

HOUSE No. 1990

The Commonwealth of Massachusetts

PRESENTED BY:

Denise Provost

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act reducing human exposure to particulate matter pollution.

PETITION OF:

| NAME: | DISTRICT/ADDRESS: |
|----------------------------|--------------------------------|
| <i>Denise Provost</i> | <i>27th Middlesex</i> |
| <i>Christine P. Barber</i> | <i>34th Middlesex</i> |
| <i>Michelle M. DuBois</i> | <i>10th Plymouth</i> |
| <i>Carolyn C. Dykema</i> | <i>8th Middlesex</i> |
| <i>James B. Eldridge</i> | <i>Middlesex and Worcester</i> |
| <i>Nika C. Elugardo</i> | <i>15th Suffolk</i> |
| <i>Tami L. Gouveia</i> | <i>14th Middlesex</i> |
| <i>James K. Hawkins</i> | <i>2nd Bristol</i> |
| <i>Jonathan Hecht</i> | <i>29th Middlesex</i> |
| <i>Kay Khan</i> | <i>11th Middlesex</i> |
| <i>José F. Tosado</i> | <i>9th Hampden</i> |

HOUSE No. 1990

By Ms. Provost of Somerville, a petition (accompanied by bill, House, No. 1990) of Denise Provost and others relative to reducing human exposure to particulate matter pollution. Public Health.

The Commonwealth of Massachusetts

**In the One Hundred and Ninety-First General Court
(2019-2020)**

An Act reducing human exposure to particulate matter pollution.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. Chapter 17 of the General Laws is hereby amended by inserting after
2 Section 20 the following sections:—

3 “particulate matter” shall mean the broad class of chemically and physically diverse
4 substances that exist as discrete particles in air, including coarse, fine, and ultrafine particles.

5 “fine particles” shall mean particles less than or equal to 2.5 micrometers in diameter.

6 “ultrafine particles” shall mean particles less than or equal to .1 micrometers in diameter
7 (.1 micrometers is equivalent to 100 nanometers).

8 “nanoparticles” shall have the same meaning as “ultrafine particles.”

9 “black carbon” shall mean those fine particles less than or equal to 2.5 micrometers in
10 diameter (also known as soot).

11 “high-activity roadway” shall mean any roadway that, on an average day, has traffic in
12 excess of 50,000 vehicles.

13 “exposure” shall mean inhalable particulate matter that is emitted from pollution sources
14 and which may come into contact with human respiratory systems.

15 “minimal exposure” shall mean indoor particulate matter levels 80% or more lower than
16 outdoor levels.

17 “mitigations” are modifications to sites or structures which reduce levels of particulate
18 matter pollution exposure. These shall include, but are not limited to: the implementation of
19 filtration systems, location of air inlets, sound-proofing, land use buffers, vegetative or structural
20 barriers, decking over highway, building set-backs (siting), trees, gardens, and/or parks.

21 “substantially reduced” shall mean particulate matter levels which meet a verifiable
22 reduction in indoor ultrafine particle levels by 80 percent, relative to outdoor levels.

23 SECTION 2. This Act may be cited as the ‘Healthy Breathing Act’

24 SECTION 3. Chapter 21A of the General Laws, as appearing in the 2016 Official
25 Edition, is hereby amended by inserting after section 18A, as Section 18B, the following
26 section:-

27 SECTION 4 (Section 18B). The department of environmental protection, in consultation
28 with the department of public health, shall promulgate regulations for conducting indoor/outdoor
29 assessments monitoring exposure to ultrafine, fine, and black carbon particulate matter
30 concentrations present in the indoor air of existing and proposed buildings, based on the best

31 available science about the health risks associated with ultrafine, fine, and black carbon
32 particulate matter.

33 (a) The department of environmental protection's regulations shall at minimum set
34 forth standard procedures for conducting air dispersion modeling, managing air pollution,
35 monitoring particulate matters, and estimating exposure.

36 (b) The department of environmental protection shall by regulation or by subregulator
37 guidance establish standards and operating procedures for air quality verification testing.

38 SECTION 5. Section 4A of chapter 15D of the General Laws, as so appearing, is hereby
39 amended by adding the following paragraph:-

40 (e) The department of early education and care shall issue an original license for a school
41 age child care program, day care center, family day care system, group care facility or temporary
42 shelter facility, family day care home or large family day care home which is not a part of a
43 family day care system, as defined in section 1A of chapter 15D of the General Laws, and
44 located within 500 feet of a high-activity roadway or a train station or train yard serving diesel
45 locomotives only after the applicant has carried out the indoor/outdoor assessment described in
46 section 18B of chapter 21A of the General Laws and the assessment results indicate the
47 concentration of fine, ultrafine, and black carbon particles in indoor air is or will be mitigated to
48 at least 80 percent below outdoor air concentrations.

49 (f) No license shall be issued until acceptable mitigation has been installed and is
50 functioning.

51 SECTION 6. Section 1A of chapter 40A of the General Laws, as so appearing is hereby
52 amended by inserting before the definition of “permit granting authority” the following
53 definitions:

54 “construction” shall mean new construction or rehabilitation up to 50 percent of assessed
55 value.

56 “high-activity roadway” shall mean any roadway that, on an average day, has traffic in
57 excess of 50,000 vehicles.

58 “hospital” shall mean any institution in the Commonwealth of Massachusetts, however
59 named, whether conducted for charity or for profit, which is advertised, announced, established
60 or maintained for the purpose of caring for persons admitted thereto and staying overnight for
61 diagnosis or medical, surgical or restorative treatment which is rendered within said institution;
62 but shall not include clinics, day surgery centers, dialysis centers, or other such health care
63 facilities which do not admit patients overnight.

64 “long-term care facility” shall mean any institution whether conducted for charity or
65 profit which is advertised, announced or maintained for the express or implied purpose of
66 providing three or more individuals admitted thereto with long-term resident, nursing,
67 convalescent or rehabilitative care; supervision and care incident to old age for ambulatory
68 persons; or retirement home care for elderly persons. Long-term care facility shall include
69 convalescent or nursing homes, rest homes, and charitable homes for the aged.

70 “particulate matter mitigation” shall mean strategies, structural and nonstructural, that
71 verifiably reduce indoor ultrafine particle levels by 80 percent, relative to outdoor levels.

72 “publicly funded” shall mean any entity or institution which receives federal, state or
73 municipal monies, grants, and/or subsidies.

74 “publicly subsidized” shall mean any project receiving any form of direct funding, loan,
75 loan guarantee, tax credit, TIF funding, publicly bonded funds, or property tax incentives, issued
76 or granted by any public or quasi-public entity.

77 “school” shall mean any public or private institution primarily engaged in the education
78 of persons aged 18 years and younger. This definition does not include institutions of higher
79 education.

80 SECTION 7. Chapter 40A of the General Laws, as so appearing is hereby amended by
81 inserting as Section 9D the following:

82 No permit granting authority shall grant a building permit for any proposed residential
83 development, hospital, school, long-term care facility, school aged child care program, day care
84 center, family day care home or large family day care home which is not a part of a family day
85 care system, family day care system, or group care facility or temporary shelter facility as
86 defined in section 1A of chapter 15D of the General Laws within 500 feet of a high-activity
87 roadway or a diesel rail yard or station, unless

88 (a) the owner or applicant carries out an indoor/outdoor particulates assessment
89 consistent with the regulations adopted pursuant to section 18B of chapter 21A of the General
90 Laws, and

91 (b) the assessment results indicate that the concentration of fine, ultrafine, and black
92 carbon particulates is or will be mitigated to at least 80 percent below outdoor concentrations.

93 SECTION 8: Subsection a of section 6 of chapter 70B of the General Laws, as so
94 appearing, is hereby amended by inserting after subparagraph (6) the following paragraph:-

95 (7) If the school project includes structures, apart from parking structures and accessory
96 structures, within 500 feet of a high-activity roadway as defined in Section 21 of Chapter 17 of
97 the General Laws or a train station or train yard serving diesel locomotives, the applicant has
98 carried out the indoor/outdoor particulates assessment described in section 18B of chapter 21A
99 of the General Laws and the assessment results indicate that the concentration of fine, ultrafine,
100 and black carbon particulates is or will be mitigated to at least 80 percent below outdoor
101 concentrations.

102 SECTION 9: Section 51 of Chapter 111 of the General Laws, as so appearing, is hereby
103 amended by inserting after the second paragraph the following paragraph:

104 No original license shall be issued to establish a hospital so as to place structures
105 inhabited by patients within 500 feet of a high-activity roadway or a train station or train yard
106 serving diesel locomotives unless the developer has carried out the indoor/outdoor particulates
107 assessment described in section 18B of chapter 21A of the General Laws and the assessment
108 results indicate that indoor fine, ultrafine, and black carbon particulate levels are or will be
109 mitigated to at least 80 percent below that of outdoor levels. In the case of a facility previously
110 licensed as a hospital in which there is only a change in ownership, no such particulates
111 assessment shall be required, in the absence of expansions or new construction.

112 SECTION 10: Section 71 of Chapter 111 of the General Laws, as so appearing, is hereby
113 amended by inserting after the second paragraph the following paragraph:-

114 No original license shall be issued to establish a convalescent or nursing home, rest home
115 or charitable home for the aged so as to place residential structures within 500 feet of a high-
116 activity roadway as defined in section 1A of chapter 40A or a train station or train yard serving
117 diesel locomotives unless the developer has carried out the particulates assessment described in
118 section 18B of chapter 21A of the General Laws and the assessment results indicate indoor fine,
119 ultrafine, and black carbon particulate levels are or will be mitigated to at least 80 percent below
120 those of outdoor levels. In the case of a facility previously licensed in which there is only a
121 change in ownership, no such health risk assessment shall be required, in the absence of
122 expansion or new construction.