

Legislative  
Assembly  
of Ontario



Assemblée  
législative  
de l'Ontario

1ST SESSION, 43RD LEGISLATURE, ONTARIO  
2 CHARLES III, 2023

# Bill 140

**An Act respecting improving air quality for schools and child care providers**

**Co-sponsors:**

Ms C. Pasma  
Ms T. Armstrong  
Ms B. Karpoche

**Private Members' Bill**

1st Reading      October 19, 2023

2nd Reading

3rd Reading

Royal Assent



#### EXPLANATORY NOTE

The Bill enacts the *Improving Air Quality for Our Children Act, 2023*. The Act provides that every publicly-funded school and every child care provider licensed under the *Child Care and Early Years Act, 2014* shall install carbon dioxide monitors in every classroom and congregate space, including portables, gymnasiums, change rooms, auditoriums, cafeterias, music rooms, libraries, staff rooms and main offices. The Act also sets out a maximum carbon dioxide threshold of 600 parts per million above outdoor carbon dioxide levels. Schools and child care providers to which the Act applies are required to report carbon dioxide levels to the Ministry of Education as well as what measures have been taken in response. The Act also requires that the Ministry of Education develop an Air Quality Action Plan that includes measures to be taken when carbon dioxide levels approach and exceed the maximum threshold.

## An Act respecting improving air quality for schools and child care providers

### Preamble

Children's access to early learning and education is affected by air quality and by the prevalence of airborne illnesses which can be reduced through good quality ventilation. Studies have shown that children learn better, have better test scores in math, science, and reading, fewer school absences and fewer symptoms of respiratory conditions such as asthma when ventilation in classrooms is improved. Studies have also shown that better ventilation decreases absenteeism among staff and improves morale and job performance for teachers, education workers and child care workers.

Carbon dioxide levels are widely recognized by experts as a proxy measurement for the quality of air indoors and for tracking the functioning of ventilation systems. Evidence from other jurisdictions shows that classrooms with mechanical ventilation systems can still have high rates of carbon dioxide levels that exceed safe norms due to incorrect installation, user error or improper maintenance. We therefore cannot conclude that simply upgrading ventilation in Ontario classrooms and child care centres is providing the best level of air quality for our children. We need to actually measure air quality to ensure that our children are in safe classroom settings that support their learning. Transparency and accountability are both needed to ensure good air quality in Ontario's classrooms and child care centres.

Therefore, His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

### Definitions

1 In this Act,

“Minister” means the Minister of Education; (“ministre”)

“Ministry” means the Ministry of Education. (“ministère”)

### Application

2 This Act applies to,

- (a) every publicly-funded school; and
- (b) every child care provider licensed under the *Child Care and Early Years Act, 2014*.

### Carbon dioxide monitors

3 (1) Every school and child care provider to which this Act applies shall install carbon dioxide monitors in every classroom and congregate space, including portables, gymnasiums, change rooms, auditoriums, cafeterias, music rooms, libraries, staff rooms and main offices.

### Same

(2) It is the responsibility of school boards to ensure that,

- (a) every school to which this Act applies installs carbon dioxide monitors; and
- (b) carbon dioxide monitors are installed in spaces within schools that are leased to or occupied by child care centres and community groups, if the space is contiguous with the rest of the school building.

### Monitor specifications

(3) Carbon dioxide monitors referred to in subsection (1) must have an NDIR sensor and a visible display panel.

### Installation requirements

(4) The carbon dioxide monitors must be installed in accordance with the following requirements:

1. The monitors must be installed in the occupied space, rather than in the ductwork.
2. The monitors must be installed between 1.3 and 1.5 metres above the finished floor.
3. The monitors must be located away from ventilation equipment, windows and doors.
4. The monitors must be located at least 1.5 metres away from occupants.

5. The monitors must be powered to ensure continuous monitoring.

#### **Recalibration**

- (5) The carbon dioxide monitors shall be recalibrated at least once every year.

#### **Maximum carbon dioxide threshold**

**4** (1) The maximum threshold for carbon dioxide levels in a school or child care facility is 600 parts per million above outdoor carbon dioxide levels.

#### **Publication**

- (2) The Ministry shall publish annually on its website the target carbon dioxide level in parts per million for each region of the province based on outdoor carbon dioxide levels for that region.

#### **Carbon dioxide reporting**

**5** (1) Every school and child care facility to which this Act applies shall report to the Ministry, at least once per week, the average daily carbon dioxide levels for each room in the school or child care facility with a carbon dioxide monitor during the times at which the room is occupied, as well as the percentage of occupied time during which the carbon dioxide levels exceed the maximum threshold set under section 4.

#### **Publication**

- (2) The Ministry shall publish the reports referred to in subsection (1) on its website.

#### **Same**

- (3) The Ministry shall also publish the raw data received from each school board and child care operator on its website in the format in which it was provided by the school board or child care operator.

#### **Colour-coded system**

- (4) The published reports shall use a colour-coded system in accordance with the following requirements:
  1. Spaces that are 200 parts per million or more below the maximum threshold for carbon dioxide shall be indicated in green.
  2. Spaces that are within 200 parts per million of the maximum threshold shall be indicated in yellow.
  3. Spaces that are at or above the maximum threshold shall be indicated in red.

#### **Air Quality Action Plan**

**6** (1) The Ministry shall, no more than 60 days after the day this section comes into force, develop an Air Quality Action Plan.

#### **Consultation**

- (2) In developing the Air Quality Action Plan, the Ministry shall consult with the following:
  1. Engineers.
  2. Experts in heating, ventilation and air conditioning.
  3. Industrial hygienists.
  4. Unions for teachers and other education workers.
  5. Principals and administrators.
  6. Early childhood educators.
  7. School boards.

#### **Details**

- (3) The Air Quality Action Plan shall include the following:
  1. Measures to be taken when carbon dioxide levels approach the maximum threshold, including,
    - i. using portable air filters, opening windows, moving the students to another location and reducing class sizes, and
    - ii. improving the efficiency of HVAC filters, if the system allows, or taking other measures to increase airflow.
  2. Measures to be taken when carbon dioxide levels exceed the maximum threshold, including,
    - i. temporary measures that should be taken, such as using additional portable air filters, opening windows, moving the students to another location and reducing class sizes,
    - ii. intermediate measures, such as investigating if repairs are needed or taking measures to increase airflow, and

- iii. long-term measures, such as upgrades to the ventilation system.
- 3. Guidance on the quality of products to be used, including noise level standards and filtration standards.
- 4. Guidance on the qualifications required to assess and implement intermediate and long-term measures to address carbon dioxide levels.
- 5. Guidance on who is responsible for monitoring carbon dioxide levels and implementing which measure in response.
- 6. Guidance on when temporary and intermediate measures are sufficient and when long-term measures must be adopted.
- 7. Educational resources for the following groups regarding air quality, carbon dioxide, the benefits of improved air quality and the benefits of mitigation measures:
  - i. School boards.
  - ii. Principals.
  - iii. Teachers and education workers.
  - iv. Child care workers.
  - v. Workplace health and safety committees.
  - vi. Parents.
  - vii. Children.
- 8. Infographics that can be placed on the wall next to carbon dioxide monitors that allow room occupants to decipher carbon dioxide levels and that explain what steps can be taken as carbon dioxide levels rise.

#### **Publications and dissemination**

(4) The Minister shall ensure that the Air Quality Action Plan is published on the Ministry's website and circulated to school boards and child care centres.

#### **School boards responsible**

(5) Every school board shall ensure that it complies with the Air Quality Action Plan.

#### **Reporting — schools, child care centres**

7 (1) When carbon dioxide levels exceed the maximum threshold at a school or child care centre to which this Act applies, the school or child care centre shall report to the Ministry what measures have been taken in response.

#### **Publication**

(2) The Ministry shall publish the reports on its website.

#### **Regulations**

8 The Minister may make regulations prescribing measures to be taken in response to non-compliance, including warnings, penalties and measures to bring about compliance.

#### **Commencement**

9 This Act comes into force three months after the day it receives Royal Assent.

#### **Short title**

10 The short title of this Act is the *Improving Air Quality for Our Children Act, 2023*.