

CORONAVIRUS

# Open windows, new filters: How NJ schools are readying for in-person classes this fall

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When every New Jersey school reopens for on-site instruction this autumn, as expected, students and teachers will be walking into intentionally drafty buildings where windows are kept open and HVAC systems are constantly running to reduce the spread of COVID-19.

School officials throughout the state are already preparing their buildings to be at full capacity once again. Billions of dollars of federal relief money are flowing into New Jersey schools this year, and it can pay for everything from ensuring new filters in classroom vents to overhauling outdated heating and air conditioning systems to bring more outdoor air inside.

"We're seeing this work being done across the U.S. but especially in the Northeast in New York and New Jersey, because they were hit early and hardest by COVID," said Mark Davidson, a manager for air filter manufacturer Camfil, based in New Jersey.

The good news is that in-person learning has not appeared to be a major source of COVID-19 transmission so far, health officials say.

The bad news is that COVID-19 particles spread much more rapidly indoors. And the vast majority of schools haven't been at full capacity since March 2020.

The federal Centers for Disease Control and Prevention says most buildings, including schools, do not need a complete overhaul of their ventilation systems to be reoccupied. But recirculating indoor air and lacking proper filtration can't continue.

"There is now good evidence that good ventilation reduces the risk of transmission when indoors," said Stephanie Silvera, a professor of public health at Montclair State

University. "Combining ventilation with masks and the new CDC guidelines on spacing will all be important in terms of getting schools reopened for as many students as possible."

New Jersey will receive \$3.9 billion in school funding this year from two major COVID relief bills passed by Congress.

## **Ventilation becomes top priority**

State education officials did not know how much of that money will go toward ventilation projects at New Jersey's 2,500 school buildings, which range from the newly constructed to some that are more than a century old. But in all parts of the state, work is planned, underway or completed.

For instance, more than 300 students at East Rutherford's Alfred Faust middle school are being temporarily relocated this spring while their HVAC system is refurbished.

They'll be heading to Becton Regional High School in the borough, which installed new 2-inch air filters in its HVAC system last September using money from the \$150 billion federal CARES Act. Those new filters — along with a ventilation system that pulls outside air into the building — are among the reasons why Becton is one of the few North Jersey schools currently running full-capacity in-person instruction.

"We don't need to prepare any more than we already have for next school year," said Becton Principal Dario Sforza. "We were already prepared and have been very successful this school year."

### **COVID in schools: Eight more Glen Rock High School students test positive**

As of late March, the vast majority of New Jersey students were still splitting their time between home and school, with 496 districts in hybrid mode, 165 in person, 118 all remote, and 32 districts with a combination.

The state Health Department issued a set of recommendations last month to improve airflow at schools, focusing almost entirely on commonsense practices.

## **Emphasis on outdoor air, less time inside**

The guidance centered on basic steps to bring in more outdoor air, such as opening windows and using fans to blow potentially contaminated air out and pull fresh air in. It also called for

holding class, lunch and other activities outdoors as much as possible, although this may be difficult at densely populated schools in cities.

"It's a good idea, but more needs to be done inside the school," said Steve Baker, a spokesman for the New Jersey Education Association, the largest teachers' union in the state. "If students and staff are not safe indoors on the coldest, rainiest day of the year, someone is not doing their job."

Schools will have to meet 2007 federal indoor air quality standards before reopening, said Shaheed Morris, a state Department of Education spokesman. "No additional ventilation or air quality requirements have been imposed on school buildings as a result of COVID-19," he said in an email.

Baker's concerns were raised last summer at schools across New Jersey, including Newton's Marian E. McKeown Elementary School in Sussex County, where teachers raised worry about the building's filtration as they were about to embark on a hybrid school year.

After fixing all broken exhaust fans, school officials had them pump in outdoor air all year long, even during the coldest days of winter, said Superintendent Craig Hutcheson. He said McKeown's heating costs have almost doubled this year due to the school's keeping every vent open.

"But just to be safe, it is a dollar well spent," Hutcheson said.

**Back in business:** After a year of virtual learning, some Montclair students return to classrooms

Hutcheson essentially followed recommendations from the CDC that emphasize drawing fresh air from the outside rather than just continually recirculating indoor air. The agency recommends that HVACs be run at least two hours before and after the school day to refresh air in the early morning and remove any particles at the end of the day, although it suggests schools may want to run them 24 hours a day.

## **Mixed results**

Some schools have had success with the guidance, including the Holmdel district, which allowed students to return to full in-class instruction in January. Among several safety improvements, the schools upgraded their HVAC systems by adding bi-polar ionization technology that is supposed to destroy virus cells.

Others have tried to open but failed, including the South Orange-Maplewood district, which went hybrid in January and a month later returned to all-remote learning. The teachers' union had complained that windows were kept open, creating frigid conditions because older buildings lacked proper ventilation from their HVAC systems.

Camfil, a Swedish filter company whose U.S. headquarters is in Morris County, is having one of its busiest years, supplying filters to owners of nearly every type of building, including schools.

Among its bestsellers to schools is the CDC-recommended MERV-13 air filter that can last 12 to 18 months, capturing particles in most school's ventilation systems. It is also selling many stand-alone filters that can be placed in classrooms — a one-two punch that can keep viral particles down.

"There is going to be a lot of public money out there for school districts to address their ventilation, and they really need to get this right," said Davidson, the Camfil manager. "It's not just COVID. These are steps that are going to improve the air in schools for a long time to come."

While ventilation is key, said Silvera, the Montclair professor, it is going to take a multi-pronged approach to ensure safety when everyone is back in the classroom come September.

"Adequate ventilation, combined with masking, distancing and — hopefully as we get closer to the fall — vaccination of both teachers and older students, will all be necessary to help us reopen schools and move through this pandemic," she said.

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