

HOUSE No.

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>Lori A. Ehrlich</i>	<i>8th Essex</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>
<i>Elizabeth A. Malia</i>	<i>11th Suffolk</i>
<i>Jonathan Hecht</i>	<i>29th Middlesex</i>
<i>Patricia D. Jehlen</i>	<i>Second Middlesex</i>
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>
<i>James Arciero</i>	<i>2nd Middlesex</i>

HOUSE No.

[Pin Slip]

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE HOUSE, NO. 786 OF 2013-2014.]

The Commonwealth of Massachusetts

**In the One Hundred and Eighty-Ninth General Court
(2015-2016)**

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. Section 1 of Chapter 111 of the General Laws is hereby amended by
2 inserting the following:—

3 Section 1. The following words as used in this chapter, unless a different meaning is
4 required by the context or is specifically prescribed, shall have the follow meanings:

5 “black carbon” shall mean a combustion related component of fine particulate matter less
6 than or equal to 2.5 micrometers in diameter (also known as soot).

7 “exposure” shall mean inhalable particulate matter that is emitted from pollution sources
8 and which is capable of coming into contact with human respiratory systems.

9 “fine particles” shall mean particulate matter less than or equal to 2.5 micrometers in
10 diameter.

11 “minimal exposure” shall mean indoor particulate matter levels of 80% or more lower
12 than pre-mitigation levels.

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

15 “particulate matter mitigation” shall mean verifiable structural and/or nonstructural
16 strategies that minimize exposure to particulate matter pollution. Modification to sites or
17 structures which can be demonstrated to reduce levels of particulate matter pollution shall
18 include but are not limited to: nonstructural strategies such as vegetative barriers, land use
19 buffers, trees, gardens and parks; and structural strategies such as indoor air filtration systems,
20 built barriers, highway decking, building set-back, siting of air inlets, sound-proofing and tight
21 envelope building construction.

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

24 “ultrafine particles” shall mean particulate matter less than or equal to .1 micrometers in
25 diameter (.1 micrometers is equivalent to 100 nanometers).

26 “verification testing” shall mean near simultaneous indoor and outdoor particulate
27 number concentration measurements for 72 consecutive weekday hours. Measurements must be
28 made with a certified instrument to accurately count particles down to 7 nanometers in diameter.
29 Verification is confirmed if results indicate substantially reduced exposure.

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

31 SECTION 3. Chapter 111 of the General Laws is hereby amended by inserting after
32 Section 231 the following: —

33 Section 232. The bureau of environmental health of the department of public health shall
34 conduct a comprehensive review of the scientific literature on health effects of particulate matter
35 pollution from surface transportation. The study shall quantify the expected health impacts from
36 fine and ultrafine particulate matter upon persons living, engaging in physical activity or
37 attending school within 500 feet of any roadway with 50,000 or more motor vehicle trips per
38 day, or any station regularly used by diesel locomotives; provided further, that the study shall
39 include, but not be limited to, examining respiratory and cardiovascular disease and cancer
40 incidence that is affected by exposure to surface transportation-related particles. The following
41 departments and agencies of the commonwealth shall provide information to the bureau of
42 environmental health of the department of public health relevant to the study: the department of
43 environmental protection, the department of transportation (MassDOT), and the central
44 transportation planning staff of the Boston metropolitan planning organization. The department
45 of public health shall report its findings, or a progress report, together with any recommended
46 response actions by the commonwealth to the joint committee on healthcare finance, to the
47 secretary of the executive office of energy and environmental affairs, and to the secretary of the
48 executive office of transportation, not later than two years after the adoption of this section.

49 SECTION 4. Chapter 21A of the General Laws, as appearing in the 2014 Official
50 Edition, is hereby amended by inserting after section 18A the following section:-

51 Section 18B. The department of environmental protection, in consultation with the
52 department of public health, shall promulgate regulations, based on the best available science, for
53 conducting health risk assessments for exposure to fine and ultrafine particulate matter.

54 (a) Such regulations shall set forth standard procedures for conducting air dispersion
55 modeling, managing air pollution, monitoring particulate matter, and estimating exposure with
56 accuracy and completeness.

57 (b) The department of environmental protection shall by regulation establish standards
58 and operating procedures for air quality verification testing.

59 Section 18C. The central transportation planning staff of the metropolitan planning
60 organizations shall produce maps or data sufficient to produce maps, based on the best available
61 science, reflecting vehicle counts and identifying parcels located within 500 feet of a high-
62 activity roadway or station serving diesel locomotives, and shall make such data and maps
63 available to the municipalities it serves. Such data and maps shall be updated at least every five
64 years.

65 SECTION 5. Section 3 of chapter 15D of the General Laws, as so appearing, is hereby
66 amended by adding the following paragraph:-

67 (a) The department of early education and care shall issue an original license for a school
68 age child care program, day care center, family day care home or large family day care home
69 which is not a part of a family day care system, family day care system, group care facility or
70 temporary shelter facility located within 500 feet of a high-activity roadway or station serving
71 diesel locomotives only after the applicant has carried out a health risk assessment meeting the
72 technical requirements of section 18B of chapter 21A of the General Laws and the assessment

73 results indicate either: i) that the site receives minimal exposure to particulate matter; or ii)
74 conditions have been mitigated so as to substantially reduce such exposure. The provisions of
75 this paragraph shall apply to every city and town, including but not limited to the city of Boston
76 and the city of Cambridge.

77 (b) For purposes of this section, the definitions of section 1 of chapter 111, and section
78 1A of chapter 40A shall apply.

79 SECTION 6. Section 1A of chapter 40A of the General Laws, as so appearing, is hereby
80 amended by inserting the following definitions:-

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

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

89 “new construction” shall mean a new project that has submitted approved architectural
90 plans, and is going through the building permit process, or has been issued a building permit
91 from a permit granting authority.

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

95 “substantial renovation”

96 SECTION 7. Section 3 of chapter 40A of the General Laws, as so appearing, is hereby
97 amended by inserting after line 93, the following language:-

98 (a) Notwithstanding any general or special law to the contrary, no building permit for
99 new construction or substantial renovation shall be issued for any residential development, long-
100 term care facility, or school, ~~public open space~~ within 500 feet of a high activity roadway or
101 station serving diesel locomotives, until the owner to applicant has carried out a health risk
102 assessment meeting the technical requirements of section 18B of chapter 21A of the General
103 Laws and the assessment results indicate either: i) that particulate matter pollution levels at the
104 site pose minimal exposure; or ii) conditions have been mitigated so as to substantially reduce
105 such exposure. The provisions of this paragraph shall apply to every city and town, including but
106 not limited to the city of Boston and the city of Cambridge.

107 (b) No certificate of occupancy for new construction or substantial renovation of land
108 uses listed in subsection A shall be issued until a certified industrial hygienist or licensed
109 professional civil, environmental or mechanical engineer with the necessary skills and abilities to
110 conduct indoor and outdoor air pollution monitoring conducts verification testing, pursuant to
111 regulations set forth in section 18B of chapter 21A, for completed particulate matter mitigation
112 where new construction or rehabilitation is substantially complete.

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

115 (7) If the school project includes structures, apart from parking structures and accessory
116 structures, within 500 feet of a high-activity roadway as defined in section 1A of chapter 40A of
117 the General Laws or station serving diesel locomotives, the developer, owner or applicant has
118 carried out the health risk assessment meeting the technical requirements of section 18B of
119 chapter 21A of the General Laws and the assessment results indicate that: i) exposure to
120 particulate matter at the site is minimal, or ii) such exposure can and will be mitigated so as to
121 substantially reduce exposure.

122 SECTION 9. Section 71 of chapter 111 of the General Laws, as so appearing, is hereby
123 amended by inserting after the second paragraph the following paragraph:-

124 An original license shall only be issued to establish a convalescent or nursing home, rest
125 home or charitable home for the aged so as to place residential structures within 500 feet of a
126 high-activity roadway as defined in section 1 of chapter 40A or station serving diesel
127 locomotives if the developer, owner or applicant has carried out the health risk assessment
128 meeting the technical requirements of section 18B of chapter 21A of the General Laws and the
129 assessment results indicate that: i) exposure to particulate matter at the site is minimal, or ii) such
130 exposure can and will be mitigated so as to substantially reduce exposure. In the case of a facility
131 previously licensed in which there is only a change in ownership, no such health risk assessment
132 shall be required, in the absence of rehabilitation or new construction.

133 SECTION 10. DEP enforcement and/or penalty/appeals.