

# IOWA STATE UNIVERSITY

## Building Ventilation Systems and COVID-19

Iowa State University has a comprehensive strategy to mitigate the risk of COVID-19 spread, built upon Centers for Disease Control and Prevention (CDC), World Health Organization, and Iowa Department of Public Health guidance. It includes symptom checking, testing, isolation, contact tracing, quarantine and enhanced hygiene and personal responsibilities of staying home if you are sick, wearing a face covering, physical distance and hand washing. We are also moving more classes online, and in-person classes are being scheduled in each classroom at no more than 50% of pre-COVID-19 capacity.

The CDC states that the risk of spreading the coronavirus through building ventilation systems is likely to be low. The CDC and Occupational Safety and Health Administration (OSHA) recommend considering the following actions for building ventilation systems:

- Routine system maintenance
- Increasing ventilation rates and the amount of outdoor air brought into buildings
- Maintain temperature and humidity at comfortable levels for occupants
- Installing high efficiency air filters

At ISU, normal maintenance of campus building ventilation systems has been continued over the summer, and all systems are operating normally, ready to support Fall 2019 operations, albeit classrooms will be at less than 50% of normal capacity.

### Outdoor air intake

The ventilation rates and outdoor air supply on many of these systems can be adjusted to some degree. Significant changes, however, cannot be accomplished without re-balancing the flow of air throughout buildings, and may require the replacement of multiple system components. Facilities Planning and Management (FP&M) will monitor outdoor air supplies for proper operation, and increase outdoor air intake where possible, but their efforts will be limited by the need to maintain proper temperature and humidity for all building occupants, in particular during warm, humid summer weather and colder winter weather.

### Air filters

Building ventilation systems, where possible, already have very efficient filter systems (known as “MERV-14” rated), which are regularly maintained by FP&M, but they are not necessarily intended to remove particles as small as COVID-19 (0.125 microns). The type of ultra-low particulate filter required to remove the virus would require the university to redesign and reconstruct its systems to be able to overcome the increased resistance of these filters to air flow.

**Personal air filtration devices**

Personal air filtration devices are permitted on campus under certain conditions. The devices should be UL listed and labeled, meaning they conform to widely established safety standards, and should only be plugged directly into a wall outlet, and not into an extension cord or power strip.

Facilities Planning and Management is working in conjunction with Environmental Health and Safety to evaluate classrooms, labs and workspaces where ventilation may be a problem. Ultimately, the best way to prevent the spread of coronavirus remains maintaining the recommended 6-foot physical distance from others, wearing face coverings when such distance is not possible, washing hands frequently, and staying home when not feeling well.

*Last updated July 20, 2020*