



CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

December 5, 2022

BlueGreen Alliance Response to Request for Information: Better Indoor Air Quality Management To Help Reduce COVID-19 and Other Disease Transmission in Buildings: Technical Assistance Needs and Priorities To Improve Public Health

[EPA-HQ-OAR-2022-0794](#)

The BlueGreen Alliance unites America’s labor unions and environmental organizations to solve today’s environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don’t have to choose between a good job and a clean environment—we can and must have both. We are pleased to offer comments to the EPA on Indoor Air Quality in buildings, which is an opportunity, especially for school buildings in disadvantaged communities, to protect and improve people’s health while optimizing opportunities for quality job creation. This is aligned with the Justice40 initiative to ensure federal investments benefit disadvantaged communities as well as the Good Jobs Initiative that calls on federal agencies to create good, quality jobs.

Key Questions

3.2 In your opinion, what are the near-term indoor air quality related actions that could help schools respond to a COVID-19 disease surge?

Conduct indoor and outdoor air monitoring

Conducting air monitoring in and around schools will be key to identifying exposures and exposure levels for students and staff. With the ongoing threat of COVID-19, known legacy toxics like lead and PCBs in older school buildings, as well as other known and unknown exposures, it is important to monitor air quality. Creating a large monitoring program that ensures the accessibility of data will empower communities with essential information. This will require capacity and technical assistance for communities to navigate funding mechanisms. The procurement of air monitoring products that are manufactured in the US should be required.

- What approaches could a school system consider if they are willing and able to make IAQ changes but are having difficulty securing labor or supplies to complete their improvements?
 - There are low-cost sensors (e.g. Purple Air monitors) that are user-friendly for community-level initiatives. Although these monitors have limitations, they are relatively more affordable compared to traditional monitors and can be a starting investment in monitoring basic exposures (e.g. PM2.5) in schools. Additionally, EPA could provide technical assistance to assist schools with acquiring the right monitors for each school's concerns and estimated exposure profile.
 - Additionally, partnerships with universities that have monitoring equipment, particularly institutions with a NIOSH or another entity-sponsored center at their institution, could provide technical expertise to assist with completing these projects. This would establish strong ties with public institutions and their respective communities, further building long-term community resilience. However, it is important for university or other research partners to demonstrate engagement with and the intent to address the concerns of local community groups, Tribes, and unions and not simply collect data for their own purposes.

3.3 In your opinion, over the longer term, how can ventilation, filtration and air cleaning improvements be prioritized and made standard practices in building design, construction, commissioning, renovation, and operations and maintenance efforts (e.g., building code adoption, training or other efforts to sustain proper practices such as operation and maintenance of HVAC systems as designed, weatherization and other retrofit programs)?

New Building Considerations

For new building design, HVAC systems should be efficient and easily accessible for maintenance by skilled technicians. Innovative technology will need to be developed and implemented to allow for individual offices and classrooms to have greater control over ventilation and temperature. Opening windows, for example, is not sufficient for controlling ventilation in some climates throughout the year. To ensure that people use these innovative tools (e.g. use exhaust fans), and children can learn, they need to be quiet.

Currently, in the U.S., ASHRAE and ANSI standards are relied on by ventilation specialists. However, these building standards do not incorporate health-based targets and are not protective when it comes to COVID-19 transmission.ⁱ There are opportunities for EPA to partner with the Department of Energy, which received building codes funding from both the Bipartisan Infrastructure Law as well as the Inflation Reduction Act. For states and

municipalities applying for funding to update building codes, program guidance can be provided on how to optimize ventilation to reduce COVID-19 transmission and improve other health outcomes.

3.6 In your opinion, what quantifiable metrics or targets could be helpful in evaluating or assessing ventilation, filtration, and air cleaning parameters in a building?

Establish Exposure Standards

Using occupational exposure limits for workers, along with other exposure standards including EPA's ECEL's, and installing real-time monitors to measure and identify hazards in a building would be ideal. Having a monitoring system for each school and its fence line would allow for an expedient response to poor indoor and outdoor air quality. In exposure assessments, qualitative information is collected to inform quantitative processes such as air monitoring. Qualitative questions should help elucidate what hazards are already present in the buildings based on custodial and other staff input. For schools, students and their parents should also be qualitatively engaged in this process to understand if health issues are present among the population, such as elevated rates of asthma or COVID-19.

For reducing infectious disease transmission, particularly airborne respiratory diseases, recommendations for air flow rates should reference ASHRAE standards and the Lancet COVID-19 Commission Task Force on Safe Work, Safe School, and Safe Travel's Proposed Non-infectious Air Delivery Rates (NADR) for Reducing Exposure to Airborne Respiratory Infectious Diseases for tangible solutions regarding ventilation interventions.ⁱⁱ

3.8 In your opinion, how might lessons from the COVID pandemic be useful for long-term efforts to improve ventilation, filtration, air cleaning and other indoor air quality parameters in the nation's building stock?

Remove Other Sources of Indoor Air Pollution

In addition to improving indoor air quality through ventilation, filtration, and air cleaning through the proper installation of HVAC systems, it is also important to remove sources of airborne toxics in buildings. Specifically, certain building materials can emit volatile organic compounds (VOCs) that are bad for human health. When a building is undergoing a deep retrofit with an updated HVAC system, it is important to ensure that federal funding does not go to procuring toxic building materials. BuildingClean.org is a database to help identify healthier building materials and minimize exposure of harmful chemicals to both installers and occupants.ⁱⁱⁱ Below are Building Clean criteria that can be used to guide the procurement of healthy building materials.

We recommend that EPA promote the use of healthier building materials for all construction projects used with federal funding by incentivizing applications that minimize exposure to harmful building materials. We recommend that program guidance include:

- Best practices for minimizing exposure to harmful chemicals by using the following Building Clean criteria:
 - Good: Interior building products with the potential to emit volatile organic compounds should have a low-VOC emissions certification
 - Better: Utilize third-party product certifications and labels to select products that limit some of the most hazardous content
 - Best: Utilize third-party product certifications and labels to select products that are free of the most hazardous content
- Best practices for procurement:
 - Discourage the use of insulation materials containing respiratory sensitizers, specifically two-part spray polyurethane foam insulation which is linked to debilitating respiratory diseases,^{iv}
 - Discourage the use of funds for recycled vinyl flooring or wall-coverings which may contain a number of legacy toxics, including lead.^v

Another source of indoor air pollution comes from the legacy toxics that are found in many older buildings and often found in low-income and disadvantaged communities. Buildings constructed between 1950 and 1979 often contain legacy toxics such as PCBs, as well as asbestos and lead paint, all known human carcinogens and all potentially airborne pollutants threatening the health of building occupants.^{vi} Long-term plans to improve indoor air quality must include the remediation of such toxics.

3.9 What else would you like to note about opportunities and issues that could improve indoor air quality in the nation's building stock?

Support Workforce Development

Recognizing potential skilled labor shortages in certain areas of the country, EPA should identify funding streams to support workforce development. This effort should be coordinated with the Department of Labor and the administration-wide Good Jobs Initiative that calls on all federal agencies to support quality job creation. Additionally, there are opportunities for coordination with the Department of Energy/Undersecretary of Infrastructure Office as well as the newly formed Office of School Construction in the Department of Education. We recommend collaborating through a Memorandum of Understanding with each agency. An MOU would optimize funding opportunities for

grantees to utilize funds, for example, schools can utilize ESSER (from the American Rescue Plan; Department of Education), Renew America's Schools (from the Bipartisan Infrastructure Law; Department of Energy), and School Indoor Air Pollution Grants (from the Inflation Reduction Act; EPA) to improve the overall health of students and staff.

Ensure a Qualified Workforce

Studies have shown that poor installation of HVAC and energy efficiency measures often results in energy savings losses of up to 50% compared to projected savings goals.^{vii} Investing in a qualified workforce not only ensures the full potential of EPA's investment but also that building occupants receive the full expected health benefits. Whether it is HVAC installation and energy retrofits or legacy toxic remediation, it is important to ensure a qualified workforce does the job properly the first time. Depending on the size of the project, BGA recommends the application of the following high-road labor standards:

Davis Bacon Prevailing Wage

Construction projects, including retrofits that are federally funded, are required to adhere to Davis Bacon prevailing wage provisions. Prevailing wage rates, which reflect local area standards, help attract skilled workers and benefit local communities through quality job creation. EPA can ensure prevailing wage requirements are met through program guidance, grant application, and reporting requirements.

Registered Apprenticeship, Pre-Apprenticeship, and Labor Management Partnerships:

One of the best methods for ensuring a high standard of training resulting in proper installation and fully realized energy savings, health benefits, and resilience is through registered apprenticeship, pre-apprenticeship, and other union-affiliated training programs. Apprenticeships are registered through a state apprenticeship agency or the Department of Labor. Because registered apprenticeships are paid positions that combine on-the-job training with classroom instruction in a trade, they also improve access to job opportunities for disadvantaged workers. Construction unions operate robust registered apprenticeship programs while industrial unions work with employers on joint labor management training programs that also provide a combination of classroom and on-the-job skills training.

Pre-apprentice programs aim to ensure that workers can qualify for entry into an apprenticeship program and have the skills and support they need to succeed. These programs are generally designed to target certain populations or demographics such as low-income workers, workers of color, women, and other underrepresented and marginalized communities. Additionally, many unions offer training throughout a member's career to enable them to stay up to date with changes in technology. The most

successful pre-apprenticeship programs are those affiliated with registered apprenticeships. Wraparound services such as transportation vouchers and child care also help with recruitment and retention of underrepresented and disadvantaged workers.

Project Labor Agreements (PLAs), Community Workforce Agreements, (CWAs) and Community Benefits Agreements (CBAs)

High-road labor standards for larger properties should include Project Labor Agreements (PLAs), Community Workforce Agreements (CWAs), or Community Benefits Agreements (CBAs).

PLAs promote safe, quality, cost-effective project delivery by providing project owners with unique access to the safest, most productive, best-trained skilled craft labor available in any given market. A CWA or CBA consists of a PLA that additionally reflects community input and outlines benefits for the community where the project is happening. In addition to the collective bargaining aspects of a PLA, CWAs frequently include local hire provisions, targeted hire of low-income or disadvantaged workers, and the creation of pre-apprenticeship pathways for careers on the project.

Endnotes

ⁱ The Lancet COVID-19 Commission, *Proposed Non-infectious Air Delivery Rates (NADR) for Reducing Exposure to Airborne Respiratory Infectious Diseases*, 2022. Available online:

<https://static1.squarespace.com/static/5ef3652ab722df11fcb2ba5d/t/637740d40f35a9699a7fb05f/1668759764821/Lancet+Covid+Commission+TF+Report+Nov+2022.pdf>

ⁱⁱ Ibid

ⁱⁱⁱ BlueGreen Alliance Foundation, *Building Clean database*, 2022. Available online:

<http://www.buildingclean.org>

^{iv} NRDC, *Federal Relief Should Support Healthier Energy Efficiency*, 2022. Available online:

<https://www.nrdc.org/experts/veena-singla/federal-relief-should-support-healthier-energy-efficiency>

^v BlueGreen Alliance Foundation, *Beware Recycled, Older Flooring*, 2022. Available online:

<https://buildingclean.org/harmful-chemicals/flooring/beware-recycled-older-flooring>

^{vi} Environmental science and pollution research international, *Review of PCBs in US Schools: A Brief History, Estimate of the Number of Impacted Schools, and an Approach for Evaluating Indoor Air Samples.*, 2015. Available online: <https://pubmed.ncbi.nlm.nih.gov/25940477/>

^{vii} Berkeley Labor Center, *EE Program Workforce Guidance Plan*, 2014. Available online:

<http://laborcenter.berkeley.edu/workforce-issues-and-energy-efficiency-programs-a-plan-for-californias-utilities/>