

To the Honorable Senator Nangle, Representative Stover and Members of the Joint Standing Committee on State and Local Government,

I come before you today to ask you to vote Ought to Pass on LD 1173 "An Act Directing the Bureau of General Services to Ensure Adequate Air Quality in All State-owned and State-leased Buildings"

I had the pleasure of clerking for the Joint Standing Committee on Criminal Justice and Public Safety during the 129th and 130th Legislative Sessions, so I was here from the start of the COVID pandemic. Even before the pandemic clerks were complaining of poor ventilation in the committee rooms. The arrival of the pandemic gave us another very serious reason to want to improve the situation. Poor ventilation means any and all contaminants in the air, including viruses will build up, especially when a room is crowded or in use for a long time as committee rooms often are. I chose not to return to my job for the 131st Legislature because the problems with ventilation were not addressed. This bill is an important step forward in ensuring the health and safety of staff, legislators and the general public.

If you tend to feel sleepy and have trouble concentrating after a long day in committee, there may be a very good reason for that. Poor ventilation allows the carbon dioxide (or CO<sub>2</sub>) we all exhale to build up in the room. The current level of CO<sub>2</sub> outdoors is about 420 parts per million (ppm). If the level in a room rises to 1,000 ppm or more it adversely affects our ability to concentrate and make decisions. A study at the University of Boulder Colorado found that at *".. at 1400 ppm, CO<sub>2</sub> concentrations may cut our basic decision-making ability by 25 percent, and complex strategic thinking by around 50 percent"*.

Plus, if anyone in the room is infected with a cold or virus, they exhale airborne viruses along with carbon dioxide so the viral load will build up at the same rate. That means CO<sub>2</sub> can serve as a "proxy" for the density of viruses in the air, and is another very good reason to ensure that the ventilation system is actually doing its job!

Although this bill does not specifically mention CO<sub>2</sub> testing, it is an efficient and inexpensive way of determining if a room has adequate ventilation and should be included as one of the "factors that may affect air quality in each building".

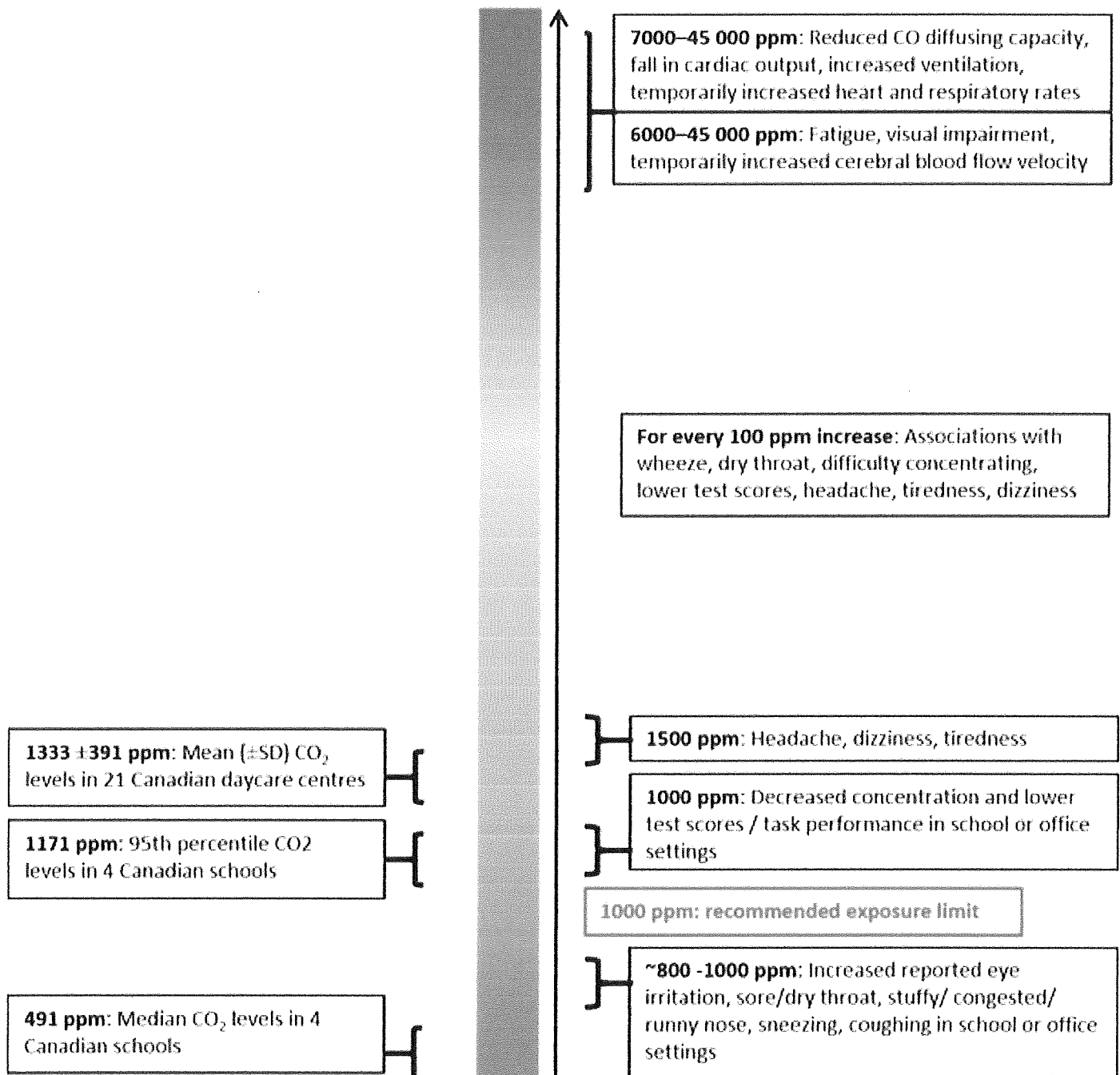
Thank you for allowing me this opportunity and I will try to answer any questions you may have.

Deb Fahy, Hallowell

\* University of Colorado at Boulder. "Rising carbon dioxide causes more than a climate crisis -- it may directly harm our ability to think." ScienceDaily. ScienceDaily, 21 April 2020. <[www.sciencedaily.com/releases/2020/04/200421090556.htm](http://www.sciencedaily.com/releases/2020/04/200421090556.htm)>.

## Measured levels

## Effects\*



From 2021 Canadian report "Residential indoor air quality guidelines: Carbon dioxide"

<https://www.canada.ca/en/health-canada/services/publications/healthy-living/residential-indoor-air-quality-guidelines-carbon-dioxide.html>