

SENATE No. 445

The Commonwealth of Massachusetts

PRESENTED BY:

Joanne M. Comerford

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 establishing an ecologically-based mosquito management program in the Commonwealth to protect public health.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Joanne M. Comerford</i>	<i>Hampshire, Franklin and Worcester</i>	
<i>James K. Hawkins</i>	<i>2nd Bristol</i>	<i>2/23/2023</i>
<i>Michael O. Moore</i>	<i>Second Worcester</i>	<i>3/20/2023</i>
<i>Lydia Edwards</i>	<i>Third Suffolk</i>	<i>5/10/2023</i>

SENATE No. 445

By Ms. Comerford, a petition (accompanied by bill, Senate, No. 445) of Joanne M. Comerford and James K. Hawkins for legislation to establish an ecologically-based mosquito management program in the Commonwealth to protect public health. Environment and Natural Resources.

The Commonwealth of Massachusetts

**In the One Hundred and Ninety-Third General Court
(2023-2024)**

An Act establishing an ecologically-based mosquito management program in the Commonwealth to protect public health.

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 2 of chapter 21A of the General Laws is hereby amended by
2 inserting after paragraph 30 the following paragraph:-

3 (31) consistent with their statutory responsibilities, implement the ecologically-based
4 mosquito management program established pursuant to Chapter 252A.

5 SECTION 2. Chapter 252 of the General Laws is hereby repealed.

6 SECTION 3. The General Laws are hereby amended by inserting after chapter 251 the
7 following chapter:

8 CHAPTER 252A.

9 ECOLOGICALLY-BASED MOSQUITO MANAGEMENT.

10 Section 1. As used in the chapter, the following words shall, unless the context clearly
11 requires otherwise, have the following meanings:

12 “Adulticiding”, the use of pesticides intended to kill adult mosquitoes.

13 “Biodiversity survey”, an accounting of the diversity, evenness, and richness of species
14 relevant to mosquito management in a given area.

15 “Board”, the mosquito management board under section 4.

16 “Breeding history”, the level of larval and adult mosquito abundance in a given area.

17 “Council”, the governing body of a mosquito management district under section 7.

18 “Disease vector”, any species of mosquito which contributes to the amplification or
19 transmission of any disease, including Eastern Equine Encephalitis or West Nile Virus, among
20 human or non-human populations by injection of salivary gland fluid during biting.

21 “District”, a mosquito management district under section 7.

22 “Ecologically-based mosquito management” or EBMM, an ecologically sustainable
23 approach to the management of mosquito populations combining cultural, physical, biological,
24 and, when strictly necessary to protect public health, least-toxic chemical control strategies.
25 EBMM prioritizes preventative measures, including surveillance, monitoring, and public
26 education on eliminating breeding sites and taking personal protective action. EBMM involves
27 the selection, integration, and implementation of mosquito control strategies based on predicted
28 ecological, epidemiological, and economic consequences. EBMM seeks maximum use of
29 naturally occurring mosquito controls, including weather, disease agents, predators, and
30 parasitoids. In addition, EBMM utilizes various biological and physical controls and habitat

31 modification techniques. Under EBMM, chemical controls are imposed as a last resort and only
32 as required to keep a pest from surpassing tolerable population levels predetermined from
33 accurate assessments of the ecological, public health, and economic costs of the control
34 measures.

35 “Ecologically-based mosquito management plan” the long term plans developed by the
36 mosquito management board and councils under sections 5 and 8.

37 “EEE”, Eastern Equine Encephalitis.

38 “Habitat manipulation”, an approach to reducing mosquito abundance by naturally
39 altering the landscape. Habitat manipulation aims to create unfavorable conditions for mosquito
40 populations, and favorable conditions for mosquito predators.

41 “Habitat quality”, the ability of the environment to provide conditions appropriate for the
42 persistence of mosquito predators at the individual and population level.

43 “Larviciding”, the use of pesticides intended to kill larval or pupal mosquitoes.

44 “Low impact development”, development that incorporates best management practices to
45 reduce impervious surfaces; preserve natural vegetation, soils, and hydrology; and reduce
46 stormwater volumes and pollution. Low impact development practices include, but are not
47 limited to, project designs that reduce the amount of impervious cover and retain natural
48 drainage patterns. Low impact development practices are designed to infiltrate water into the
49 ground or disperse it slowly through vegetation, avoiding ponding or other water retention that
50 may create mosquito habitat.

51 “Nuisance”, mosquitoes which may cause irritation or discomfort to humans, but do not
52 pose and are not expected in the immediately predictable future to pose a significant risk to
53 public health.

54 “Pesticide”, a substance or mixture of substances intended for preventing, destroying,
55 repelling, or mitigating any pest, and any substance or mixture of substances intended for use as
56 a plant regulator, defoliant, or desiccant; provided, that the term “pesticide” shall not include any
57 article that is a “new animal drug” within the meaning of section 201(w) of the federal food, drug
58 and cosmetic act (21 U.S.C. Section 321 (v)), or that has been determined by the secretary of the
59 United States Department of Health and Human Services to be a new animal drug by a regulation
60 establishing conditions of use for the article, or that is an animal feed within the meaning of
61 section 201(x) of such act (21 U.S.C. Section 321(w)).

62 “PFAS”, a class of fluorinated organic chemicals containing at least one fully fluorinated
63 carbon atom.

64 “Secretary”, the secretary of the executive office of energy and environmental affairs.

65 “Sentinel species”, an animal species that may contract an arbovirus before the arbovirus
66 spreads to the human population, or a species in which an arbovirus outbreak may be more
67 widespread than it is in the human population. A sentinel species may serve as an indicator of the
68 presence of the arbovirus in area mosquito populations.

69 “Source reduction”, a method of managing mosquitoes that relies on reducing or
70 eliminating the ability of larval habitats to support the development of larvae, including removal
71 of artificial sources of standing, stagnant water or the restoration of natural flows and wetland
72 systems to improve access by predators, water quality, and overall aquatic health.

73 “Wetlands or wildlife ecologist”, an expert with a master’s or doctorate degree in wetland
74 ecology, wildlife ecology, or a closely related field of ecological study.

75 Section 2. When it is necessary for the purpose of protecting public health or for other
76 purposes to control or abate mosquitoes or greenhead flies, measures shall be taken as specified
77 in this chapter. Nothing in this chapter shall prohibit a municipality from conducting its own
78 mosquito or greenhead fly management program, except that no municipality shall conduct aerial
79 spraying of adulticides or larvicides. Nothing in this chapter shall prohibit any resident from
80 controlling or abating mosquitos or greenhead flies on his or her property.

81 Section 3. There is hereby established within the executive office of energy and
82 environmental affairs a mosquito management office that shall be administered by the secretary.
83 The secretary shall appoint all necessary employees within the mosquito management office,
84 except as may be otherwise provided by law. The secretary shall direct the mosquito
85 management office, consistent with state law and policies and directives of the board, to adopt,
86 and from time to time amend, rules, regulations, procedures, standards, guidelines, and policies
87 that shall constitute the Massachusetts ecologically-based mosquito management program.

88 Section 4. (a) There shall be in the mosquito management office a mosquito management
89 board. The function of the board shall be to regulate and oversee all disease vector mosquito and
90 related nuisance organism management activities in the commonwealth; to prepare an
91 ecologically-based mosquito management plan and a state emergency arbovirus response plan; to
92 review and certify ecologically-based mosquito management plans submitted by councils; to
93 create policies and procedures for ecologically-based mosquito management to control vector-
94 borne diseases; to authorize and carry out investigations and keep records; to carry out mosquito

95 management programs in areas of the commonwealth outside of any mosquito management
96 district; and to develop policies and procedures to insure that all mosquito management activities
97 comply with the intent of section 5 of chapter 40; sections 1 through 63, inclusive, of chapter 91;
98 section 105 of chapter 130 and sections 40 and 40A of chapter 131 as applicable; provided,
99 however, the usual and customary activities associated with the state emergency arbovirus
100 response plan or the ecologically based mosquito management plan of the state or of a council,
101 as certified, shall not require filings or hearings under section 40 of chapter 131, but rather
102 simple notice to the conservation commission of a municipality of proposed actions in any
103 regulated wetland; and to carry out all other powers and functions granted to the board by this
104 chapter.

105 (b) The board shall consist of

106 (1) the following members or their designees: the commissioner of the department of
107 environmental protection, who shall serve as chair; the commissioner of the department of public
108 health; the commissioner of the department of agricultural resources; the commissioner of the
109 department of fish and game; the director of the natural heritage and endangered species program
110 of the division of fisheries and wildlife; and the director of the division of ecological restoration
111 of the department of fish and game.

112 (2) the following 5 members designated by the secretary: one person representing a
113 statewide land conservation organization or a regional or statewide river protection organization;
114 one person representing beekeepers; one person representing groups concerned about native
115 pollinators; an expert in pesticides and mosquito control and an ecological risk assessor with a
116 background in ecotoxicology. Each of these five designated members shall be designated for a

117 term of four years, except for persons designated to fill vacancies, who shall serve for the
118 unexpired term. Any member appointed under this clause shall be eligible for reappointment, so
119 long as no specific member shall serve for more than 2 terms.

120 (c) The board members shall receive no additional compensation for service on the board,
121 but shall be entitled to their reasonable traveling and other expenses incurred in the performance
122 of their duties. The board may draw staff support from the departments represented with the
123 consent of the respective commissioners.

124 (d) The board shall meet at the call of any 2 members or at the call of the board chair, but
125 not less than 6 times annually. The board may elect a secretary and other officers as it finds
126 necessary.

127 (e) The board may purchase, lease, or rent equipment and supplies to be used in
128 performance of the board's duties and to facilitate the ecologically-based management of
129 mosquitoes. Such supplies may be made available to councils by petition to the board, but shall
130 remain the property of the board.

131 (f) No member of the board shall have current or reasonably foreseeable conflicts, as
132 defined by chapter 268A.

133 Section 5. (a) The board shall prepare a state ecologically-based mosquito management
134 plan. Any action taken under this chapter shall be included in the state plan, in a district plan
135 certified by the board pursuant to section 8, or in the state emergency arbovirus response plan
136 pursuant to section 9. Before adoption of the state ecologically-based mosquito management
137 plan, a public hearing shall be held by the board in each mosquito control district. The state

138 ecologically-based mosquito management plan shall prioritize preventive action and non-
139 pesticide control measures and shall include the management activities under this section.

140 (b) (1) The state ecologically-based mosquito management plan shall establish a public
141 education and outreach campaign aimed at informing residents and businesses how to reduce
142 mosquito breeding sites in and around their properties and the community at large, preventive
143 measures individuals can take to protect themselves, and proper use of larvicides. The campaign
144 shall be overseen by the board, with assistance from mosquito management councils.

145 (2) The public education and outreach campaign shall inform residents of how mosquito-
146 borne diseases are transmitted and the difference between nuisance and disease vector
147 mosquitoes, inform residents of the environmental and health hazards associated with mosquito
148 adulticides and larvicides, and advise residents how they can opt-out of adulticide applications.
149 The public education and outreach campaign may include, but not be not limited to, the
150 following methods of public outreach:

- 151 (i) a publicly accessible website and social media pages;
- 152 (ii) campaign branded pamphlets, infographics, and fact sheets;
- 153 (iii) public meetings and open houses;
- 154 (iv) videotaped and digital presentations;
- 155 (v) advertisements in public spaces;
- 156 (vi) local public access television or other local media sources;
- 157 (vii) inserts in utility bills;

158 (viii) posting on the apiary program website of the division of agriculture resources; and
159 (ix) in-state registration notifications for pesticide applicators.

160 (c) (1) The state ecologically-based mosquito management plan shall establish a program
161 for trapping adult mosquitoes. Within mosquito management districts, trapping shall be overseen
162 by the mosquito management councils. In areas of the commonwealth not within mosquito
163 management districts, the board shall oversee trapping and testing of adult mosquitoes, pursuant
164 to section 6.

165 (2) Trapping shall occur during a time period corresponding with mosquito activity. The
166 acting authority, whether the board or a mosquito management council, may, at its own
167 discretion, change these dates based upon climatic conditions or other outstanding factors. Traps
168 shall be placed at locations based on risk of disease spread. Mosquito counts from mosquito traps
169 shall be recorded at regular intervals in a publicly accessible location, such as the board or
170 council's website.

171 (3) Trapped mosquitoes may be tested for the following mosquito-borne diseases:

172 (i) West-Nile Virus;

173 (ii) Eastern Equine Encephalitis;

174 (iii) Jamestown Canyon Virus; or

175 (iv) other arboviruses of local or regional concern.

176 (4) Based on positive findings of a mosquito-borne disease in tested mosquitoes, or at the
177 discretion of the board, the board may test sentinel host species for the presence of mosquito-
178 borne disease.

179 (d) (1) The state ecologically-based mosquito management plan shall establish a program
180 for monitoring and mapping larval breeding sites. Within mosquito management districts,
181 monitoring and mapping shall be overseen by the mosquito management councils. In areas not
182 within mosquito management districts, the board shall oversee monitoring and mapping,
183 pursuant to section 6.

184 (2) The acting authority, whether the board or a mosquito management council, shall
185 oversee the creation of a map of larval mosquito breeding sites within the commonwealth or
186 mosquito management district that classifies breeding sites based on habitat quality and breeding
187 history.

188 The following classifications may shall be used:

189 (i) Low quality ecological habitat and low breeding history;

190 (ii) High quality ecological habitat and low breeding history;

191 (iii) Low quality ecological habitat and high breeding history; and

192 (iv) High quality ecological habitat and high breeding history.

193 (3) The acting authority shall monitor larval mosquito populations on a regular interval
194 using a diptest. Particular attention is to be paid to sites where known vector mosquitoes breed,
195 and sites with low quality ecological habitat and high breeding history. The monitoring period

196 shall correspond with mosquito activity in the area monitored. The acting authority may, at its
197 own discretion, change these dates based upon climatic conditions or other outstanding factors.

198 The map of larval mosquito breeding sites, their classification, and larval monitoring data
199 shall be maintained in a publicly accessible location, such as the board or council's website.

200 (4) The acting authority shall regularly conduct an ecological analysis and biodiversity
201 survey in mosquito larval breeding sites. Such a survey shall be conducted in consultation with a
202 wetlands or wildlife ecologist. The acting authority shall work with the wetlands or wildlife
203 ecologist to classify breeding sites based on habitat quality and breeding history, using the
204 classifications listed in subsection (2) to characterize ecological health in the context of mosquito
205 abundance and mosquito-borne disease transmission in the area. The assessment shall aim to
206 further develop non-pesticidal management approaches to reduce mosquito populations.

207 (5) The acting authority shall make all data and analysis analyses under this section
208 available in a publicly accessible location, such as the board or council's website within 10
209 business days of acquiring data, and completing analyses, classifications, and plans.

210 (e) (1) The state ecologically-based mosquito management plan shall employ source
211 reduction and wetlands restoration as the preferred methods of managing mosquito populations.
212 Within mosquito management districts, source reduction and wetlands restoration shall be
213 overseen by the mosquito management councils in coordination with a wetlands or wildlife
214 ecologist. In areas of the commonwealth not within mosquito management districts, the board
215 shall oversee source reduction and wetlands restoration, pursuant to section 6.

216 (2) Source reduction may include, but not be limited to, removal of tires, trash,
217 abandoned containers or structures, and other sources of artificial standing water, and water

218 management strategies to avoid and eliminate artificially created mosquito breeding areas such
219 as use of low impact development techniques for stormwater management.

220 (3) Wetlands restoration shall be designed to restore natural flows, improve water quality
221 and fish access, mosquito predator access, and increase overall wetland ecosystem diversity and
222 function. Wetlands restoration may include, but not be limited to, upgrading culverts, removing
223 dams, and otherwise restoring degraded wetlands. All wetlands restoration must comply with
224 applicable federal, state, and local laws. The state ecologically-based mosquito management plan
225 shall include the involvement of local conservation commissions and the division of ecological
226 restoration in wetlands restoration projects.

227 (f) (1) The state ecologically-based mosquito management plan shall provide for the
228 mitigation activities described in this subsection. Within mosquito management districts,
229 mitigation activities shall be overseen by the mosquito management councils. In areas of the
230 commonwealth not within mosquito management districts, the board shall oversee the provision
231 of these mitigation activities, pursuant to section 6.

232 (2) (i) The state ecologically-based mosquito management plan shall establish
233 scientifically based and quantifiable thresholds for larvicide use and shall provide for the
234 application of larvicides based on the monitoring of breeding sites. Particular attention is to be
235 paid to sites where known vector mosquitoes breed, and sites with low quality ecological habitat
236 and high breeding history.

237 (ii) Larvicides shall not be used to manage nuisance mosquito populations and may be
238 used only when source reduction and wetlands restoration have not been effective in abating
239 disease risk. When applying larvicides, the applying authority, whether the board or a mosquito

240 management council, shall select the larvicide that poses the least risk to human health and the
241 environment, while remaining effective. Preference is given to larvicides that are certified by the
242 Organic Materials Review Institute or classified under the Environmental Protection Agency's
243 minimum risk pesticide program.

244 (iii) Aerial application of any larvicide is prohibited.

245 (3) (i) The state ecologically-based mosquito management plan shall provide that
246 mosquito adulticides are considered the most dangerous and least effective method of reducing
247 nuisance and vector mosquito populations. Adulticides shall not be used to manage nuisance
248 mosquito populations, and shall only be considered following the detection of a mosquito-borne
249 pathogen in mosquito or sentinel species.

250 (ii) The state ecologically-based mosquito management plan shall establish scientifically
251 based and quantifiable thresholds for adulticide use based on the risk of mosquito-borne disease
252 transmission.

253 (iii) Following the detection of a mosquito-borne pathogen in an adult mosquito or
254 sentinel species, the acting authority, whether the board or a mosquito management council, shall
255 take the following actions:

256 (A) notify the public and increase public education and outreach, emphasizing personal
257 protection measures;

258 (B) begin or increase the trapping of adult mosquitoes in the area of detection;

259 (C) begin or increase larval monitoring and management in the area of detection;

260 (D) prioritize further testing for mosquito-borne diseases in the area of detection; and

261 (E) consider non-pesticidal management approaches to reduce mosquito populations in
262 the area of detection.

263 (iv) Following the detection of a mosquito-borne pathogen in an adult mosquito or
264 sentinel species, if the established threshold has been met, the acting authority may consider the
265 ground application of adulticide using a backpack applicator, provided that the backpack-applied
266 adulticide application occurs only within the immediate area of detection and the backpack-
267 applied adulticide is the least toxic adulticide available. Preference shall be given to adulticides
268 that are certified by the Organic Materials Review Institute or classified under the Environmental
269 Protection Agency's minimum risk pesticide program.

270 (v) If monitoring and trapping data indicate a broader concern of mosquito-borne disease
271 in the community, and education, prevention, habitat manipulation, larviciding, and backpack-
272 applied adulticiding have all been attempted and determined insufficient to address an immediate
273 threat to public health from mosquito-borne disease, the acting authority may, based on
274 alignment with an established threshold, consider the truck-mounted ground application of a
275 mosquito adulticide, provided the application occur within the most limited area possible to
276 achieve effective reduction in adult vector mosquitoes. If necessary to protect public health, the
277 truck-applied adulticide need not be certified by the Organic Materials Review Institute or be
278 classified under the Environmental Protection Agency's minimum risk pesticide program, but it
279 shall be the least toxic adulticide that will be effective in mitigating disease risk.

280 (vi) The acting authority shall increase monitoring and trapping following the application
281 of a mosquito adulticide, and shall work with a wetlands or wildlife ecologist to characterize the

282 impacts adulticide use had on the ecological health of the habitat where the adulticide was
283 applied.

284 (vii) Aerial application of any adulticide is prohibited.

285 (viii) Any application of a mosquito adulticide shall be performed by a certified pesticide
286 applicator.

287 (g) (1) The ecologically-based management plan shall include:

288 (i) a determination by the Natural Heritage and Endangered Species Program in the
289 department of fish and game that the plan proposed will result in no alteration, as defined under
290 chapter 131A, to any priority habitat or take of rare, threatened, endangered, or species of special
291 concern state or federally listed species; and

292 (ii) reasonable measures by the board to assure that the plan proposed will avoid
293 hazardous effects on human health and the environment, including effects to soils, sediments,
294 surface waters, groundwater or any ocean sanctuary under sections 13 through 16 and 18 of
295 chapter 132A.

296 (h) The board shall review and revise the state ecologically based mosquito management
297 plan whenever useful or necessary, but no less frequently than every 3 years.

298 Section 6. (a) (1) In carrying out the provisions of this chapter, the board may employ
299 necessary engineers, scientists, assistants, or other agents, who may enter on premises that the
300 board desires to survey or examine. The board may provide technical assistance to any council in
301 the development and implementation of an ecologically-based mosquito management program.

302 (2) The board shall carry out field investigations and other determinations of the need,
303 method, and procedures for managing mosquitoes as deemed advisable, including all significant
304 potential health and environmental impacts of the proposed management measures. Board
305 members and their agents are authorized to enter or examine at any reasonable time those
306 premises which the board considers necessary to carry out its responsibilities.

307 (b) (1) The board shall provide a menu of services to municipalities that are not members
308 of mosquito control districts, with reasonable fees for each service selected by the municipality.
309 This menu shall include public education and outreach, surveillance of adult mosquitoes,
310 monitoring and mapping of larval breeding sites, source reduction and wetlands restoration, and
311 larviciding and adulticiding services, subject to the state ecologically-based mosquito
312 management plan.

313 (2) A municipality may opt in to receiving any of the services under clause (1) by
314 approval of its legislative body and notification to the board and the municipality's conservation
315 commission. In opting in to larviciding or adulticiding services, a municipality may impose
316 additional restrictions not included in the state ecologically-based mosquito management plan on
317 the timing, location, or manner of application of larviciding or adulticiding. A municipality that
318 has opted in to receiving any service may opt out at any time by approval of its legislative body.
319 The fee charged for each service shall pay the full cost of the service. Any funds received for this
320 purpose in excess of those required to provide the requested services shall be returned to the
321 purchasing municipality. At least once per year, or more frequently if requested by a
322 municipality, the board shall provide each municipality an accounting of the fees charged to the
323 municipality that year.

324 (3) All amounts for which a municipality may be liable in connection with the above may
325 be contributed by persons or bodies politic benefited by the services in proportion to their
326 respective benefits or otherwise.

327 Section 7. (a) Any municipality or 2 or more municipalities, may, by obtaining
328 certification of the board, become a mosquito management district. The district shall be titled the
329 mosquito management district. Notice of the formation of a district must be filed with the
330 secretary of state and the board with a description of the proposed boundaries of the district.

331 (b) A council shall be established for each district and shall be called the mosquito
332 management council. The council is declared to be the corporate authority of the district and
333 shall exercise all the powers and control all of the affairs and property of the district.

334 Any mosquito management council shall be composed of at least 5 members, all of
335 whom must either live or work in the district. The members of the council are to be appointed by
336 the mosquito management board and shall comprise: 1 person who represents an environmental
337 protection or conservation organization or a municipal conservation commission; 1 person who
338 is a member of a municipal board of health or a health care provider; 1 person who represents the
339 executive office of a municipality; and 2 citizens at large preferably with some background in
340 engineering, law, chemistry, biology, or any other experience or education that would have
341 relevance to mosquito control and management.

342 (c) The mosquito management board shall monitor the operations of the councils and
343 shall require adherence to this act and to each council's certified ecologically-based mosquito
344 management plan.

345 (d) (1) Each district council shall appoint a superintendent who shall be a person of skill
346 and experience or knowledge in the field of mosquito management and who shall be committed
347 to the use of ecologically-based mosquito management. The district superintendent, with the
348 approval of the council, shall be empowered to hire sufficient staff and employees and purchase
349 materials to fulfill the requirements of the council's certified ecologically based mosquito
350 management plan. Employees and staff of the council shall not be subject to the provisions of
351 section 9A of chapter 30, and chapter 31.

352 (2) The superintendent shall keep regular records of all proceedings and financial affairs,
353 which shall be open to inspection by the board or by the council at all times; and by the public at
354 reasonable hours. The council shall have ultimate responsibility for the efficient financial and
355 sound environmental management of the district and shall be required, at the discretion of the
356 board, to audit its finances and submit said audit to the board for its review and oversight.

357 (e) The federal government, the commonwealth or its municipalities, or their
358 administrative agencies, not members of a mosquito management district, may request mosquito
359 or greenhead fly management services from the district, which the council may provide at a fee,
360 which shall pay the full cost of the mosquito or greenhead fly management services. The
361 recipient of the services shall pay the full fee. Any funds received for this purpose in excess of
362 those required to provide the requested services shall be returned to the purchaser.

363 (f) (1) The council shall provide a menu of services to participating municipalities, with
364 reasonable fees for each service selected by the municipality. This menu shall include public
365 education and outreach, surveillance of adult mosquitoes, monitoring and mapping of larval
366 breeding sites, source reduction and wetlands restoration, and larviciding and adulticiding

367 services to all municipalities within the district, subject to the district's certified ecologically
368 based mosquito management plan.

369 (2) A municipality may opt in to receiving any of the above services by approval of its
370 legislative body and notification to the council and the municipality's conservation commission.
371 In opting in to larviciding or adulticiding services, a municipality may impose additional
372 restrictions not included in the district ecologically based mosquito management plan on the
373 timing, location, or manner of application of larviciding or adulticiding. A municipality that has
374 opted in to receiving any service may opt out at any time. The fee charged for each service shall
375 pay the full cost of the service. Any funds received for this purpose in excess of those required to
376 provide the requested services shall be returned to the purchasing municipality. At least once per
377 year, or more frequently if requested by a municipality, the council shall provide each
378 municipality an accounting of the fees charged to the municipality that year.

379 (3) All amounts for which a municipality may be liable in connection with the receipt of
380 services under this section may be contributed by persons or bodies politic benefited by the
381 services in proportion to their respective benefits or otherwise.

382 (4) The cost of district services may be shared by the board if the board deems, and in
383 proportion as the board determines, that the service is in the larger interest of the commonwealth.

384 Section 8. (a) Within 90 days from the formulation of the board's ecologically-based
385 management plan, or from the establishment of a district, the council shall develop and submit to
386 the board an ecologically-based mosquito management plan. The district's ecologically-based
387 plan shall be constituted either by adopting the board's ecologically-based mosquito management
388 plan, or the board's plan with modifications. The district's ecologically-based plan shall not

389 authorize the use of adulticides, larvicides, or other pesticides when such use is prohibited by law
390 or by the state ecologically-based mosquito management plan. The board shall be allowed 30
391 days to approve, disapprove, or modify the district's plan. If the board disapproves or requires
392 amendment of the plan submitted by the council, the council shall have 30 days to make those
393 amendments and resubmit the plan to the board for certification. In disapproving or requiring
394 amendment of the plan submitted by the council, the board shall clearly state the areas of the
395 plan that were deficient and what the deficiencies of the plan were. The plan shall be adopted for
396 the district upon certification by the board. Thereafter the plan shall be reviewed, amended if
397 necessary, and submitted for recertification no less than every 3 years, or more frequently if the
398 council chooses.

399 (b) With the prior written certification of the board of the district's ecologically-based
400 mosquito management plan, as provided for in this section, the council shall have the power to
401 take all necessary or proper steps for the management of mosquitoes within the district subject to
402 the provisions of this chapter; to purchase supplies and materials and to employ labor, assistants,
403 scientists, or consultants as may be necessary or proper in furtherance of the objectives of the
404 same; and generally to do all things, subject to the provisions of this chapter, necessary or
405 incident to powers hereby granted and to carry out the objectives specified herein.

406 (c) (1) Any action taken under this chapter shall be included in the district's ecologically-
407 based mosquito management plan. Before adoption of a district ecologically-based mosquito
408 management plan, a public hearing shall be held by the council. A hearing required by a federal,
409 state, or municipal agency on the program shall be sufficient for purposes of this section. In
410 addition to the details of management activities the ecologically-based management plan shall
411 include:

412 (i) A determination by the Natural Heritage and Endangered Species Program in the
413 department of fish and game that the plan proposed will result in no alteration, as defined under
414 chapter 131A, to any priority habitat or take of rare, threatened, endangered, or species of special
415 concern state or federally listed species; and

416 (ii) reasonable measures by the council to assure that the plan proposed will avoid
417 hazardous effects on human health and the environment, including effects to soils, sediments,
418 surface waters, groundwater or any ocean sanctuary under sections 13 through 16 and 18 of
419 chapter 132A.

420 Section 9. (a) The board shall complete an emergency arbovirus response plan to be
421 exercised by the commissioner of the department of public health under this section. The
422 emergency response plan shall specify scientifically based and quantifiable thresholds for
423 determining the existence of an ongoing arbovirus public health emergency. The emergency
424 arbovirus response plan shall specify the mosquito management measures to be used in case of
425 an ongoing arbovirus public health emergency and shall specify procedures for coordination
426 among state agencies, municipal governments, the board, and the mosquito management
427 districts. The emergency arbovirus response plan shall not authorize the aerial application of any
428 adulticide or larvicide.

429 (b) Before adoption of the emergency response plan, a public hearing shall be held by the
430 board in each of the existing mosquito control districts. The emergency response plan shall be
431 reviewed and revised whenever useful or necessary, but no less than every 3 years.

432 (c) The state emergency response plan shall be exercised only after a public health
433 emergency is declared by the governor of the commonwealth on the recommendation of the

434 commissioner of the department of public health and the board that the thresholds of the
435 emergency response plan have been met. Such recommendation shall be accompanied by a
436 public document detailing the evidence and the basis for the judgment that a public health
437 emergency exists, the target organism, the expected management agents or chemicals and
438 procedures to be used, and the areas to be so treated.

439 (d) Following a declaration of a public health emergency by the governor of the
440 commonwealth, the emergency response plan shall be exercised by the commissioner of the
441 department of public health. The board and the district councils shall act under the direction of
442 the commissioner of the department of public health during the state of public health emergency.

443 The costs incurred by the board or any councils due to the exercise of the emergency
444 response plan shall be paid by the commonwealth.

445 (e) The state of public health emergency shall be terminated automatically after 60 days,
446 or by a declaration by the governor of the commonwealth. If the public health emergency is not
447 resolved within 60 days, a subsequent declaration of public health emergency may be made,
448 pursuant to the requirements of this section for making such declaration.

449 (f) In exercising the emergency arbovirus response plan, the notification and opt-out
450 provisions of sections 10 and 11 shall continue to apply.

451 (g) (1) Following any declaration of an arbovirus public health emergency under this
452 section and within 30 days after termination of the emergency, the commissioner of the
453 department of public health shall complete and make available on the department's website for
454 the public record a report of actions taken during the emergency, including, at a minimum:

455 (i) the target organism or organisms, their estimated population size, records of EEE or
456 other mosquito-borne disease prevalence and infection rate, rainfall and temperature data, and an
457 analysis of the geographic patterns indicated by these data, both prior to and following
458 management activities;

459 (ii) agents, chemicals, or source reduction activities used in the treatment, and times, rates
460 and means of application;

461 (iii) records of incidence of EEE or other mosquito-borne diseases and the effectiveness
462 of the treatment in preventing the disease or diseases, the total number of confirmed human cases
463 of EEE or other mosquito-borne diseases, the total number of horses and other animals
464 confirmed as having been affected by EEE or other mosquito-borne diseases, the number of
465 deaths in humans and other animals, the kinds of illness and disabilities, noting term and nature
466 of sickness, recuperation, and rehabilitation in humans;

467 (iv) effects of the treatments on soils and water, and on flora and fauna of the areas
468 treated including pesticide incidents reported to apiary program of the division of agriculture
469 resources and at their apiary and pesticide locator map and other areas affected;

470 (v) maps of the area treated with indications on the maps of localities treated; and

471 (vi) any recommendations for changes in regulations or procedures for future
472 interventions.

473 All actions taken under the authority of this section shall be designed to protect public
474 health while minimizing any adverse effect to the environment.

475 Section 10. (a) At least 72 hours prior to the application of any adulticide, the authority
476 overseeing such application, whether the board, a district council, or the commissioner of the
477 department of public health, shall provide notice of the methods to be employed, including: the
478 product to be applied; the locations, dates, and times of application; and any health risks and
479 adverse environmental impacts associated with the product.

480 (b) Notice shall be provided to all residents within ½ mile of the planned adulticide
481 application. Notice shall be provided through, at a minimum, any municipal emergency
482 notification or community alert service, such as “CodeRED,” announcements in local
483 newspapers or other press, and the website and social media feeds of the affected municipalities.

484 Direct notice shall also be provided to:

485 (i) the executive office of the affected municipality or municipalities;

486 (ii) appropriate local and regional boards and commissions, including boards of health
487 and conservation commissions;

488 (iii) schools, child care centers, and school age child care programs within ½ mile of the
489 planned adulticide application;

490 (iv) property owners within ½ mile of the planned adulticide application who have opted
491 out of spraying based on exclusions pursuant to applicable regulations governing pesticide
492 application;

493 (v) agricultural entities including beekeepers, cranberry growers, certified organic farms
494 and aquaculture facilities within ½ mile of the planned adulticide application; and

495 (vi) any other person within ½ mile of the planned adulticide application who informs the
496 board through a form made available on the board’s website that they wish to be informed of
497 adulticide spraying in their region.

498 (c) Notice shall include, or direct recipients to the online location of, an educational fact
499 sheet about the planned spraying, including the adulticide’s label and Material Safety Data Sheet,
500 further information about the risks posed by the adulticide, specific precautions residents may
501 take to avoid exposure to the adulticide or deposition of the adulticide on sensitive private
502 property, including gardens and children’s play equipment, as well as personal protective
503 measures and other preventative actions residents can take to reduce mosquito-borne disease
504 transmission.

505 (d) If adulticide application must be postponed due to weather conditions, notice
506 provided before application shall remain in effect for 48 hours following the improvement of
507 such weather conditions if postponement of spraying would extend beyond the dates indicated in
508 the initial notice; provided, however, that, to the extent reasonably possible, the board shall make
509 a good faith effort to inform the public of any changes to the application schedule.

510 Section 11. (a) The board shall maintain a “no spray list” and provide an online form on
511 its website allowing residents to opt out of the application of adulticides. Residents on the “no
512 spray list” shall be notified via reasonable means that they are on the list, and shall be reminded
513 each year following, via reasonable means, that they remain on the “no spray list.”

514 (b) State registered beekeepers and certified organic farms shall be automatically placed
515 on the “no spray list”, and shall be notified through reasonable means that they are on the list.

516 (c) Residents on the “no spray list” shall not have an adulticide applied within 300 feet of
517 their property line.

518 (d) Any municipality may opt out of adulticide application conducted under section 9 by
519 approval of its legislative authority, provided that the municipality opts in to receiving public
520 education and outreach and surveillance of adult mosquitoes from either the board or a mosquito
521 management district.

522 Section 12. Each year, the board and each council shall work alongside a wetlands or
523 wildlife ecologist and other relevant experts to review the effectiveness of the board or council’s
524 mosquito control program and publish the findings in a report. The report shall include successes
525 and failures of the past year; a survey of the experience of state registered beekeepers and
526 certified organic farms; records of the location, rates, and time of application of any chemical or
527 biological pesticides applied that year; and additional steps the board or council will consider to
528 further reduce reliance on pesticide use and improve local ecological capacity to naturally
529 manage nuisance and vector mosquitoes.

530 Findings in the report are to be made available in a publicly accessible location, such as
531 the board or council’s website.

532 Section 13. (a) A district council that determines it is necessary to control greenhead flies
533 within the district shall create a greenhead fly management plan. The plan shall specify the
534 monitoring and mitigation activities that will be undertaken to control greenhead flies. The plan
535 shall specify how the costs of controlling greenhead flies are to be allocated among the member
536 municipalities of the district. All greenhead fly control activities shall be carried out according to
537 the district’s plan.

538 (b) Before adoption of a district greenhead fly management plan, a public hearing shall
539 be held by the council. A hearing required by a federal, state, or municipal agency on the
540 program will suffice for purposes of this section. In addition to the details of management
541 activities the greenhead fly management plan shall include:

542 (i) a determination by the Natural Heritage and Endangered Species Program in the
543 department of fish and game that the plan proposed will result in no alteration, as defined under
544 chapter 131A, to any priority habitat or take of rare, threatened, endangered, or species of special
545 concern state or federally listed species; and

546 (ii) reasonable measures by the council to assure that the plan proposed will avoid
547 hazardous effects on human health and the environment, including effects to soils, sediments,
548 surface waters, groundwater or any ocean sanctuary under sections 13 through 16 and 18 of
549 chapter 132A.

550 (c) The greenhead fly management plan shall not authorize the use of any chemical
551 pesticide other than attractants, such as octenol, used to bait traps.

552 Section 14. (a) No pesticide containing PFAS shall be used as part of any mosquito or
553 greenhead fly control activity conducted pursuant to this chapter. This prohibition includes
554 pesticides that contain PFAS as an inactive or inert ingredient.

555 (b) No pesticide shall be used as part of any mosquito or greenhead fly control activity
556 conducted pursuant to this chapter unless the department of environmental protection has tested a
557 sample of the pesticide and certified that the pesticide does not contain PFAS. This testing
558 requirement shall not apply to a pesticide used during an arbovirus public health emergency
559 pursuant to section 9 as long as (1) the commissioner of the department of public health

560 determines that it is infeasible to test the pesticide prior to application in response to the
561 arbovirus public health emergency and (2) there are no equally or more effective pesticides
562 available for use that the department of environmental protection has already tested and certified
563 as not containing PFAS.

564 Section 15. (a) Any person aggrieved by a determination by the board or any council,
565 including any party to a complaint and investigation under section 17, may request an
566 adjudicatory hearing before the board under the provisions of chapter 30A. The determination
567 shall contain a notice of right to request a hearing and may specify a time limit, not to exceed 21
568 days, within which persons may request a hearing before the board under the provisions of
569 chapter 30A. If no such request is timely made, the determination shall be deemed assented. If a
570 timely request is received, the board shall within a reasonable time hold a hearing and comply
571 with the provisions of chapter 30A. In a hearing so held the board shall designate a hearing
572 officer to preside over the hearing, to assemble an official record thereof, and to render a
573 tentative decision as provided in paragraph (7) of section 11 of chapter 30A. The board shall
574 make the final decision on the basis of the official record and tentative decision so rendered.

575 (b) If in making a determination which may be the subject of an adjudicatory hearing the
576 board finds that an imminent hazard or an unreasonable adverse effect on the environment could
577 result pending the conclusion of adjudicatory hearing, the board may order that the determination
578 shall become provisionally effective and enforceable immediately upon issuance, and shall
579 remain so notwithstanding and until the conclusion of any adjudicatory hearing procedures
580 timely requested. In the event that the department has thus made a determination provisionally
581 effective, it may later, at its discretion, shorten the duration of or waive the order.

582 (c) A person aggrieved by a final adjudicatory determination of the board may obtain
583 judicial review thereof pursuant to the provisions of chapter 30A.

584 Section 16. Whenever any council commences any mosquito management activity not
585 permitted by the certified district ecologically-based mosquito management plan, including the
586 use of pesticides when not permitted by the certified district ecologically-based mosquito
587 management plan, or violates any rule or regulation of the board, the board shall have the power
588 by written notice to order the violator to cease and desist immediately. If the violator does not
589 conform to the board's order, the board may bring prosecution in the district court of the state.

590 The board, without being required to enter into any recognizance or to give surety for
591 cost, may institute proceedings in the name of the state. It shall be the duty of the attorney
592 general to conduct the prosecution of the proceedings brought by the board. The board may
593 obtain relief in equity or by prerogative writ whenever that shall be necessary for the proper
594 performance of those duties.

595 Section 17. The board shall establish a process by which residents of the commonwealth
596 may file complaints alleging violations of the provisions of this chapter or of the provisions of
597 the ecologically-based mosquito management plan of the board or any district. The process for
598 filing complaints shall, at a minimum, include a telephone hotline and allow for the submission
599 of written complaints. Within 60 days of receiving a complaint, the board shall investigate and
600 make a determination as to whether any violation has occurred and whether any action is
601 required to remedy the violation or prevent such violation from occurring again.

602 The board shall maintain a publicly accessible online docket of complaints received, the
603 outcome of its investigations, and any actions taken.

604 Section 18. Any municipality not a part of an existing district may be annexed by
605 approval of the municipality’s legislative body to a district upon approval by the district’s
606 council.

607 Section 19. Any municipality or subdivision thereof which lies within a district may be
608 disconnected from the district in accordance with the district’s separate governing enabling act,
609 voluntary trust, or other legal instrument, by the decision of its legislative body.

610 Section 20. Any district organized under the provisions of this act may be dissolved and
611 discontinued by appropriate action of either the board or the council, or as provided in the
612 district’s governing enabling act, voluntary trust, or other legal instrument. Notice of dissolution
613 shall be filed with the secretary of the commonwealth and the board.

614 Section 21. All meetings of the board or councils shall comply with the provisions of the
615 open meeting laws under sections 18 through 25, inclusive of chapter 30A. All regular board or
616 council meetings shall be open to the public and all resolutions, actions, and records of its
617 proceedings shall be open to public view.

618 Section 22. The board shall provide a report to the house and senate committees on ways
619 and means and the committee on environment, natural resources and agriculture by April first
620 each year detailing all encumbrances, expenditures, and projected expenditures of funds and
621 providing projections for needs and associated costs for the next fiscal year.

622 SECTION 4. The current mosquito control projects known by their identifying names as
623 the Berkshire county mosquito control project, the Bristol county mosquito control project, the
624 Cape Cod mosquito control project, the central Massachusetts mosquito control project, the
625 Dukes county mosquito control project, the east Middlesex mosquito control project, the Norfolk

626 county mosquito control project, the northeast Massachusetts mosquito control and wetlands
627 management district, the Pioneer Valley mosquito control district, the Plymouth county mosquito
628 control project, and the Suffolk county mosquito control project may remain in existence if a
629 project obtains certification from the mosquito management board that the project fulfills the
630 provisions of section 7 of chapter 252A of the General Laws, inserted by this act.

631 Existing superintendents, and existing staff and employees of the projects may continue
632 in their present capacity, subject to adherence to the regular conditions of workplace and
633 employment, provided that the superintendents, staff and employees shall meet the conditions of
634 subsection (d) of said section 7.

635 Commissioners of these projects and their employees may continue in their capacity
636 under their existing terms of appointment, as members or employees of the newly formed
637 councils, and may be reappointed as members of the councils, provided they meet the criteria for
638 membership established by said section 7.

639 The board shall arrange for an orderly transition of such mosquito control districts and
640 mosquito control projects in compliance with said chapter 252A.

641 SECTION 5. The mosquito management board shall complete the state ecologically-
642 based mosquito management plan under section 5 of chapter 252A of the General Laws and the
643 emergency arbovirus response plan under section 9 of said chapter 252A within 6 months of the
644 enactment of this act.

645 SECTION 6. Section 14 of chapter 252A of the General Laws shall be effective 1 year
646 from the passage of this act.

SECTION 7. The remainder of this act shall take effect upon its passage.