

# Ventilation Recommendations

October 13, 2020

The CDC recognizes the risk of infection in poorly ventilated indoor environments. Indoors, the amount of infectious smaller droplets and particles expelled by people with Covid-19 “became concentrated enough to spread the virus to other people,” even to those who arrived in a room shortly after an infected person left.<sup>i</sup>

Face coverings, distancing and hand washing remain the primary mitigation measures for reducing exposure risk indoors. Limiting occupancy time also reduces risk. To the extent that a disease spreads by small aerosols that travel with indoor air currents, HVAC systems may be able to provide some risk reduction by increasing outside air for ventilation or enhancing filter efficiency.<sup>ii</sup> Upgrading filters is generally not recommended for churches due to the pressure drop across higher efficiency filters and resultant reduction in air flow. Improving filtration efficiency and increasing air handling capacity would likely require professional design services, may entail significant capital improvements, and will increase operation and maintenance costs.

Therefore, we provide the following HVAC operating guidance while the facility is in use:

- a. Air changes per hour should be increased to at least 6.
- b. Increase make-up (fresh) air as much as is practical. Increasing outside air quantities will increase cooling and heating loads.
- c. In moderate weather windows may be opened.
- d. For small offices used for more than 2 hours daily, portable air cleaners are recommended.<sup>iii</sup>

—prepared by Andrew Kissell, Back to In-Person Worship Work Group

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<sup>i</sup> <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>

<sup>ii</sup> <https://www.hpac.com/covid-19/article/21138820/assessing-the-role-of-hvac-systems-in-fighting-covid19>

<sup>iii</sup> <https://www.epa.gov/indoor-air-quality-iaq/air-cleaners-and-air-filters-home>