



Session Summary

Session 8 • July 29, 2021

Improving Ventilation for Healthier Learning Environments

Presenters: Tom St. Louis and Meg Harvey, CT Department of Public Health

[Watch Session 8](#)

Overview

Ventilation systems that provide adequate supplies of fresh outdoor air and appropriately filter out contaminants are especially important in school environments, where significant research has shown that better ventilation is associated with better learning outcomes. Many school districts have encountered budgetary challenges when considering repairs and/or improvements to the ventilation systems that service their school buildings in the past, and those challenges are amplified in schools in urban, aging, and densely populated school settings. ARP ESSER funds and other available funding mechanisms provide unique opportunities for districts to repair and improve existing systems or to consider installing central mechanical ventilation systems.

Identify qualified, trusted, and ideally local/regional professionals to supplement facilities staff.

Consult with your local building official and your current facilities managers to find a local certified Heating, Ventilation, and Air Conditioning (HVAC) professional with experience in large central HVAC systems and school building environments, who can provide technical expertise to augment the knowledge base of your current facilities staff, assist with the inspection and repair or installation of systems, and be available to respond in case of emergencies.

Tools: [CT Department of Consumer Protection – HVAC Licensure](#)

Commission your building mechanical ventilation systems prior to the start of the school year.

Hiring a mechanical engineering firm (ideally a local firm) with a proven track record of evaluating, adjusting, and balancing ventilation systems (particularly in school buildings) to commission your systems will provide you with recommendations on how to optimize the capabilities of your systems for air flow, filtration, and fresh air intake with the goal of striving toward meeting standards set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE 62.1).

Tools: [ASHRAE 62.1 Standards, Commissioning Guidance, CT Ventilation Guidance for Schools](#)

Conduct repairs and improvements to existing mechanical ventilation systems.

The commissioning process may identify needed repairs or improvements that are recommended for your mechanical ventilation system to perform to its full capacity. Such improvements may include adding stand-alone air filter units or window fans for individual rooms. If air filters are added, they should be HEPA filters only with no ionizers, ozone generators, UV light or other add-ons, and units should be the correct size for the room with appropriate clean air delivery rate (CADR 250+ cfm).

Tools: [EPA HVAC Inspection Form – Long Form](#)

Install central mechanical ventilation systems where none currently exist.

It is much easier, effective, and efficient to control indoor building environments with centralized mechanical systems rather than multiple individual ventilation units (such as unit ventilators), or situations with only natural ventilation (i.e., windows). However, installing a central mechanical ventilation system will be a very costly investment. Before making such a costly investment decision, obtain advice from a local, trusted, independent, qualified professional. Consider future maintenance costs and facilities staff training that may be needed to operate a complicated system.

Tips & Tricks

Invest in contracts with local, trusted, independent and qualified professionals rather than product manufacturers or salespersons. Involve your facilities staff from the beginning of the process. Stick to the basics and avoid unproven technologies or sales pitches from manufacturers or distributors.