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Submitted via Regulations.gov

David Keeling
Assistant Secretary of Labor for the Occupational Safety and Health Administration
United States Department of Labor
200 Constitution Avenue, NW
Washington, DC 20210

RE: OSHA–2021–0009; Post-Hearing Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings Proposed Rule

Dear Assistant Secretary Keeling:

We are writing on behalf of the 3 million members of the National Education Association (NEA) and the 50 million students we serve. **We welcome the opportunity to provide post-hearing comments on OSHA’s proposed rule for Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings. Heat-related injuries and deaths are preventable, and NEA strongly supports OSHA’s proposed heat standard.**

NEA, the largest labor union in the country, represents members who work in and around 100,000 public school buildings. Our members include teachers, paraeducators, nurses, bus drivers, security staff, mechanics, custodians, food service workers, HVAC technicians, office professionals, and many other types of educators. Most NEA members work in public schools and institutions of higher education in states with State Plans that cover state and local government employees. Our members also include educators working in private K-12 and higher education institutions and other public employees. We are deeply committed to the health and safety of our members, the students they serve, and the communities in which they live and work. We urge OSHA to consider our recommendations when finalizing the proposed heat standard.

Extreme heat in schools is a widely felt issue among all educators. The NEA, its affiliates, and its members have a longstanding concern with extreme heat in schools, school grounds, school buses, and other education-related work settings.^{1,2} NEA has advocated for years, alongside other unions and

¹ Tim Walker, “It’s Getting Hot in Here: Without Air Conditioning, Students and Staff Suffer,” *NEA Today* (June 9, 2023). Retrieved from <https://www.nea.org/nea-today/all-news-articles/its-getting-hot-here-without-air-conditioning-students-and-staff-suffer>

² National Education Association, “Addressing Indoor Air Quality in Schools,” *NEA Today* (January 2023). Retrieved from <https://www.nea.org/resource-library/addressing-indoor-air-quality-schools>

public health organizations, for laws, regulations, and policies to address excessive heat exposure in education settings.^{3, 4, 5}

State Plans with Heat Standards

When State Plans implement their own state regulations for hazards not yet covered by OSHA, the resulting standards often serve as crucial learning opportunities to inform federal standards. State Plans provide an environment for experimenting with and refining safety and health regulations, demonstrating the feasibility of employer compliance, and testing effectiveness in protecting workers and enforceability by occupational safety and health agencies. Over the past 50 years, OSHA has often been the beneficiary of these successful pilots. OSHA’s Bloodborne Pathogens (BBP) standard, issued in response to the HIV/AIDS crisis, is an excellent case in point. Before OSHA issued the BBP standard, which included needlestick prevention elements, in 2001, Cal/OSHA issued its first standard in August 1998. A year later, Maryland and several other states promulgated their own standards. On November 6, 2000, Congress passed the Needlestick Safety and Prevention Act. On January 18, 2001, OSHA published the revised Bloodborne Pathogens standard to include requirements of the Needlestick Safety and Prevention Act. This experience aided in the development of OSHA’s standard, which has contributed to a substantial decline in healthcare worker exposure to bloodborne pathogens like HIV and Hepatitis B and C.⁶

NEA has analyzed the heat standards that were promulgated by State Plans. NEA encourages OSHA to focus on the two states with the most experience with a workplace heat standard, California (20 years) and Washington (17 years). Over the years since promulgation, employers have developed successful programs, demonstrating that their standards are feasible, improve the protection of workers, and are enforceable. The two state standards vary in detail but use a similar prescriptive approach, permitting some employer flexibility. Both state standards require employers to develop and implement a written site-specific heat prevention plan at their worksite. For indoor heat elements, we urge OSHA to consider the heat standards developed by Minnesota, Maryland, and Oregon.^{7,8} NEA urges OSHA to adopt the standards' most protective and effective elements.

We oppose the Nevada Heat Standard's performance-based approach. We believe it will be difficult for employers to apply and lead to weak worker protections.^{9,10} Recently, the Economic Policy Institute analyzed the human and economic costs of extreme heat for the economy and states. It critiqued the Nevada Heat Standard as an untested state standard with no temperature triggers. Worker advocates characterized the Nevada standard as “almost as bad as no heat standard.”¹¹ In Jordan Barab’s oral

³ See ANPRM response comments submitted by the Connecticut Education Association (January 2022). Retrieved from <https://www.regulations.gov/comment/OSHA-2021-0009-0641>

⁴ See Stakeholder Meeting response comments submitted by the National Education Association (August 2022). Retrieved from <https://www.regulations.gov/comment/OSHA-2022-0006-0230>

⁵ See Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings Proposed Rule comments submitted by the National Education Association (January 2025). Retrieved from <https://www.regulations.gov/comment/OSHA-2021-0009-25378>

⁶ David Michaels and Gregory Wagner, “Occupational Safety and Health Administration (OSHA) and Worker Safety During the COVID-19 Pandemic,” *JAMA*, 2020;324(14):1389–1390. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/32936212/>

⁷ Oregon OSHA, “Frequently Asked Questions (FAQs): Heat Illness Prevention.” Retrieved from <https://osha.oregon.gov/OSHA/Pubs/5866.pdf>

⁸ Minnesota Department of Labor and Industry, “Occupational Safety and Health Division: HEAT STRESS,” Retrieved from https://mn.gov/admin/assets/heat_stress_guide_tcm36-207189.pdf

⁹ Ariel Whitenberg, “Employers to OSHA: Don’t Kill the heat rule. Weaken it,” *Politico Pro* (June 30, 2025). Retrieved from <https://subscriber.politicopro.com/article/eenews/2025/06/30/employers-to-osha-dont-kill-the-heat-rule-weaken-it-00427906>

¹⁰ Alan Halay, “No care for us feeling sick: Las Vegas company cited under new Nevada heat rule,” *Las Vegas Review Journal* (August 8, 2025). Retrieved from <https://www.reviewjournal.com/news/politics-and-government/nevada/rtc-security-company-among-2-cited-under-new-nevada-heat-regulation-3411048/>

¹¹ Nina Mast and Emma Cohn, “Extreme heat is deadly for workers and costly for the economy,” *Economic Policy Institute, Working Economics Blog* (August 27, 2025). Retrieved from <https://www.epi.org/blog/extreme-heat-is-deadly-for-workers-and-costly-for-the-economy-states-cant-afford-to-wait-to-pass-protective-heat-standards/>

testimony, he highlights several flaws in the Nevada Heat Standard. We share similar concerns, such as the standard's lack of heat triggers and its complexity, both of which present compliance challenges for employers and hinder enforcement.¹²

Schools in Urban Heat Islands¹³

According to the U.S. Environmental Protection Agency (EPA), the urban heat island effect is a measurable increase in ambient air temperatures resulting from the replacement of vegetation with buildings, roads, and other heat-absorbing materials.¹⁴ A recent Climate Central analysis estimated the exposure of K-12 public schools and students to urban heat islands within the largest cities in the United States.¹⁵ The Climate Central analysis demonstrated that most students (76 percent, or 4,680,558) attend school in extreme urban heat zones, or neighborhoods where the built environment adds at least 8°F of additional heat. Studies show that urban heat islands are more likely to be found in predominantly lower-income and communities of color.¹⁶ To make matters worse, school districts serving high proportions of low-income students struggle disproportionately with heating, ventilation, and air conditioning (HVAC) system inadequacies.¹⁷ Educators working in those urban schools feel the impact of rising temperatures on their health and productivity at work. It adversely impacts their ability to fulfill their responsibility of providing high-quality education and care to students and fostering a safe and supportive environment. Scientific literature indicates that extreme temperatures have a negative impact on student learning, confirming the axiom that students' learning conditions are educators' working conditions.

A UCLA policy brief illustrates the concept of urban heat islands in a California playground (Figure 1).¹⁸ Educators who supervise recess or work near these areas are exposed to extreme heat. The policy brief includes a list of effective mitigation measures.

Engineering Controls

- Improve school building envelopes (e.g., insulation, double-paned windows, window shading, and air sealing).
- Install cool roofs.
- Plant trees to provide shade outdoors for the buildings and play areas.
- Install other outdoor shade structures, such as shade sails over playground equipment, outdoor dining, and other common outdoor areas.
- Decrease asphalt cover and increase permeable surfaces and natural ground cover, like gardens.

¹² See OSHA Heat Injury and Illness Prevention Hearing Transcripts testimony presented by Jordan Barab, pp 22-26 (June 27, 2025). Retrieved from [OSHA-2021-0009-25560 attachment 9 \(1\).pdf](#)

¹³ Calvin Macatantan, "Urban Heat Zones Making Schools Even Hotter," *NEA Today* (August 28, 2025). Retrieved from <https://www.nea.org/nea-today/all-news-articles/urban-heat-zones-making-schools-even-hotter>

¹⁴ U.S. Environmental Protection Agency, "Heat Island Effect Glossary," (2009). Retrieved from https://sor.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/

¹⁵ Climate Central, "Public Schools in Urban Heat Islands," (June 25, 2025). Retrieved from <https://www.climatecentral.org/climate-matters/schools-and-urban-heat-2025>

¹⁶ Angel Hsu, Glenn Sheriff, Tirthankar Chakraborty, and Diego Manya, "Disproportionate Exposure to Urban Heat Island Intensity Across Major U.S. Cities," *Nature Communications*, 12, 2721 (May 21, 2021). Retrieved from <https://www.nature.com/articles/s41467-021-22799-5>

¹⁷ Debbie Alexander and Laurie Lewis, "Condition of America's Public-School Facilities: 2012-13. First Look," National Center for Education Statistics, NCES 2014-022 (March 2014). Retrieved from nces.ed.gov/pubs2014/2014022.pdf

¹⁸ UCLA Luskin Center for Innovation, "Protecting California's with Heat-Resilient Schools," (May 2023). Retrieved from <https://innovation.luskin.ucla.edu/wp-content/uploads/2023/05/Protecting-Californians-with-Heat-Resilient-Schools.pdf>

- Install or improve cooling equipment (i.e., air conditioners or heat pumps), prioritizing energy-efficient equipment whenever possible.

Administrative Controls

- During high-heat periods, modify activities, move inside to suitably cooled facilities, or reschedule outdoor activities.

Extreme Heat in Schools

A) Aging Infrastructure

The average U.S. public school was built nearly half a century ago.¹⁹ These facilities were not built to function in our present-day climate.²⁰ Schools are not meeting healthy ventilation levels; in fact, a study found that most schools did not meet the minimum ventilation rates set by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). In a recent NEA survey, ventilation remained a key area that needed to be addressed in schools, with 78 percent of members feeling their school’s ventilation system provided them with inadequate protection.^{21, 22} From September 2024 to January 2025, NEA collected over 2,900 member stories on excessive heat, all of which shared a similar theme: the need for climate control.²³

B) Funding

When federal or state agencies give clear requirements, school districts have the instructions to comply. Without specifications, employers can implement weak or inconsistent protections. A U.S. Energy Information Administration report states that “education buildings were more likely than all others to make HVAC changes because of the pandemic. One respondent noted mandates on HVAC settings related to ventilation, and other respondents mentioned health and safety reasons for making HVAC changes.”²⁴

When the necessary funding and requirements are available, schools can significantly improve working conditions, as they have with the American Rescue Plan (ARP) funds. Data on district spending plans showed that more than 70 percent of districts planned facility upgrades, which accounted for more than 17 percent of federal pandemic relief funds for education.²⁵ A Center for Green Schools analysis reported that, based on the spending plans of 5,004 school districts for the American Rescue Plan and

¹⁹ National Center for Education Statistics, “Nearly One-Third of Public Schools Have One or More Portable Buildings in Use,” (February 15, 2024). Retrieved from [https://nces.ed.gov/whatsnew/press_releases/2_15_2024.asp#:~:text=The%](https://nces.ed.gov/whatsnew/press_releases/2_15_2024.asp#:~:text=The%20)

²⁰ Climate Central, “Cooling Schools in a Hotter Climate,” (August 2024). Retrieved from <https://www.climatecentral.org/climate-matters/cooling-schools-in-hotter-climate>

²¹ Eric Jotkoff, “NEA Survey: Massive Staff Shortages in Schools Leading to Educator Burnout; Alarming Number of Educators Indicating They Plan to Leave the Profession,” *NEA Today* (February 1, 2022). Retrieved from <https://www.nea.org/about-nea/media-center/press-releases/nea-survey-massive-staff-shortages-schools-leading-educator>

²² Mendell M.J., et al, “Association of Classroom Ventilation with Reduced Illness Absence: A Prospective Study in California Elementary Schools,” *Indoor Air* 23(6):515–528 (2013). Retrieved from <https://api.istex.fr/ark:/67375/WNG-2T0S5BV0-W/fulltext.pdf>

²³ National Education Association, “OSHA Heat Surveys,” (2024).

²⁴ U.S. Energy Information Administration, “Energy-Related Changes in Education Buildings Following the COVID Pandemic,” (December 2024). Retrieved from

https://www.eia.gov/consumption/commercial/reports/2024/covid_education/pdf/Changes%20in%20Education%20Buildings.pdf

²⁵ National Conference of State Legislatures Website, “How Schools Are Spending Unprecedented Education Relief Funding,” Retrieved from <https://www.ncsl.org/state-legislatures-news/details/how-schools-are-spending-unprecedented-education-relief-funding>

Elementary and Secondary School Emergency Relief funds, upgrades to air filtration/HVAC were the second-highest category for district planned spending at \$5.5 billion, just behind hiring school staff.²⁶

In response to the most significant federal investment in public education in history, NEA and state affiliates funded new positions, School Rescue Fund Coordinators, to coordinate the allocation of funds to the right priorities and recovery initiatives within the state. NEA state affiliates collaborated with school administrators to coordinate the upgrades of HVAC systems to improve ventilation.

- Virginia allocated \$250 million in federal ARP funding for necessary ventilation upgrades, which will be matched by local ARP or other relief funding. A minimum of \$200,000 was assigned to each school district.
- Battle Creek, Michigan, utilized \$24 million in funds to upgrade and install HVAC and ventilation equipment in six of the district's schools.
- Bloomfield, New Jersey, allocated funds to upgrade and install HVAC units in buildings, prioritizing buildings over 100 years old.
- Albuquerque, New Mexico, public schools replaced all HVAC units in 35 schools with new refrigerated air systems, which cost over \$16 million.
- Milford, Connecticut, invested \$1 million to install new school HVAC systems.

C) Assessments

The fact that test scores go down as temperatures go up calls into question the reliability, validity, and comparability of the results of the large-scale assessments school districts rely on to access federal funds and to determine student achievement, educator effectiveness, whether opportunity gaps are closing, how to drive improvements to instructional approaches and educational opportunities for students, and/or school quality.²⁷ For example, a study investigated the impact of changing weather conditions on standardized tests in Math and English.²⁸ The study showed that increasing average temperature and particularly hot days reduce student learning and achievement. The study found that achievement decreases as temperatures rise and that each additional day above 100 °F decreases student achievement. Another study revealed that students scored increasingly worse on standardized tests each school day when the temperature rose above 80 °F.^{29,30}

D) Student Absenteeism

High student absenteeism may result in less school funding, which in turn results in worse learning and working conditions. A white paper found that unsatisfactory or nonfunctional HVAC systems lead

²⁶ Neil Sauter and Anisa Heming, "School Facilities Funding in the Pandemic," (November 2022). Retrieved from https://www.usgbc.org/sites/default/files/202211/School_Facilities_Funding_Pandemic_ESSER_III_Planned_Spending.pdf

²⁷ The NEA maintains that no one measure, such as standardized test scores, should determine a student, educator, or school's performance. Instead, a diverse array of indicators and assessment strategies should be used to make informed decisions about instructional strategies, understand school quality, and drive school improvement. This should include increasing the use and frequency of low stakes, curriculum-embedded, educator created, and authentic assessments. To learn more about the NEA's vision for fairer, more well-rounded assessment systems, please see [NEA's Principles for the Future of Assessment](#).

²⁸ Travis Roach and Jacob Whitney, "Heat and Learning in Elementary and Middle School," *Education Economics*, 30(1), (May 14, 2020). Retrieved from <https://doi.org/10.1080/09645292.2021.1931815>

²⁹ R. Jisung Park, et al., "Learning is inhibited by heat exposure, both internationally and within the United States," *Nature Human Behavior*, (5)19–27, October 5, 2020. Retrieved from <https://doi.org/10.1038/s41562-020-00959-9>

³⁰ Sofia Postell, Megan Kufield, Susan Kowaski, and Jazmin Issacs, "Hot Test days, Lower Math Scores: How Heat Affects Student Achievement, NWEA (October 25, 2025). Retrieved from https://www.nwea.org/uploads/hot-test-days-lower-math-scores-how-heat-affects-student-achievement_NWEA_researchBrief.pdf

to a two to three percent increase in student absenteeism rates.³¹ Unsatisfactory or non-functional HVAC systems increase student suspension by over six percent. Extreme heat can also significantly exacerbate asthma symptoms due to increased humidity, trapped pollutants, and poor air quality. More than 10.5 million school days are lost every year due to asthma, making it the leading cause of school absenteeism.³² In 2013, 49 percent of students ages 5 to 17 missed one or more school days due to their asthma.³³ This raises serious concerns because many states use the Average Daily Attendance (ADA). ADA is the count used to apportion funding for schools and is based not on the number of students enrolled but rather on the days of school attended by those students.³⁴

E) Current and Future Ventilation Demand

Although federal funding during the pandemic was historic and aided many public schools, so much work still needs to be done. For example, according to Philadelphia School District officials, 57 percent of Philadelphia schools don't have adequate cooling.³⁵ One in five schools in California has no air conditioning, and another 10 percent require repairs.³⁶

Climate Central utilized historical temperature data to analyze the change in cooling degree days (CDD), a measure of cooling demand, during the back-to-school period from 1970 to 2023 in 240 cities across the United States. On average, 231 cities experienced 32 percent higher cooling demand during the back-to-school period than in the early 1970s. Back-to-school CDD has more than doubled since 1970 in 10 cities analyzed.³⁷ With increasing cooling demands, it's essential to recognize that simple measures, such as opening doors or windows, may not be effective in schools due to the high occupancy and security protocols.³⁸ In addition to the school districts that need to repair, update, or replace their HVAC systems, the Center for Climate Integrity estimated that 13,700 schools that did not need cooling systems in 1970 have installed or will need to install HVAC systems by 2025.³⁹

Due to the number of school buildings that needed improvement on their HVAC systems before the COVID-19 pandemic, the rising temperatures, and future cooling demand, NEA believes OSHA's estimate that 15 percent of school employees may work in inadequately ventilated buildings is an underestimate.

Monitoring Temperatures

For years, schools have used the heat index and the wet-bulb globe temperature (WBGT) to measure heat exposure during student activities. School administrators incorporate these methods to create plans and policies to minimize heat exposure. After NEA reviewed some school heat exposure plans, we

³¹ Lucy Sorensen, Moontae Hwang, and Marzuka Ahmad Radia, "The Effects of School Building HVAC Systems Conditions on student academic and behavioral outcomes," *Brown EdWorking Paper* No. 24-1093 (November 2024). Retrieved from <https://files.eric.ed.gov/fulltext/ED672375.pdf>

³² National Education Association, "Healthy Classroom Air, Healthy Students," (October 7, 2025). Retrieved from <https://www.nea.org/resource-library/healthy-classroom-air-healthy-students>

³³ *Ibid.*

³⁴ ED Data, Education Data Partnership, "How Students are Counted," (August 21, 2024). Retrieved from <https://www.ed-data.org/article/How-Students-Are-Counted>

³⁵ Christina Ruffini, "Without Proper Air Conditioning, Many U.S. Schools Forced to Close Amid Scorching Heat," CBS Evening News, (September 6, 2023). Retrieved from <https://www.cbsnews.com/news/schools-close-air-conditioning-high-temperatures/>

³⁶ Alejandra Reyes-Veladre, "Vomiting, Cramps, and Lethargy: As Heat Rises, California Kids are Sweltering in Schools with No Air," Cal Matters (October 1, 2024). Retrieved from <https://calmatters.org/environment/climate-change/2024/10/california-schools-air-conditioning-heatwave-climate/>

³⁷ Climate Central, "Hotter Climate, Higher Cooling Demand," (July 19, 2023) Retrieved from <https://www.climatecentral.org/climate-matters/hotter-climate-higher-cooling-demand-2023>

³⁸ *Ibid.*

³⁹ Sverre LeRoy, Megan Matthews, and Richard Wiles, "Hotter Days, Higher Costs," The Center For Climate Integrity (September 2021). Retrieved from <https://coolingcrisis.org/uploads/media/HotterDaysHigherCosts-CCI-September2021.pdf>

determined that many control measures implemented for students can be used to protect workers. Therefore, worker-centered heat prevention plans should be feasible. Below are examples of heat plans implemented in schools where NEA members work and states with ongoing work on the issue.

Massachusetts

Holyoke Public Schools is proactively addressing extreme heat in the classroom.⁴⁰ Holyoke updated their Guidelines for Extreme Weather, incorporating a robust extreme heat protocol that builds on their pandemic guidance around indoor air quality. The 2024 policy incorporates best practices for reducing heat stress through a multi-pronged approach addressing key factors like humidity levels, air circulation, classroom temperature thresholds, ensuring hydration for students and staff, and modifying physical activities. For indoor environments with limited air conditioning, which are most of Holyoke's schools, the policy provides detailed guidance on adjusting classroom conditions and activities to keep building occupants safe when temperatures rise. The policy establishes specific heat index thresholds to trigger modifications to activities and consideration of early dismissal. The policy recommends resilient measures, such as retrofitting buildings with energy-efficient cooling systems and installing additional shade structures. The policy emerged from a collaborative relationship between Holyoke's facilities and nursing staff. This interdepartmental approach is reflected in their heat policy, which considers building operations and health impacts.⁴¹

Colorado

Boulder Valley School District uses the heat index to determine early dismissals and outdoor activities, including recess, physical education, athletics, and outdoor field trips for students.⁴²

Arizona

The Arizona Department of Health Services (ADHS) recommends that Arizona school districts formally document their response to extreme heat in a written school heat policy, in accordance with ARS 15-341(A).⁴³ ADHS created a guidance document that provides recommendations for K-12 schools on actions to mitigate extreme heat exposure.⁴⁴ Several of the control measures listed in the guidance could also provide relief for educators. The document is deeply rooted in NIOSH's hierarchy of controls. ADHS adapted the hierarchy of controls pyramid to help school administrators effectively utilize it. The Hierarchy of Controls starts with eliminating or reducing the hazard at the source.

⁴⁰ Holyoke Public Schools, "Extreme Weather-Heat," (May 2024). Retrieved from https://www.mapc.org/wp-content/uploads/2024/06/Extreme-Weather_-Heat-HPS-.docx.pdf

⁴¹ Metropolitan Area Planning Council, "New Template Policy Language for Addressing Extreme Heat and Air Quality in Schools," (June 2024). Retrieved from <https://www.mapc.org/planning101/extreme-heat-air-quality-in-schools/>

⁴² Boulder Valley School District, "Extreme Heat and Cold," Retrieved from <https://www.bvsd.org/departments/health-services/heat-and-cold-guidelines-for-schools>

⁴³ Arizona State Legislature. Retrieved from <https://www.azleg.gov/viewdocument/?docName=https://www.azleg.gov/ars/15/00341.htm>

⁴⁴ Arizona Department of Health Services, "Managing extreme heat recommendations for schools: Pilot Version," (2021). Retrieved from [managing-extreme-heat-recommendations-for-schools.pdf](https://www.azdhs.gov/documents/health-services/heat-and-cold/managing-extreme-heat-recommendations-for-schools.pdf)

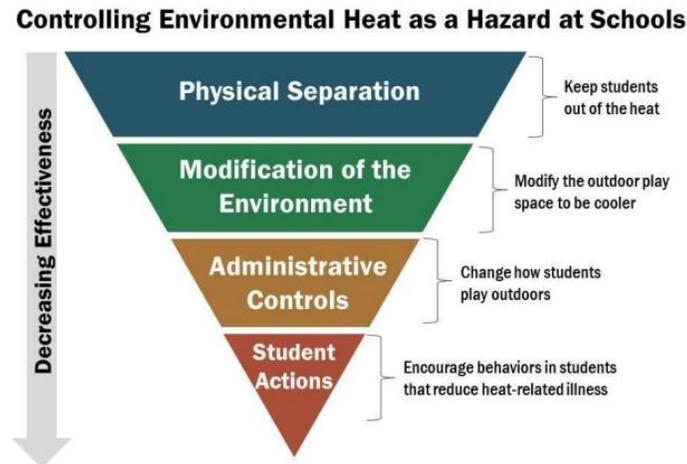


Figure 2. Controlling Environmental Heat as a Hazard at Schools (Adaptation of NIOSH’s Hierarchy of Controls)

In our testimony, NEA has highlighted our recommendations in several areas, such as a trigger of 80°F measured by the WBGT method. WBGT provides the most accurate measurements for assessing heat exposures in indoor workplaces, incorporating temperature, humidity, radiant heat sources, and air movement into its measurements. Some schools and universities have experience using this form of measurement in specific capacities, for instance, in the context of school sports. We urge OSHA to require employers to use WBGT to accurately measure temperature. This would also allow for a consistent, uniform approach to addressing heat across state and federal standards.

In addition, we can confirm that the existing WBGT monitors are both affordable and easy to use, as the following examples show:

New Jersey

Heat illness during sports or competitions is a leading cause of death and disability among U.S. high school athletes.⁴⁵ A high school south of Newark, New Jersey, utilizes WBGT to assess the potential heat stress that student-athletes may experience during practice or games.⁴⁶ Educators use it to implement control measures, such as mandatory rest and water breaks, and a plastic cooling tub to treat individuals who are overheating.

Minnesota

The OSHA state standard applies to indoor workplaces and uses WBGT for environmental monitoring. For years, employers in Minnesota have been successfully using this method.

⁴⁵ Ellen Yard, Julie Gilchrist, Tadesse Haileyesus, Matthew Murphy, Christy Collins, Natalie McIlvain, and R. Dawn Comstock, “Heat Illness Among High School Athletes--United States, 2005-2009,” *Journal of Safety Research* 41(6), 471–474. (December 2010). Retrieved from <https://doi.org/10.1016/j.jsr.2010.09.001>

⁴⁶ CBS News, “How to Protect Student Athletes Amid Dangerous Heat Across the Country,” (August 27, 2024). Retrieved from <https://www.cbsnews.com/video/how-to-protect-student-athletes-amid-dangerous-heat-across-the-country/>

Rest Breaks

Unlike other professions, educators frequently deprive themselves of drinking water because they have limited access to rest breaks.⁴⁷ In Orange County, Florida, members of our state affiliate, the Florida Education Association, conducted a poll, and the results showed that 63 percent of teachers reported avoiding drinking water to avoid using the restroom. The same survey showed that 20 percent of teachers have sought medical care for bladder-related issues.⁴⁸ The poll also showed that 47 percent of educators supervised students for three or more continuous hours. In some cases, it is not just bathroom breaks that are difficult to take, but lunch breaks as well.

In Virginia, an educator shared that she wears incontinence underwear, “If I’m sick or coughing, there’s no hope for me. I am going to be frank about that,” she says.⁴⁹ The educator further states, “That’s so cute when you say federally protected rights. It is also in the county code!” She works in a self-contained classroom for students with disabilities. Her school district has not implemented protocols or procedures to allow her to leave her students, even for lunch. “Today, for example, I didn’t get lunch—and I didn’t go to the bathroom for three hours after I had to go,” she says.⁵⁰

In Georgia, a classroom teacher shared, “We have six minutes between bells. We are supposed to be in the hallway [supervising] for those six minutes. Who is going to supervise these students if I run out of the room?” Her solution to the issue, “We need to put more pressure on school districts, on governments, to provide more funding so that we can have more teacher aides. Teachers with aides don’t have bathroom problems.”⁵¹ OSHA must require an adequate number of rest breaks in the final heat standard.

When barriers are addressed, educators’ working conditions improve. Educators nationwide are using the power of collective bargaining to improve their working conditions on the issue. Local NEA-affiliated associations have successfully negotiated bargaining agreements, a legal document that holds authority to address working conditions. In collaboration, school districts and union members create protocols and procedures to ensure feasible rest breaks. See examples below.⁵²

California

Lavatory facilities should be within four hundred feet of the unit member’s classroom. When lavatory facilities are more than four hundred feet from a member’s classroom, the following accommodations will be made: the member will receive coverage to use the bathroom when needed, or unit members will not be required to work more than two consecutive hours without a break. — *Coalition of Educators for Change*

A lavatory break will be provided in conjunction with regular work assignments. Where regular duty assignments prevent taking a lavatory break, a plan or schedule shall be developed by the site administrator, which shall ensure that all certificated employees have the opportunity for

⁴⁷ Alia Wong, “Why Don’t Schools Give Teachers Enough Time to Use the Restroom,” *The Atlantic* (July 27, 2015). Retrieved from <https://www.theatlantic.com/education/archive/2015/07/teachers-not-enough-bathroom-time/399629/>

⁴⁸ Mary Ellen Flannery, “Teachers Need a Bathroom Break,” *NEA Today* (May 2024). Retrieved from <https://www.nea.org/nea-today/all-news-articles/teachers-need-bathroom-break>

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² National Education Association, “Bargaining for Bathroom Breaks,” *NEA Today* (September 2024). Retrieved from <https://www.nea.org/resource-library/bargaining-bathroom-breaks>

a break. If problems with the schedule arise, they will be resolved with input from the staff. — *East Whittier Education Association*

Florida

Administrators will cooperate with employees in making arrangements for a break in the morning or afternoon. Employees needing to use the restroom may call the office at any time of the day to receive relief without delay. — *Orange County Classroom Teachers Association*

Heat Exposure in Public School Buses

NEA is not aware of robust data on internal temperatures in school buses; however, we have strong anecdotal evidence from our members that suggests a widespread problem with excessive heat. [More than 21 million students](#) take school buses to and from school in the United States.⁵³ When temperatures start rising, the ventilation strategy in one school district in New Jersey is “open the window and drive faster,” shared Chrissy, a school bus driver.⁵⁴ Most school buses today—like the large one Chrissy drove—do not have a ventilation system. It is not always possible or safe to open the windows of a school bus. “We tend to leave the windows up for the little ones, but it’s not a healthy environment for students or drivers,” she explains. Open windows let in bugs, rain, and contaminated air, including diesel exhaust. Some mitigation measures include tinting windows or installing small dash fans near the steering wheel. Some schools have shortened their bus routes to limit heat exposure. Some bus drivers report using wet towels around their necks; however, this measure provides some comfort, rather than protection.

School districts across the United States were transitioning to electric school buses (ESBs). In the United States, there are 480,000 public school buses on the road, and of those buses, 12,000 are electric.⁵⁵ With funding from the Bipartisan Infrastructure Law, the EPA’s Clean School Bus Program provided funding to replace existing school buses with zero-emission and clean ones.⁵⁶ A huge benefit is that the new electric school buses have air conditioning systems.

NEA connected with our internal network of educational support professionals across the nation and shared OSHA’s questions with them. Below, we provide some of their responses.

Indiana⁵⁷

Merrillville Community Schools has 70 full-size buses, three of which have air conditioning. The three buses with air conditioning are designated for special education routes only. Type A buses are typically used to transport students with disabilities who may require cooler temperatures, as specified in their Individualized Education Plan (IEP) or as a reasonable

⁵³ Clean Technica, “The State of Electric School Bus Adoption in the U.S.,” (July 3, 2024). Retrieved from <https://cleantechnica.com/2024/07/03/the-state-of-electric-school-bus-adoption-in-the-us-2/>

⁵⁴ Dorothy Wigmore, “Air quality on school buses matters, too,” *NEA Today* (April 24, 2024). Retrieved from <https://www.nea.org/advocating-for-change/new-from-nea/air-quality-school-buses>

⁵⁵ School Bus Fleet, “2024 Fact book pupil transportation by the numbers,” (2024). Retrieved from <https://schoolbusfleet.mydigitalpublication.com/fact-book-2024/page-12>

⁵⁶ U.S. Environmental Protection Agency, “Clean School Bus Program Awards,” (August 2025). Retrieved from <https://www.epa.gov/cleanschoolbus/clean-school-bus-program-awards#total-awards>

⁵⁷ **Type “A”** Ideal for transporting smaller groups of students, transporting students with disabilities, and routes with less demand. These buses often come equipped with wheelchair lifts and other accessibility features, making them suitable for transporting students with disabilities.

Type “C” This design is the most used for bus routes transporting students to and from school.

Type “D” Also known as transit-style school buses. This is the largest school bus that can carry more than 50 students.

accommodation under Section 504 of the Rehabilitation Act.⁵⁸ Of the remaining buses, seven new buses are equipped with “driver-only” AC, which the transportation director decided to disable. So far, there has been no directive on whether or not it can be used. During summer school, when the temperatures were at 90°F, at least two bus drivers got heat-related illnesses requiring loss of time.⁵⁹

The school district does not monitor the interior temperatures of its buses. When bus drivers complain, they are told there is nothing the school can do about it. A member shared that if school buses could park in shaded areas, it might help reduce internal temperatures. Currently, drivers must park in parking lots with direct sunlight. It is a losing battle between the hot sun beating down and the hot asphalt underneath. Additionally, the no-idling school policy would prevent the buses from running to cool the interior, even if they had air conditioning.

Wyoming

Most of the buses in the Rock Springs school district do not have air conditioning. The school district has 90 buses, and only ten have air conditioning. The school district does not monitor the interior temperatures of its buses. The only method members have to cool down the bus is to open the windows. Like Indiana, Rock Springs members are not allowed to idle the school bus because of school policy.

In Cheyenne, educators struggle during the summer with inadequate air conditioning, cramming two high school students per seat and up to three elementary school students per seat due to capacity constraints. All the transit-style buses (travel buses, Type D), including the new ones, do not have air conditioning. It is common for school bus drivers and students to be on a bus for hours at a time. It can get extremely hot depending on how long drivers wait for students at the schools. There is a lot of travel in Wyoming for students to get to activities.

Colorado

A member from Jefferson County stated that three out of about 400 buses have air conditioning. As a mechanic in the county, he is very knowledgeable about the issue. The only other vehicles they have with air conditioning are the smaller buses (Type A) and the SUVs. Our members shared that employers do not require internal temperature monitoring in school buses. Bus drivers were tracking temperatures when a previous union president started a health and safety campaign around the issue. A representative stated that they were monitoring temperatures well above 100 °F. When it does happen, it is because our members are taking the initiative and are advocating for safer working conditions through their local union.

⁵⁸ An IEP or 504 plan may require a student to receive instruction in a room with cooler temperatures. If the classroom where the student is scheduled to receive instruction does not have a functioning air conditioning unit, it may be necessary to discuss alternative methods of cooling to discuss such as providing the student with a personal fan or cooling unit or closing the classroom’s shades. This may also apply to the transport (to and from school) of students with IEPs.

⁵⁹ It is important to note that 82 percent of U.S. public schools offer summer school programs that aim to help students academically. Pew Research Center, “When U.S. public school students go back to school,” (August 4, 2023). Retrieved from https://www.pewresearch.org/short-reads/2023/08/25/back-to-school-dates-u-s/sr_23-08-16_schoolstartdates_1-png/

Pew Research Center, “In the U.S., back-to-school dates vary by region,” (August 24, 2023). Retrieved from https://www.pewresearch.org/short-reads/2023/08/25/back-to-school-dates-u-s/sr_23-08-16_schoolstartdates_2-png/

National Center for Education Statistics, “The Majority of K-12 Public Schools Offer Academically Focused Summer and After-School Programs,” Press Release (November 8, 2023). Retrieved from [Press Release - The Majority of K-12 Public Schools Offer Academically Focused Summer and After-School Programs - November 8, 2023](https://nces.ed.gov/ipeds/datacenter/ipedsdatatools/pressreleases/2023/11/08/2023-11-08-01-the-majority-of-k-12-public-schools-offer-academically-focused-summer-and-after-school-programs/)

Delaware

At the Sussex Consortium, a member shared that approximately 40 percent of the buses, including those operated by contractors, have air conditioning. Sussex Consortium is a school that provides services to students with disabilities. It has different locations within the Cape School District, and they have their own specific buses assigned to them. Internal bus temperatures are monitored only if an Individualized Education Plan (IEP) requires a particular temperature; otherwise, they are not. Drivers pop the roof vents angled facing the rear of the bus. They open windows to create an air current when the bus is running. Drivers use defrost fans and a cool towel or rag on the back of the neck.

Alabama

A few years ago, the Alabama Education Association launched a “Stop the Heat” campaign. The campaign focused on advocacy for air conditioning in all school buses.⁶⁰ To mobilize members around the campaign, bus drivers would share pictures of the internal bus temperatures with their local union. The internal temperature monitoring was conducted as part of the advocacy effort, rather than as part of the employer's existing temperature monitoring requirement. One member shared a picture from Mobile, Alabama that read 124 °F.⁶¹



We applaud OSHA’s efforts to protect workers from excessive heat. We urge the agency to finalize a comprehensive heat rule that will provide the protection our educators desperately need. NEA respectfully submits our comments for consideration. Please do not hesitate to contact Eunice Salcedo at esalcedo@nea.org should you have any questions. Thank you for the opportunity to comment.

Sincerely,



Daaiyah Bilal-Threats
Senior Director, Education Policy and Implementation Center
National Education Association

⁶⁰ Joshua LeBerte, “Alabama School Districts Move to Air Condition Buses, Officials Asking for State Relief,” Alabama Public Radio (August 2023). Retrieved from <https://www.apr.org/news/2023-08-28/alabama-school-districts-move-to-air-condition-buses-officials-asking-for-state-relief>

⁶¹ Trisha Powell Crain, “How Hot are Alabama’s School Buses? Drivers Show Us,” (August 23, 2019). Retrieve from <https://www.al.com/news/2019/08/how-hot-are-alabamas-school-buses-drivers-show-us.html>