



FAQ

As of July 1, 2025, Title 22.1, Chapter 9, Article 4 Indoor Air Quality: Inspection and Evaluation, becomes Virginia Law.

What is it?

It is a crucial step to improve Indoor Air Quality (IAQ) in schools by ensuring that every school's Heating, Ventilation, and Air Conditioning (HVAC) system operates to provide sufficient ventilation and filtration for the health of students, teachers, and other school officials.

Why is it important?

Ventilation, the process of bringing in clean outdoor air to remove bad indoor air, has been long established as a fundamental to creating healthy buildings. Numerous studies have shown the benefits of increased ventilation for a student's health and academic performance.

Is this a problem exclusive to Virginia schools?

No. Schools in the United States have a long history of not providing enough clean ventilation air. In fact, a U.S. Government Accountability Office report found that almost ½ of all school HVAC systems need updates or replacement. Anyone can conduct an internet search on "inadequate ventilation in schools" and see all the reported problems and the importance of ventilation and indoor air quality (IAQ).

What does this law require?

It requires all schools in the Commonwealth of Virginia to perform an HVAC system and ventilation assessment at least once every 4 years. This includes physical measurements of outside air delivery rate, measurement of air distribution system outside air, return air, supply air, and exhaust air to verify that they are in accordance with the requirements of the most recent ventilation standards produced by ASHRAE. It requires a publicly available written report on the condition of the schools' HVAC systems, including maintenance and any deficiencies that need repair or replacement, which impact indoor air quality (IAQ).

Is every 4 years frequent enough to validate a school's ventilation?

This is a typical requirement for maintaining a building's air balance through what is known as testing, adjusting, and balancing (TAB). However, HVAC systems can fall out balance or have other operational problems that can negatively impact the ventilation. Anything done only occasionally is less effective than monitoring a system continuously.

How can a system be monitored?

Sensors permanently installed can measure outside air ventilation rates and airflow rates in the supply, return, and exhaust systems. The benefit is to detect if ventilation is too low or to indicate other problems soon after they occur.

What if my school doesn't have a Building Automation System (BAS)?

The EBTRON IAQ Enforcer® System has the capability of connecting up to 20 airflow measuring devices and providing a single visual access point using the SDX-1000 Smart Display Panel. This system does not require an HVAC control system.

Why is it important to also measure the supply, return, and exhaust?

HVAC systems in the building create airflows that create pressure differences, just as you can feel pressure when the wind blows. In Virginia's climate, it is good to maintain a slightly positive pressure, enough to keep hot, humid air from entering the building through doors, windows, and walls. The humid air can create conditions that cause mold or attract pests. Additionally, it allows unfiltered air to enter, which can irritate allergies or asthma. Therefore, it is essential to measure airflow in and out of a building's HVAC systems. Significant school damage has been attributed to, for example, an exhaust system operating without another system providing makeup air.

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Continuation

Are there other benefits?

When airflow measurement is installed, it can help alert people to problems in the HVAC system when they occur, not in the future. Problems may result in poor indoor air quality (IAQ) and/or wasted energy. In the event there is wildfire smoke outdoors or infectious aerosols indoors, measuring the airflow will provide the necessary values to adjust ventilation and exhaust airflow rates properly. This is essential for achieving ventilation and pressurization requirements to maintain IAQ during these events. Installed airflow measurement will also speed up future inspection and evaluation tasks; therefore, this investment will pay for itself.

What should be done?

Tell your IAQ inspection and evaluation team to provide quotations for the installation of accurate and repeatable airflow measurement devices.

