State Board of Education Resolution
Addressing Heating, Ventilation, and Air Conditioning (HVAC)
Issues in Public Schools in the District of Columbia
SR25-1

WHEREAS, indoor air quality (IAQ)—which refers to the temperature, filtration, ventilation, and comfort of the air in and around buildings—has been shown to directly impact academic achievement, student attendance, and overall well-being of students and staff in schools[1,2,3]

WHEREAS, inadequate filtration and ventilation in classrooms is increasingly recognized as a threat to student health, with frequent exposure to suboptimal conditions linked to respiratory problems such as asthma, obstructive lung diseases, and bronchitis—disproportionately affecting students with pre-existing health issues—[4,5,6] and these risks are further exacerbated by extreme weather events, rising urban pollution levels, and climate change;[7,8]

WHEREAS, the climate crisis presents growing risks of extreme temperatures, which are projected to increase globally by approximately 2.7°F by 2050;[9]

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[1] U.S. Environmental Protection Agency. (2024, December 20). *Introduction to indoor air quality.* https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality

[2] IAQ encompasses key factors such as air temperature, particulate matter, carbon dioxide (CO_2) levels, and ventilation, which significantly impact the health and well-being of students, staff, and other school community members.

[3] Environmental Protection Agency (2012). *Student Health and Academic Performance Quick Reference Guide.* https://www.epa.gov/sites/default/files/2014-08/documents/student_performance_findings.pdf

[4] Sadrizadeh, S., et al. (2022). Indoor air quality and health in schools: A critical review for developing the roadmap for the future school environment. Journal of Building Engineering, 57, 104908. https://doi.org/10.1016/j.jobe.2022.104908

[5] *Air quality and health* | Minnesota Pollution Control Agency. Minnesota Pollution Control Agency. https://www.pca.state.mn.us/air-water-land-climate/air-quality-and-health

[6] *The air we breathe: Why Good HVAC systems are an essential resource for our students and school staff.* (2020, December 8). Learning Policy Institute. https://learningpolicyinstitute.org/blog/covid-hvac-systems-essential-resource

[7] Sadrizadeh, S., et al. (2022). Indoor air quality and health in schools: A critical review for developing the roadmap for the future school environment. Journal of Building Engineering, 57, 104908. https://doi.org/10.1016/j.jobe.2022.104908

[8] *Air quality and health* | Minnesota Pollution Control Agency. Minnesota Pollution Control Agency. https://www.pca.state.mn.us/air-water-land-climate/air-quality-and-health

[9] United Nations. (2022). *Climate Reports* https://www.un.org/en/climatechange/reports

WHEREAS, the District of Columbia is projected to experience temperature increases of up to 10°F by 2085, compounding the threat of extreme temperatures on schools, students, and staff, particularly during warmer months;[10]

WHEREAS, extreme heat and cold, worsened by climate change, pose a serious risk to District of Columbia Public School (DCPS) and public charter school students and staff, leading to uncomfortably hot classrooms in summer and cold spaces in winter, further exacerbating health conditions, reducing academic performance, and decreasing school attendance;[11,12]

WHEREAS, the District of Columbia Department of General Services (DGS) currently has over 87 high-priority open HVAC work orders, with nearly 4,000 total open work orders across the city;[13]

WHEREAS, the 2023 Master Facilities Plan highlights that, while HVAC maintenance work order volume has decreased, significant challenges remain, requiring prioritization and equitable modernization efforts to address ongoing climate and health threats in all public schools across the District;[14]

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[10] Department of Energy and Environment (2021). *The District of Columbia's Extreme Heat Adaptation Strategy.* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/2022%20Keep%20Cool%20DC_0.pdf

[11] Institute of Education Sciences (IES). (2018). *Optimal classroom temperature to support student learning.* https://ies.ed.gov/ncee/edlabs/regions/west/Ask/Details/64

[12] Wargocki, P., Porras-Salazar, J. A., Contreras-Espinoza, S., & Bahnfleth, W. (2020). The relationships between classroom air quality and children's performance in school. *Building and Environment,* 173, 106749. https://doi.org/10.1016/j.buildenv.2020.106749

[13] See the Department of General Services' open work order portal at https://dataviz1.dc.gov/t/OCTO/views/DGSPublicWorkOrderData/DGSHVACDashboard?%3AshowAppBanner=false&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Aembed=yes&%3Atoolbar=no

[14] Office of the Deputy Mayor for Education. (2024). *DC Public Education Facilities Master Plan.* https://dcgov.app.box.com/v/mfp2023report

WHEREAS, significant progress has been made in addressing HVAC issues, including ongoing modernization efforts,[15] though challenges remain that require sustained attention and additional resources;[16]

WHEREAS, temporary school facility issues, such as swing spaces, are often used in place of long-term solutions like full facility modernization or comprehensive staff training to support HVAC maintenance and reporting;[17,18]

WHEREAS, inconsistent or inadequate HVAC maintenance has led to poor indoor air quality and suboptimal learning environments, as inadequate maintenance impairs ventilation, reduces filtration, and disrupts airflow, worsening air quality, health risks, and discomfort, especially during extreme conditions worsened by climate change;[19]

WHEREAS, public concerns have been raised by District parents, students, and educators regarding inconsistent temperatures, and inadequate HVAC repairs, and inefficient management of HVAC systems in schools;[20]

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[15] DGS highlighted their preventative maintenance program, which reduced emergency work orders by 45% in FY24. This was noted during the Committee of the Whole & Committee on Facilities Joint Public Roundtable on Heating and Indoor Air Quality Failures in the District of Columbia's Public Schools on February 12, 2025. https://www.youtube.com/watch?v=kEl34lrvI8w

[16] Persistent HVAC issues continue to affect many DCPS schools. At the Council roundtable (see Footnote 15), testimony cited examples such as Plummer Elementary with 30 open work orders, Whittier Elementary with 39 open work orders, and Roosevelt High School experiencing ongoing HVAC failures despite a $136 million renovation. Additional concerns were raised about work orders being marked as complete while issues persisted, challenges in commissioning new HVAC systems—such as delays in calibrating and restoring Whitlock Elementary's geothermal system—and questions about whether current resources for preventative maintenance are sufficient to meet the needs of all 117 DCPS schools.

[17] See testimony from Kristin Yochum and Momoko Soltis during the January 15, 2025, D.C. State Board of Education Public Meeting. The testimony is available at: https://www.dropbox.com/scl/fo/ipgkuivzostn3p6sx1phw/AFqT7SNnoBNOIoSTSWhwVa8/2025/2025-01/2025-01-15%20Public%20Meeting/VII.%20Panel%20on%20Indoor%20Air%20Quality%20in%20Schools/a.%20Live%20Testimony?rlkey=6qa05ai16c0ju6smyhhsnh3ue&subfolder_nav_tracking=1&st=uy4jr6wk&dl=0

[18] Collins, S. P., & Benjamin, K. (2023, September 14). *Even with DGS Intervention, HVAC Issues Persist at Whittier Elementary.* The Washington Informer. https://www.washingtoninformer.com/even-with-dgs-intervention-hvac-issues-persist-at-whittier-elementary/

[19] *Heating, Ventilation and Air-Conditioning Systems, part of indoor air quality design tools for schools* (2024, November 6). US Environmental Protection Agency. https://www.epa.gov/iaq-schools/heating-ventilation-and-air-conditioning-systems-part-indoor-air-quality-design-tools

[20] Thurgood Marshall Academy (TMA) students have highlighted issues such as inconsistent classroom temperatures, repeated requests for HVAC repairs, reliance on a single individual for managing HVAC issues, and restrictions on wearing outside outerwear unless it bears the TMA logo.

WHEREAS, during its November 20, 2024 and January 15, 2025 public meetings, the D.C. State Board of Education (State Board) heard and received testimony from students, parents, educators, and experts, including representatives from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE);[21,22]

WHEREAS, improved air filtration and ventilation systems can mitigate the significant health risks to students and staff in schools that are caused by elevated levels of carbon dioxide (CO_2), particulate matter, and airborne pathogens;

WHEREAS, public testimony and expert recommendations support the ASHRAE standards,[23] including ASHRAE Standard 241 for the control of infectious aerosols, as measures for enhancing air quality, health, and academic outcomes in schools;[24,25] and

WHEREAS, states such as Maryland,[26] Washington,[27] and Michigan[28] have implemented measures to improve indoor air quality in schools, including dedicated funding for HVAC and air quality improvements, prioritization of facilities with IAQ deficiencies, and the establishment of grant programs to support air filtration enhancements and overall air quality upgrades.

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[21] Testimony from Cole Hofmann, Dahlia Anderson, and Zoe Fisher at the November 20, 2024 Public Meeting can be found here: https://www.dropbox.com/scl/fo/ipgkuivzostn3p6sx1phw/AN1Dwf9bhSFq-OsDyY0yVEc/2024/2024-11/2024-11-20%20Public%20Meeting/VII.%20Public%20Comment?rlkey=6qa05ai16c0ju6smyhhsnh3ue&subfolder_nav_tracking=1&st=1khbw5hc&dl=0

[22] See both expert panel testimony and public comment testimony from the January 15, 2025, Public Meeting here: https://www.dropbox.com/scl/fo/ipgkuivzostn3p6sx1phw/AOARhTx5L4mr0oX9YjMbkTE/2025/2025-01/2025-01-15%20Public%20Meeting?rlkey=6qa05ai16c0ju6smyhhsnh3ue&subfolder_nav_tracking=1&st=363shg4j&dl=00

[23] ASHRAE standards are internationally recognized guidelines for IAQ that help ensure healthy, safe, and comfortable environments in schools. ASHRAE 62.1 and 62.2 focus on ventilation, filtration, and temperature control to enhance air quality, while ASHRAE 241 provides protocols for reducing the spread of infectious aerosols. These standards are critical to improving the learning and working conditions in schools, directly impacting health, attendance, and academic performance. See https://www.ashrae.org/file%20library/about/position%20documents/pd_indoor-air-quality-2023-06-28.pdf

[24] See testimony provided to the D.C. State Board of Education at the January 15, 2025 meeting which can be found here: https://www.dropbox.com/scl/fo/ipgkuivzostn3p6sx1phw/AFqT7SNnoBNOIoSTSWhwVa8/2025/2025-01/2025-01-15%20Public%20Meeting/VII.%20Panel%20on%20Indoor%20Air%20Quality%20in%20Schools/a.%20Live%20Testimony?rlkey=6qa05ai16c0ju6smyhhsnh3ue&subfolder_nav_tracking=1&st=uy4jr6wk&dl=0

[25] Centers for Disease Control and Prevention (CDC). (2024). *Ventilation FAQs Frequently Asked Questions.* https://www.cdc.gov/niosh/ventilation/faq/index.html

[26] *HB1390.* (2024). https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/hb1390?ys=2024RS

[27] *SB 5949.* (2024). https://app.leg.wa.gov/billsummary?billnumber=5949&year=2024

[28] *SB 173.* (2023). https://www.legislature.mi.gov/documents/2023-2024/billenrolled/Senate/pdf/2023-SNB-0173.pdf

NOW, THEREFORE BE IT RESOLVED, that Mayor Muriel Bowser, the D.C. Council, and the Department of General Services (DGS) should prioritize HVAC maintenance and system upgrades, ensuring sufficient funding for timely repairs and modernizations, particularly in schools with outdated systems, with oversight from the Office of the D.C. Auditor to track progress and spending;

BE IT FURTHER RESOLVED, that the State Board requests that by May 31, 2025, that DGS, in coordination with the Office of the State Superintendent of Education (OSSE) and the D.C. Department of Energy and Environment (DOEE), should inform SBOE, in writing, of the following cost estimates and any additional funds needed for: ensuring sufficient funding for prompt maintenance and repairs of existing HVAC systems; conducting biannual HVAC inspections in all DCPS schools; restoring prior air quality monitoring that was previously funded with federal COVID funds; and testing for environmental hazards like mold, especially when concerns are raised by staff, students, or family members; [29]

BE IT FURTHER RESOLVED, that the State Board suggests that DGS, in coordination with OSSE and DOEE, strengthen preventative maintenance and rapid response capabilities to address HVAC issues promptly, while the Mayor and D.C. Council allocate dedicated funding to support comprehensive HVAC overhauls and modernization projects at schools with aging or inadequate systems, ensuring long-term solutions to HVAC failures;

BE IT FURTHER RESOLVED, that the State Board requests that by May 31, 2025, DGS should issue clear guidance affirming that donated air filtration equipment are permitted in classrooms and common areas to support cleaner indoor air, [30] or alternatively DGS should state, in writing, why they do not support the use of donated air filtration devices;

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[29] This recommendation is based on testimony from the February 12, 2025, Joint Public Roundtable held by the Council of the District of Columbia's Committee of the Whole and Committee on Facilities. Parents, educators, and community members raised concerns about environmental hazards, such as mold, in schools, emphasizing the need for independent testing when issues are not properly addressed. The roundtable recording is available here: https://www.youtube.com/watch?v=kEl34lrvI8w

[30] This recommendation is based on testimony from Momoko Soltis, a parent of a DCPS first grader, who highlighted the challenges faced by families in securing donated air cleaners for schools. In her testimony, Soltis shared instances where parents were informed that donated air cleaners could not be accepted without permission from the District or were not prioritized, even in schools facing air quality challenges. For further details, the full testimony is available here: https://www.dropbox.com/scl/fo/ipgkuivzostn3p6sx1phw/ALLPJSw2KaPxkx2VFPGo4iU/2025/2025 -01/2025-01-15%20Public%20Meeting/VII.%20Panel%20on%20Indoor%20Air%20Quality%20in%20Schools/a.%20Live%20Testimony/iv.%20Momoko%20Soltis%2C%20DCPS%20Elementary%20School%20 Parent?preview=2025-01-15-Testimony-+Momoko+Soltis-+School+Indoor+Air+Quality+-+January+2025.pdf&rlkey=6qa05ai16c0ju6smyhhsnh3ue&subfolder_nav_tracking=1&st=7222qlkx&dl=0

BE IT FURTHER RESOLVED, that the State Board requests that by December 31, 2025, DGS, in coordination with the OSSE and DOEE, should issue a report detailing the cost, feasibility, timeline, and proposed modernization schedule, which would be required to ensure DCPS compliance with ASHRAE Standards 62.1, 62.2, and 241 by September 1, 2030; and [31]

BE IT FINALLY RESOLVED, that the State Board urges DGS and the Deputy Mayor for Education (DME) to incorporate ASHRAE 241 into all school modernization projects and develop a phased plan within Fiscal Year 2025 to bring all schools into compliance, with updates provided to the D.C. Council and the State Board of Education.

Date Adopted: February 19, 2025 Signed: _____

Jacque Patterson, President

[31] ASHRAE recommends that commercial HVAC systems undergo maintenance at least twice a year, with more frequent checkups for older systems. See ASHRAE (2018). ANSI/ASHRAE/ACCA Standard 180-2018. In *Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems.* https://www.ashrae.org/File%20Library/Technical%20Resources/Bookstore/previews_2016639_pre.pdf