



General Assembly

Amendment

February Session, 2022

LCO No. 5371



Offered by:
SEN. KUSHNER, 24th Dist.

To: Subst. Senate Bill No. 423

File No. 320

Cal. No. 239

"AN ACT IMPROVING INDOOR AIR QUALITY IN PUBLIC SCHOOL CLASSROOMS."

1 Strike everything after the enacting clause and substitute the
2 following in lieu thereof:

3 "Section 1. (NEW) (*Effective July 1, 2022*) As used in this section and
4 sections 2 to 6, inclusive, of this act:

5 (1) "Commissioner" means the Labor Commissioner or the
6 commissioner's designee;

7 (2) "Person" means one or more individuals, partnerships,
8 associations, corporations, limited liability companies, business trusts,
9 legal representatives or any organized group of persons;

10 (3) "Employee" means any person engaged in service to an employer
11 in a business of his employer;

12 (4) "Local or regional board of education" means local and regional
13 boards of education as used in title 10 of the general statutes and

14 includes regional educational service centers, state board of education
15 approved incorporated or endowed high schools or academies and state
16 charter schools;

17 (5) "School facilities" means any permanent building or portable
18 building or structure or commercial space owned, rented, operated or
19 leased by boards of education and charters, including donated space,
20 used as a classroom or day care, or any other space for education
21 services including, but not limited to, classrooms, cafeterias, staff
22 lounges, staff offices, auditoriums, gymnasiums or libraries;

23 (6) "Heating, ventilation and air conditioning system" means the
24 equipment, distribution network, controls and terminals that provide,
25 either collectively or individually, heating, ventilation or air
26 conditioning to a building;

27 (7) "School activity hours" means any time of day in which students
28 or school personnel occupy school facilities throughout the year;

29 (8) "ASHRAE Standard 62" means the most recent edition of the
30 American National Standards Institute/American Society of Heating,
31 Refrigerating and Air-conditioning Engineers Standard 62.1 entitled
32 "ventilation for acceptable indoor air quality";

33 (9) "Indoor air quality" has the same meaning as used by the United
34 States Department of Labor Occupational Safety and Health
35 Administration Standard Number 1910.1000 "OSHA Policy on Indoor
36 Air Quality;

37 (10) "Public school temperature range" means a temperature from
38 sixty-eight degrees Fahrenheit to seventy-six degrees Fahrenheit;

39 (11) "Public school relative humidity range" means relative humidity
40 levels within twenty to sixty per cent;

41 (12) "Properly licensed heating, ventilation and air conditioning
42 contractor" means a contractor who is licensed in accordance with
43 chapter 393 of the general statutes;

44 (13) "Properly certified testing, adjusting and balancing technician"
45 means a technician certified to perform testing, adjusting and balancing
46 of heating, ventilation and air conditioning systems by the Associated
47 Air Balance Council, the National Environmental Balancing Bureau or
48 the Testing, Adjusting and Balancing Bureau, or individuals training
49 under the supervision of a Testing, Adjusting and Balancing Bureau
50 certified technician or a person certified to perform ventilation
51 assessments of heating, ventilation and air conditioning systems
52 through a certification body accredited by the American National
53 Standards Institute; and

54 (14) "Skilled and trained construction workforce" means a workforce,
55 managed in conformance with the Davis-Bacon Act of 1931 40 USC 3145,
56 et seq., as amended from time to time, in which at least sixty per cent of
57 the workers are graduates of or registered in and attending an
58 apprenticeship program registered with the Labor Department's office
59 of apprenticeship training.

60 Sec. 2. (NEW) (*Effective July 1, 2023*) (a) Except as otherwise provided
61 in subdivision (4) of subsection (b) of this section, on or before August
62 15, 2023, the Labor Department shall, in accordance with the definitions
63 of subdivisions (10) and (11) of subsection (a) of section 1 of this act,
64 establish: (1) A mandatory public school temperature range; and (2) a
65 mandatory public school relative humidity range. The temperature and
66 relative humidity readings for public school facilities shall be taken in a
67 location or locations that are illustrative of the highest and lowest
68 temperature and relative humidity in the school facility where student
69 instruction or activities are taking place during school activity hours.

70 (b) (1) On or before June 30, 2024, the Labor Commissioner, in
71 consultation with the Commissioner of Education and the Secretary of
72 the Office of Policy and Management, or their designees, shall establish
73 a routine school indoor air quality schedule for school facilities to assess
74 their heating, ventilation and air conditioning system.

75 (2) The routine indoor air quality assessment shall be performed by a

76 certified Testing, Adjusting and Balancing technician or mechanical
77 engineer. The ventilation assessment shall verify whether the existing
78 mechanical ventilation system follows the recommendations of the
79 American Society of Heating, Refrigerating and Air-Conditioning
80 Engineers for ventilation needs during the 2020 coronavirus disease
81 pandemic. The ventilation assessment for heating, ventilation and air
82 conditioning systems shall include: (A) Testing for maximum filter
83 efficiency; (B) physical measurements of outside air rate; (C) verification
84 of operation of ventilation components; (D) measurement of all air
85 distribution inlets and outlets; (E) verification of unit operation and that
86 required maintenance has been performed in accordance with ASHRAE
87 Standard 62; (F) verification of control sequences; (G) verification of
88 carbon dioxide sensors; and (H) collection of field data for the
89 installation of mechanical ventilation if none exist.

90 (3) The indoor air quality and ventilation assessment shall result in a
91 written report, prepared by the technician and reviewed by a
92 mechanical engineer and shall include appropriate corrective actions
93 needed for the mechanical ventilation system or the heating, ventilation
94 and air conditioning infrastructure, including installation of filters
95 meeting the most optimal level of filtration available for a given heating,
96 ventilation and air conditioning system, installation of carbon dioxide
97 sensors and additional maintenance, repairs, upgrades or replacement.

98 (4) The Labor Commissioner shall have the discretion to reasonably
99 adjust the initial reporting deadline by up to six months for districts that
100 submit a request for an extension to account for a lack of availability of
101 certified technicians to complete such report.

102 (c) On or before July 1, 2024, and every three years thereafter, each
103 local and regional board of education shall conduct an indoor air quality
104 and ventilation assessment.

105 (d) Local and regional boards of education shall make the appropriate
106 corrective actions identified in the ventilation assessment report and
107 duly issue a report of completed corrective actions. The corrective

108 actions shall include testing, adjusting and balancing the public school
109 mechanical ventilation system and, if necessary or cost effective, repair,
110 upgrade or replacement of the existing heating, ventilation and air
111 conditioning system or the installation of a stand-alone mechanical
112 ventilation system. The corrective actions identified in the ventilation
113 assessment may include general maintenance, reading and adjustment
114 of ventilation rates, filter replacement to meet the most optimal level of
115 filtration available for the given heating, ventilation and air
116 conditioning system, while assuring the pressure drop is less than the
117 fan's capability, carbon dioxide monitor installation or complete system
118 installation or replacement. Portable filtration and air cleaners shall be
119 used only if the existing heating, ventilation and air conditioning
120 infrastructure cannot meet minimum filtration and ventilation
121 requirements or, as recommended by a mechanical engineer, as
122 supplemental enhancement to the permanent heating, ventilation and
123 air conditioning infrastructure when the desired indoor air quality
124 cannot be maintained with the mechanical ventilation system or there
125 are concerns with outdoor air contaminants such as those created by
126 wildfires and pollution.

127 (e) Any remediation, additions or alterations to a heating, ventilation
128 and air conditioning system shall be performed by a properly licensed
129 heating, ventilation and air conditioning contractor employing a skilled
130 and trained construction workforce consisting of journey persons and
131 registered apprentices, pursuant to title 31 of the general statutes, in
132 accordance with chapter 393 of the general statutes.

133 (f) All testing and certifications of a heating, ventilation and air
134 conditioning system shall be performed by a properly certified testing,
135 adjusting and balancing technician.

136 (g) Local and regional boards of education shall be responsible for the
137 ongoing maintenance of heating, ventilation and air conditioning
138 systems in a manner enabling such systems to continually maintain
139 indoor air quality and temperature and humidity ranges in school
140 facilities during school activity hours in accordance with the routine

141 school indoor air quality and ventilation assessment performed by a
142 certified testing, adjusting and balancing technician or mechanical
143 engineer. Each local and regional board of education shall participate in
144 the United States Environmental Protection Agency's Air Quality Flag
145 Program for Schools.

146 (h) (1) On or before June 30, 2027, and each year thereafter, each local
147 and regional board of education shall operate and maintain a heating,
148 ventilation and air conditioning system in full compliance with section
149 10-231e of the general statutes and the indoor air quality assessment
150 recommendations and public school temperature and humidity ranges
151 established pursuant to subsection (b) of this section.

152 (2) Any written assessment report produced pursuant to subsection
153 (b) of this section and any corrective action report produced pursuant to
154 subsection (d) of this section shall be duly made available for public
155 inspection, posted on the local or regional board of education's Internet
156 web site and submitted to the Labor Department within thirty days of
157 the production of such reports.

158 Sec. 3. (NEW) (*Effective July 1, 2022*) (a) The Commissioner of Public
159 Health in consultation with the Commissioner of Administrative
160 Services shall determine threshold school air quality emergency
161 conditions based on the presence of an excessive combination of indoor
162 temperature and humidity levels that together result in a heat index
163 temperature of eighty degrees or higher as indicated on the National
164 Weather Service heat index matrix or some other threshold such
165 commissioners may determine taking into consideration of mandatory
166 public school temperature and humidity ranges established in section 2
167 of this act and the best interest of protecting children's health.

168 (b) Each local and regional board of education shall close a school, or
169 an affected portion of a school, for the day if a school exceeds threshold
170 school air quality emergency conditions for twelve or more consecutive
171 school activity hours. Any school closure or closure of a portion of a
172 school required pursuant to this subsection shall not result in

173 diminishment of pay for any board of education employee or any
174 employee contracted to work for such board of education, who was
175 scheduled to work on such day or days.

176 Sec. 4. Subsection (d) of section 10-220 of the 2022 supplement to the
177 general statutes is repealed and the following is substituted in lieu
178 thereof (*Effective July 1, 2023*):

179 (d) Prior to [January 1, 2008] July 1, 2024, and every [five years] year
180 thereafter, for every school building that is or has been constructed,
181 extended, renovated or replaced on or after January 1, [2003] 1854, a
182 local or regional board of education shall provide for a uniform
183 inspection and evaluation program of the indoor air quality within such
184 buildings, such as the Environmental Protection Agency's Indoor Air
185 Quality Tools for Schools Program. The inspection and evaluation
186 program shall include, but not be limited to, a review, inspection or
187 evaluation of the following: (1) The heating, ventilation and air
188 conditioning systems; (2) radon levels in the air; (3) potential for
189 exposure to microbiological airborne particles, including, but not
190 limited to, fungi, mold and bacteria; (4) chemical compounds of concern
191 to indoor air quality including, but not limited to, volatile organic
192 compounds; (5) the degree of pest infestation, including, but not limited
193 to, insects and rodents; (6) the degree of pesticide usage; (7) the presence
194 of and the plans for removal of any hazardous substances that are
195 contained on the list prepared pursuant to Section 302 of the federal
196 Emergency Planning and Community Right-to-Know Act, 42 USC 9601
197 et seq.; (8) ventilation systems; (9) plumbing, including water
198 distribution systems, drainage systems and fixtures; (10) moisture
199 incursion; (11) the overall cleanliness of the facilities; (12) building
200 structural elements, including, but not limited to, roofing, basements or
201 slabs; (13) the use of space, particularly areas that were designed to be
202 unoccupied; and (14) the provision of indoor air quality maintenance
203 training for building staff. Local and regional boards of education
204 conducting evaluations pursuant to this subsection shall make available
205 for public inspection the results of the inspection and evaluation at a
206 regularly scheduled board of education meeting and on the board's or

207 each individual school's web site.

208 Sec. 5. Subsection (b) of section 10-283 of the 2022 supplement to the
209 general statutes is repealed and the following is substituted in lieu
210 thereof (*Effective July 1, 2024*):

211 (b) (1) Notwithstanding the application date requirements of this
212 section, at any time within the limit of available grant authorization and
213 within the limit of appropriated funds, the Commissioner of
214 Administrative Services, in consultation with the Commissioner of
215 Education, may approve applications for grants and make payments for
216 such grants, for any of the following reasons: (A) To assist school
217 building projects to remedy damage from fire and catastrophe, (B) to
218 correct safety, health and other code violations, (C) to replace roofs,
219 including the replacement or installation of skylights as part of the roof
220 replacement project, (D) to remedy a certified school indoor air quality
221 emergency, (E) to install insulation for exterior walls and attics, (F) to
222 purchase and install a limited use and limited access elevator, windows,
223 photovoltaic panels, wind generation systems, building management
224 systems, a public school administrative or service facility or portable
225 classroom buildings, provided portable classroom building projects
226 shall not create a new facility or cause an existing facility to be modified
227 so that the portable buildings comprise a substantial percentage of the
228 total facility area, as determined by the commissioner, [or] (G) for school
229 security projects, including, but not limited to, making improvements to
230 existing school security infrastructure or installing new school security
231 infrastructure, or (H) for the installation, remediation or replacement of
232 heating, ventilation and air conditioning systems necessary to
233 continually maintain indoor air quality, in accordance with section 10-
234 231e, and temperature and humidity ranges in school facilities during
235 school activity hours in accordance with section 2 of this act.

236 (2) Not later than seven calendar days following the discovery of a
237 reason described in subparagraphs (A) to [(F)] (H), inclusive, of
238 subdivision (1) of this subsection, the superintendent of schools of a
239 town or regional school district shall notify the Commissioner of

240 Administrative Services in writing of such reason in order to be eligible
241 for a grant under this subsection. Such superintendent shall submit an
242 application to the commissioner not later than six months following
243 such notification in order to receive a grant under this subsection.

244 Sec. 6. (NEW) (*Effective July 1, 2023*) (a) Any local or regional board of
245 education commencing a project to remediate, replace or install a
246 heating, ventilation and air conditioning system shall be considered to
247 be in compliance with the provisions of subsection (g) of section 2 of this
248 act.

249 (b) Any local or regional board of education eligible for
250 reimbursement for school construction projects pursuant to chapter 173
251 of the general statutes, that submits a completed application to
252 remediate, replace or install a heating, ventilation and air conditioning
253 system to continually maintain indoor air quality and temperature and
254 humidity ranges in school facilities during school activity hours, shall
255 be considered to be in compliance with the provisions of subsection (g)
256 of section 2 of this act.

257 Sec. 7. (NEW) (*Effective July 1, 2023*) (a) Each local or regional board
258 of education shall:

259 (1) Designate an individual within each local and regional board of
260 education to be responsible for receiving and reporting to the
261 superintendent complaints of mold, evidence of pest infestation,
262 hazardous odors or chemicals and poor indoor air-quality;

263 (2) Make available on the district's Internet web site the procedure for
264 any party to file such complaint with the designated individual;

265 (3) Duly forward any such complaints, in writing, to each bargaining
266 agent representative representing members who work or visit the
267 affected building, including, but not limited to, teachers, paraeducators,
268 nurses, custodians, administrative staff and bus workers; and

269 (4) Report complaints, in writing, to the corresponding board of

270 education at either the next regularly scheduled meeting or within sixty
271 calendar days, whichever is earlier.

272 (b) Any indoor air quality complaint filed under subsection (a) of this
273 section shall be investigated by local and regional boards of education,
274 including documentation of any physical symptoms exhibited by
275 students, staff or visitors, including, but not limited to, urgent care
276 referrals, blood test, an OSHA 301 form or incident report forms,
277 workers' compensation claims and the testing of any visible substance,
278 including, but not limited to, mold, chemicals, pest droppings,
279 infestations or other such substance, for the presence of a health hazard.
280 Upon confirmation of the presence of a health hazard, the local or
281 regional board of education shall create and implement a plan for
282 remedying such hazard.

283 (c) No employer that is a local or regional board of education shall
284 retaliate against, discipline or terminate any employee for filing a
285 complaint or reporting conditions regarding indoor air quality under
286 section 5 of this act.

287 (d) Any employee of a local and regional board of education who
288 believes that such employee has experienced discrimination, retaliation,
289 discipline or termination by his or her employer for filing a complaint
290 or reporting conditions regarding indoor air quality under this section
291 may submit a complaint alleging such violation in accordance with
292 section 31-379 of the general statutes.

293 Sec. 8. Subsection (a) of section 10-283b of the 2022 supplement to the
294 general statutes is repealed and the following is substituted in lieu
295 thereof (*Effective July 1, 2024*):

296 (a) On and after July 1, 2011, the Commissioner of Administrative
297 Services shall include school building projects for the Technical
298 Education and Career System on the list developed pursuant to section
299 10-283, as amended by this act. The adoption of the list by the General
300 Assembly and authorization by the State Bond Commission of the
301 issuance of bonds pursuant to section 10-287d shall fund the full cost of

302 the projects. On or after July 1, 2011, the Commissioner of
303 Administrative Services, in consultation with the Commissioner of
304 Education, may approve applications for grants to assist school building
305 projects for the Technical Education and Career System to remedy
306 damage from fire and catastrophe, to correct safety, health and other
307 code violations, to replace roofs, to remedy a certified school indoor air
308 quality emergency, for the installation, remediation or replacement of
309 heating, ventilation and air conditioning systems necessary to
310 continually maintain indoor air quality, in accordance with section 10-
311 231e, and temperature and humidity ranges in school facilities during
312 school activity hours pursuant to section 2 of this act, or to purchase and
313 install portable classroom buildings at any time within the limit of
314 available grant authorization and to make payments on such a project
315 within the limit of appropriated funds, provided portable classroom
316 building projects do not create a new facility or cause an existing facility
317 to be modified so that the portable buildings comprise a substantial
318 percentage of the total facility area, as determined by the Commissioner
319 of Administrative Services. Such projects shall be subject to the
320 requirements of chapters 59 and 60.

321 Sec. 9. (NEW) (*Effective July 1, 2023*) (a) For the fiscal year ending June
322 30, 2023, the Department of Administrative Services shall administer a
323 heating, ventilation and air conditioning system grant program to
324 reimburse local and regional boards of education for costs associated
325 with projects for the installation, replacement or upgrading of heating,
326 ventilation and air conditioning systems or other improvements to
327 indoor air quality in school buildings.

328 (b) (1) A local or regional board of education or a regional educational
329 service center may apply, at such time and in such manner as the
330 Commissioner of Administrative Services prescribes, for a grant for
331 projects for the assessment of and installation, replacement or
332 upgrading of heating, ventilation and air conditioning systems or other
333 improvements to indoor air quality in school buildings.

334 (2) The commissioner shall develop eligibility criteria for the
335 awarding of grants under the program. Such criteria shall include, but
336 need not be limited to, (A) the age and condition of the current heating,
337 ventilation and air conditioning system or equipment being replaced or
338 upgraded in the school, (B) current air quality issues at the school, (C)
339 the age and condition of the overall school building, (D) the school
340 district's master plan, (E) the availability of maintenance records, (F) a
341 contract or plans for the routine maintenance and cleaning of the
342 heating, ventilation and air conditioning system, and (G) the local or
343 regional board of education's or regional educational service center's
344 ability to finance the remainder of the costs for such project after
345 receiving a grant under the program. The commissioner shall utilize
346 such eligibility criteria when determining whether to award a grant to
347 an applicant under the program.

348 (c) (1) A local board of education may receive a grant equal to a
349 percentage of its eligible expenses. The percentage shall be determined
350 by its ranking. Such ranking shall be determined as follows: (A) Each
351 town shall be ranked in descending order from one to one hundred
352 sixty-nine according to the adjusted equalized net grand list per capita,
353 as defined in section 10-261 of the general statutes, of the town two,
354 three and four years prior to the fiscal year in which application is made,
355 (B) based upon such ranking, a percentage of not less than twenty or
356 more than eighty shall be assigned to each town on a continuous scale,
357 and (C) the town ranked first shall be assigned a percentage of twenty
358 and the town ranked last shall be assigned a percentage of eighty.

359 (2) A regional board of education may receive a grant equal to a
360 percentage of its eligible expenses. The percentage shall be determined
361 by its ranking. Such ranking shall be determined by (A) multiplying the
362 total population, as defined in section 10-261 of the general statutes, of
363 each town in the district by such town's ranking, as determined in
364 subdivision (1) of this subsection, (B) adding together the figures
365 determined under subparagraph (A) of this subdivision, and (C)
366 dividing the total computed under subparagraph (B) of this subdivision

367 by the total population of all towns in the district. The ranking of each
368 regional board of education shall be rounded to the next higher whole
369 number and each such board shall receive the same reimbursement
370 percentage as would a town with the same rank plus ten per cent, except
371 that no such percentage shall exceed eighty-five per cent.

372 (3) A regional educational service center may receive a grant equal to
373 a percentage of its eligible expenses. The percentage shall be determined
374 by its ranking. Such ranking shall be determined by (A) multiplying the
375 population of each member town in the regional educational service
376 center by such town's ranking, as determined in subdivision (1) of this
377 subsection, (B) adding together the figures for each town determined
378 under subparagraph (A) of this subdivision, and (C) dividing the total
379 computed under subparagraph (B) of this subdivision by the total
380 population of all member towns in the regional educational service
381 center. The ranking of each regional educational service center shall be
382 rounded to the next higher whole number and each such center shall
383 receive the same reimbursement percentage as would a town with the
384 same rank.

385 (d) If there are not sufficient funds to provide grants to all local and
386 regional boards of education and regional educational service centers,
387 based on the percentage determined pursuant to subsection (c) of this
388 section, the commissioner shall give priority to applicants on behalf of
389 schools with the greatest need for heating, ventilation and air
390 conditioning systems or other improvements to indoor air quality in
391 school buildings, as determined by the commissioner based on the
392 eligibility criteria developed pursuant to subdivision (2) of subsection
393 (b) of this section.

394 (e) The following expenses shall not be eligible for reimbursement
395 under this section: (1) Routine maintenance and cleaning of the heating,
396 ventilation and air conditioning system, (2) work that is otherwise
397 eligible for a school building project grant under chapter 173 of the
398 general statutes, and (3) work performed at or on a public school

399 administrative or service facility that is not located or housed within a
400 public school building.

401 (f) No grant funds received under this section by a local or regional
402 board of education or a regional educational service center shall be used
403 to supplant local matching requirements for federal or state funding
404 otherwise received by such district for a project for the installation,
405 replacement or upgrading of heating, ventilation and air conditioning
406 systems or other improvements to indoor air quality in school buildings.

407 (g) Any project for the installation, replacement or upgrading of
408 heating, ventilation and air conditioning systems or other
409 improvements to indoor air quality in school buildings for which a grant
410 is awarded under this section shall be completed by the end of the next
411 calendar year, unless the duration of such project is extended by the
412 commissioner upon a showing of good cause by the local or regional
413 board of education or regional educational service center.

414 (h) Any local or regional board of education or regional educational
415 service center that receives a grant under this section shall (1) be
416 responsible for the routine maintenance and cleaning of the heating,
417 ventilation and air conditioning system, and (2) provide training to
418 school personnel and building maintenance staff concerning the proper
419 use and maintenance of the heating, ventilation and air conditioning
420 system."

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|---|--------------|-------------|
| This act shall take effect as follows and shall amend the following sections: | | |
| Section 1 | July 1, 2022 | New section |
| Sec. 2 | July 1, 2023 | New section |
| Sec. 3 | July 1, 2022 | New section |
| Sec. 4 | July 1, 2023 | 10-220(d) |
| Sec. 5 | July 1, 2024 | 10-283(b) |
| Sec. 6 | July 1, 2023 | New section |
| Sec. 7 | July 1, 2023 | New section |
| Sec. 8 | July 1, 2024 | 10-283b(a) |

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|--------|--------------|-------------|
| Sec. 9 | July 1, 2023 | New section |
|--------|--------------|-------------|