated structures, systems and contents and to assist individuals and entities working in mold remediation to establish and maintain their professional competence. The book can be purchased online.

This link is one in a series of informational fact sheets highlighting OSHA programs, policies or Standards.

This NIEH webpage may be the first government agency to list “immune effects” in the list of health effects of mold.

Health and Safety Manual, pages 57-61, New Jersey Education Association.

Drying Out A Wet Concrete Slab

Many school buildings are built close to wetlands with a high water table. The design of school buildings also often features sections built below grade. Schools sometimes don't have basements or crawl spaces, so they are built on a concrete slab. Ideally, before the concrete is poured a moisture barrier is installed, often made with large sheets of heavy plastic polyurithane. Sometimes, in order to cut costs, the barrier isn't installed. Or it wasn't required by code when the building was constructed, or it rips. The water table can rise or fall depending on the season or a rain event. Under the right combination of factors, water will infiltrate the slab. Signs of moisture under the slab include bowed floor tiles, mastic staining due to moisture seeping out the perimeter of tiles, a slick moist surface, especially during the hot summer and high-humidity periods, discoloration, cracking and musty smells. The following are a list of ideas about how to dry it out:

MOISTURE READINGS

Professionals should provide testing for moisture to determine intervention strategies. A variety of technologies are used to test a concrete slab for interventions. A common method is the calcium chloride test (ASTM 1869). This test indicates what moisture is coming out of the slab, but only at the surface. Tramex makes a meter that provides moisture readings at ¾ inches below the surface. A more extensive method of testing concrete for moisture uses Situ probes (ASTM F2170). Situ probes are inserted through small drilled holes into the slab to provide deeper relative humidity readings There are specific protocols for positioning the probes. A good source of information on testing moisture in concrete slabs is Howard Kanare's book, "Concrete Floors and Moisture," available from the Portland Cement Association.

MOVE WATER AWAY FROM THE BUILDING

When there is a heavy downpour, observe water movement and map out areas of concern. Test the efficiency of the drainage systems by saturating a drainage system using hoses and observing the path of water as it exits the building. Clear all roof drains and gutters of debris. Install gutters and downspouts with drains extended to surfaces that grade water away from the building. Install 3-inch hoses at the discharge point of downspouts and direct water away from the building on the surface or into a dry well or stormwater drain. Grade the surface on the perimeter of the building so water is directed away from the building foundation. Lay 3 to 4 feet of plastic sheet material or asphalt around the perimeter of the building, directing water away from the structure.

SUMP PUMPS

A professional analysis of the moisture under the slab will help determine where sump pumps should be located. Due to the large flow-rates being pumped, the physical size and weight of the pumps being installed becomes a major consideration. In order to facilitate ease of maintenance, the pumps provided are typically one of two different types: Floor mounted or submergible. Floor-mounted, self-priming pumps are the most common. They are popular with design engineers and facilities management because the entire pump assembly rests above the wet well in a clean, dry, accessible location. If a location is chosen that requires that the floor space above the wet well be used for other purposes, submersible pumps may be the best option. Submersible pumps rest at the bottom of the wet well on guide rails. High flow rates typically require large pumps with three-phase motors and starters. The relatively low-cost, variable-speed, control systems technology solves a number of common operational problems typically associated with large-scale project applications. These include an advantage of using

variable speed controls, reducing wet-well sizes, reducing the effects of large flow-surges, reducing the size of emergency standby generator systems, and reducing electrical costs associated with large-capacity pumping. More information can be found by reading Waterproof Magazine.

PERIMETER DRAINS

The installation of a perimeter drain can move water from the roof to a drainage system so water goes directly to the storm drain and away from the foundation. There are a variety of methods used to build a perimeter drain. The principal is to dig a trench around the slab, lay in stone, and add a perforated pipe. Sometimes sock slides are used over the pipe or cloth and wrapped around the pipe, then backfilled with a porous material. Run the pipe out to a drain at a lower elevation. There can be a direct connection between the roof water and the landscape drainage system. Water from a perimeter drain and downspouts can go directly into the stormdrains and away from the foundation, then run into the water collection site.

EPOXY COATINGS

The application of an epoxy coating is another approach to seal out moisture from an occupied space. A professional can help determine the effectiveness of this strategy. OSHA regulates the application and off-gassing protocols.

Integrated Pest Management

Vermin control falls under OSHA standard 1910 Subpart J - General Environmental Controls

1910.141(a)(5). It states: "Every enclosed workplace shall be so constructed, equipped, and maintained, so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program shall be instituted where their presence is detected."

In addition, a state IPM program is administered by the state Department of Agricultural Resources. The purpose of this program is to incentivize a reduction in the use of pesticides to control pests. Every school building must evaluate its pests and methods of control annually and report that plan to the department. Its website allows you to search for your school's plan.

What follows is an Integrated Pest Management checklist issued by the federal government. You can use this to guide your discussions and evaluate the employer's compliance with the law. A link at the end of this section provides concrete examples of how the law has been implemented in a school in Framingham.

This standard requires the employer to:

1. Construct a facility that is not open to infestation. This means windows and exterior doors must close and seal, all walls and ceilings must be completed and fully constructed, and all floors must be fully constructed and sealed.
2. The facility must be opened to regular inspections, which include vermin monitoring.
3. If vermin are on the premises, a program must be developed to eliminate these organisms to the best of the employer's or vendor's ability.
4. A monitoring program must be established for the sole purpose of identifying infestation and controlling any infesting organisms.
5. All other requirements of 1910.141 must be observed as a means to prevent further infestation.
6. Regular updates must be provided to employees with respect to vermin control, vermin monitoring and general facility maintenance.
7. If the source of the infestation is established, then this information must be forwarded to the affected employees or staff.

It is the responsibility of the employer to maintain a safe, clean and vermin-free facility.

RESOURCES

An Integrated Pest Management checklist.

Terms and conditions of employment, including the presence of pests in the workplace, are bargainable under MGL Chapter 150E.

A letter issued by the Framingham Teachers Association.

IPM Integrated Pest Management Kit For Building Managers | Mass.gov.

School Integrated Management Program Bid and Contract Guidance.

Heat and Cold

Unsafe temperatures (hot or cold) may violate DESE regulations, contract language around safe work environments and/or OSHA's General Duty Clause.

What follows are best practices for collecting temperature data. (This data can be used for organizing and publicity.)

1. Create an Excel spreadsheet with the identity of the building, room numbers, dates, at least two designated times that temperature is logged, and if possible, humidity levels. Keep collecting data for up to two weeks. Note if fans (freestanding and/or integrated into the HVAC system) are on, and whether windows are open.
2. Include data on outdoor temperature, for comparison.
3. Analyze data for patterns and check for HVAC issues if indoor temperatures are consistently higher than outdoors during hot weather, or if there are temperature variations in different parts of the building. This information can reveal if facilities have boiler or chiller failures.
4. Time-stamped photos of thermometers (ideally with humidity levels displayed) can be helpful for both enforcement and organizing.
5. Once the information is gathered, share it with the building occupants, health and safety committee and management (including the superintendent.)

The following sites provide evidence that high temperatures are a known health hazard:

- U.S. Centers for Disease Control and Prevention.
- Harvard T.H. Chan School of Public Health.
- OSHA.
- In addition, Massachusetts is developing a heat illness prevention standard that will be promulgated by the Department of Labor Standards and apply to public employees. The Department of Public Health is currently preparing the public with information. The Holyoke Public School District has an outline consistent with the Massachusetts plan.
- Recent model contract language was negotiated into the Malden collective bargaining agreement. It states: "The committee shall respond to any reports of classrooms with temperatures above 90 degrees immediately and change locations until temperature can be stabilized; for widespread issues, the superintendent shall be consulted to discuss dismissing school. In the event of a school dismissal, the committee shall dismiss school without penalty/loss of pay to workers. Bargaining unit workers shall have no loss of pay."
- New York has a new heat regulation, outlined by New York State United Teachers on this webpage.

RESOURCES

National Weather Service heat index.

Sample grievance language for high temperatures using generic health and safety provisions present in many locals' collective bargaining agreements.

DESE regulation 18.04(7)(a)4 on safe temperatures for special education programs.

Classroom temperature poster.

A Medium article on wet bulb temperature.

Room temperature recording sheet.

When is it too hot to go to school?, Washington Post.

It's Getting Hot in Here: Without Air Conditioning, Students and Staff Suffer, NEA Today.

Minimum winter classroom temperatures, DLS guidelines.

Heat illness prevention for employers.

Mental Health

Educator and student mental health are critically important issues.

Resources for employees who need to access mental health supports:

- Employee Assistance Program - Check with your district's human resources department. Many EAPs offer a number of free counseling sessions.
- Health insurance - Unions should consider the mental health coverage of their insurance when bargaining on health insurance. Laws around mental health parity require that insurance treat physical and mental health equally.
- MTA locals can offer a Virtual Behavioral Health Program through United Concierge Medicine (for a fee of $1.85 per member, per month), but the locals must cover it for all members.

Under state law, school districts are required to have Medical and Behavioral Emergency Response Plans, which cover responses to both physical and mental health emergencies (M.G.L. c. 69, §8A). Additionally, school districts are required to create School Plans for Mental Health Needs (M.G.L. c. 71, §37Q). The National Association of School Psychologists has a model for educators and school-based professionals to fulfill their role in crisis management called PREPaRE. The model can be used by local associations for bargaining conditions associated with the required Medical and Behavioral Emergency Response Plans.

RESOURCES

Well-Being for Life and Learning, University of Washington.

Well-Being for Students with Minoritized Identities, American Council on Education.

Five Things That Behavioral Specialists Want You to Know, NEA.

Educators Use Their Own Trauma to Support Students in Crisis, NEA.

Classroom Solutions to the Mental Health Crisis in our Schools, MTA.

Advocating for Change, Children's Mental Health Campaign.

Behavioral Health Integrated Resources for Children Project, BIRCh Project.

Microagressions

Infectious Diseases

A variety of infectious diseases can be spread in school settings, and can pose a hazard to employee health. Methods to help limit the spread of disease include hand washing, hand sanitizing when soap and water are not available, and cleaning and disinfecting. Vaccinations, for diseases for which they are available, also help reduce the spread and severity of symptoms of many infectious diseases. Your local public health department can be an important resource in the event of any disease outbreak.

PREVENTION STRATEGIES, BASED ON HOW DISEASES SPREAD

Airborne/droplet transmission - Transmission through the air, when one person exhales pathogens and another person inhales them. Especially prevalent for respiratory illnesses, including COVID-19.

- Indoor air quality, specifically air filtration, is a major factor in spread. The ideal filtration is MERV-13 or HEPA filters in the main HVAC system with 5 air changes per hour or better. Air purifiers and/or Corsi-Rosenthal boxes can help in rooms where HVAC systems cannot handle MERV-13 filters.
- Masks help. Masks are most effective as a source of control (if an ill person is wearing a mask, the mask filters the majority of pathogens before they reach other people) but are also effective as a preventive measure for healthy people. High-quality, filtering masks are much more effective than cloth masks. N95 or KN95 masks are the most effective, but can be uncomfortable or difficult to wear for some people.
- Staying home while symptomatic helps avoid transmitting an illness to other people.

Surface/Contact /Fomite transmission - Transmission via touching, either directly or on shared objects. This is a common source of transmission for many gastrointestinal illnesses.

- Hand washing and surface cleaning and disinfecting help.
- Masks and goggles or glasses may help, as they prevent a person from touching their eyes, nose and mouth accidentally after touching a contaminated surface.

EXAMPLES OF ILLNESSES COMMONLY SPREAD IN SCHOOLS

Viral:
- COVID-19 and other coronaviruses.
- Influenza.
- Norovirus.
- Hand, Foot and Mouth Disease.

Bacterial:
- Whooping Cough/Pertussis.
- Conjunctivitis.

Parasitic:

- Head lice.

CLEANING AND DISINFECTING

Cleaning and disinfecting high-touch surfaces can help limit the spread of germs. People using cleaning products should read and understand the Safety Data Sheet for each cleaning product they are using. EPA-approved, "green" cleaners are best. Let people in the area know what chemicals are being used in cleaning, so individuals with sensitivities can take precautions. Those using chemicals should be trained, and use appropriate personal protective equipment.

PPE

Personal protective equipment should be available for staff who are around sick or injured students or staff. At a minimum, the following should be available to nurses in ample supply:

- Gloves.
- Surgical/medical masks.
- Face shield and/or goggles.

REGULATIONS

Bloodborne Pathogens, OSHA standards.

Cleaning Industry, OSHA Standards.

RESOURCES

Ventilation in Schools and Childcare Programs, CDC.

When and how to clean a facility, CDC, Departments of Public Health.

Managing Infectious Diseases in Schools, American Academy of Pediatrics.

Products that Meet the Safer Choice Standard, EPA.

ASHRAE Standard 241: Control of Infectious Aerosols.

Helping Members Get Accommodations Due to Health and Safety Issues

The Americans with Disabilities Act requires employers to provide reasonable accommodations to individuals with disabilities, as long as these accommodations do not place an unreasonable hardship on the employer. The disability does not need to be permanent and accommodations for temporary impairments are covered, as long as the impairment is substantially severe. In addition to the federal ADA, state law prohibits discrimination on the basis of disability. The MTA will provide a disabled employee with legal counsel. The request for services can be made through the local president and field representative. It is best to start by reading Requesting Reasonable Accommodations bg the U.S. Equal Employment Opportunity Commission to help determine if an accommodation is reasonable and will be granted.

RESOURCES

Reasonable Accommodations in the Workplace, ADA National Network.

Employees' Practical Guide to Requesting and Negotiating Reasonable Accommodations under the Americans with Disabilities Act, Job Accommodation Network.

Accommodating Educators with Disabilities, Job Accommodation Network.

Mental Health Accommodations, Job Accommodation Network.

Supporting Employees with Mental Health and Cognitive Conditions While Teleworking, Job Accommodation Network.

3D Printer Safety

3D printers have been used in laboratories, shops and makerspaces across schools and college campuses.

3D printer hazards include, but are not limited to:

- Generation of ultrafine/nano-sized particles.
- Heat.
- Mechanical hazards from moving parts.
- High voltage.
- Ultraviolet light.
- Chemical vapors (including styrene, acrylonitrile or formaldehyde) depending on the media being used.

PRINTING MATERIALS

A variety of printing materials are available for use with 3D printers, each with its own inherent hazards. The most commonly used materials are polylactic acid, acrylonitrile butadiene styrene, polypropylene, polyethylene terephthalate glycol and nylon. In general, PLA, PP and PET-G are much safer to use than ABS and nylon.

Other printing materials used include metallic powders which generally are used to fabricate tools and machinery parts.

Please review product Safety Data Sheets for material-specific safety information before using anything in a 3D printer. SDSs can be found through the manufacturer's website.

3D Printer Safety Guidelines

The following is a list of safety precautions that need to be considered when using a 3D printer:

1. Whenever possible, purchase 3D printer models that are enclosed.
2. Purchase filament brand(s) specified by the printer manufacturer.
3. Whenever possible, purchase filaments with lower emissions.
4. Follow manufacturer instructions on use of the printer, including setting the nozzle and base plate temperatures at the lowest recommended settings to reduce potential emissions.
5. When 3D printers are running, users should not congregate around the printing operation to minimize the inhalation of particulates and exposure to chemical vapors.
6. Place 3D printers in areas with increased ventilation rates, such as labs and makerspaces.
7. Place 3D printers away from return air vents.
8. Do not allow eating, drinking, applying cosmetics, chewing gum, or handling contact lenses in rooms that contain 3D printing operations.
9. Wash hands thoroughly after working with 3D printers.
10. All work surfaces must be cleaned with a wet method. Sweeping and other dry methods can create airborne particles.
11. Clean the printer nozzle before each use. Clean the build plate after each use.

12. If you use a material other than PLA, ABS or nylon while printing, please conduct a risk assessment.
13. Anyone that works with a 3D printer should take a lab safety and or hazard communication training.

USE OF CORROSIVE BATHS

If the printing process includes use of a corrosive bath, the following rules must be followed:

1. Only use corrosive baths in a designated lab space. Under no circumstances should they be used in other areas.
2. Wear personal protective equipment including a lab coat or apron, chemical resistant gloves, and safety goggles when handling the chemical, placing an item in, or removing it from the bath.
3. Use tongs when placing an item in, or removing from, the bath.
4. Ensure the tank is properly labeled with the chemical name and associated hazards.
5. Ensure there is proper ventilation in the area where the bath is located.
6. Ensure there is an eyewash in the vicinity of the bath, in case of a splash.
7. Do not pour any chemical down the drain. All used chemicals must be disposed of as hazardous waste.

REFERENCE

The Rochester Institute of Technology's Environmental Health and Safety Department provides health and safety guidance to students and faculty on campus. Here is an online overview:

https://www.rit.edu/ehs/health-safety-overview.

Asbestos Laws and Regulations in Higher Ed and K-12

The EPA first banned asbestos as an air pollutant in 1971. The Asbestos Hazard Emergency Response Act required school districts to inspect all schools to determine where asbestos-containing building materials are located, to inspect and maintain asbestos-containing material in good condition and to keep records. School districts are required to conduct reinspections by outside firms every three years, to verify the location and condition of previously identified asbestos materials. Trained school personnel survey the asbestos-containing material every six months. Signed into law by President Reagan in 1986, the AHERA law was intended to protect students and staff in what were estimated to be 35,000 school buildings containing asbestos. In Massachusetts, the law is enforced by the DLS. The agency is available to take anonymous complaints and has the ability to issue fines for non compliance and answer questions. The federal EPA regulates asbestos in higher education through the Asbestos-Containing Toxic Substance Control Act regulation.

The local union's health & safety committee under MGL Ch 150E can file an information request for the original AHERA asbestos-management plan for each building of concern, which may date to the late 80s, any or all of the three-year reinspection reports, and any or all of the six-month surveillance reports. The original plan was intended to identify all asbestos-containing materials in the building. These materials should be abated, encapsulated or maintained. The three-year reinspection reports will explain whether any asbestos-containing building materials have been abated (removed) or encapsulated (covered). In addition, reports should be available on any abatement projects. Obtaining the AHERA reports is the first step. All AHERA reports from the reinspections and surveys should be on file in the main office of the school. If they aren't, or if the three-year reinspection reports or six-month surveillance reports are missing, there may be a violation of AHERA law.

Friable asbestos-containing building material should be abated because it can become airborne. Exposure to airborne asbestos can cause cancer. Friable asbestos-containing material is asbestos that can be crumbled, pulverized or reduced to powder under hand pressure. Non-friable asbestos materials, such as asbestos floor tiles, can become friable over time due to wear and constant cleaning. Nine-inch square floor tiles and the mastic that attach tiles to the floor often contain asbestos. Older pipe insulation, called thermal surface insulation, acoustical tiles (often honeycombed), and older ceiling tiles also often contain asbestos. This is NOT a complete list of potential locations for asbestos-containing materials in a building. Make sure to check the three-year AHERA plan to identify where the asbestos is located. There should be a "designated person" for AHERA in the district who can answer questions. Never touch suspect material that appears to be friable, such as torn thermal pipe insulation, because it can become airborne. Always notify an authority in the building, such as the principal or campus safety department, and report what you see. Ask them to follow up with you.

The EPA has posted its asbestos regulations online for reference.

Information on AHERA and the Massachusetts Asbestos Safety Program is available online for reference.

MTA Procedure for Requesting a Grant for Testing Services

Requests for sampling of indoor air quality and hazards in workplaces can be made by local presidents and field representatives by submitting a Request for Services grant form using the following procedure:

- A description of the potential hazard or health effect should be reported in writing to the local president.
- The president fills out a request for a health and safety services form, and submits it for approval to the field representative and the director of the Field and Organizing Division.
- Once approved, the form is forwarded to Scott Fulmer, organizer of health and safety.
- Fulmer will contact the local president and building rep to arrange a testing strategy.

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