

SENATE No. 452

The Commonwealth of Massachusetts

PRESENTED BY:

Cynthia Stone Creem

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 the Municipal Reforestation Program.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Cynthia Stone Creem</i>	<i>Norfolk and Middlesex</i>	
<i>Patrick M. O'Connor</i>	<i>First Plymouth and Norfolk</i>	<i>2/9/2023</i>
<i>Steven Owens</i>	<i>29th Middlesex</i>	<i>1/25/2023</i>
<i>Jack Patrick Lewis</i>	<i>7th Middlesex</i>	<i>2/6/2023</i>
<i>Samantha Montaño</i>	<i>15th Suffolk</i>	<i>2/6/2023</i>
<i>James K. Hawkins</i>	<i>2nd Bristol</i>	<i>2/8/2023</i>
<i>Carmine Lawrence Gentile</i>	<i>13th Middlesex</i>	<i>2/9/2023</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>	<i>2/15/2023</i>
<i>Brian W. Murray</i>	<i>10th Worcester</i>	<i>2/17/2023</i>
<i>David Henry Argosky LeBoeuf</i>	<i>17th Worcester</i>	<i>2/23/2023</i>
<i>Patricia D. Jehlen</i>	<i>Second Middlesex</i>	<i>3/2/2023</i>
<i>Michael P. Kushmerek</i>	<i>3rd Worcester</i>	<i>3/16/2023</i>
<i>Michael O. Moore</i>	<i>Second Worcester</i>	<i>3/16/2023</i>
<i>Erika Uytterhoeven</i>	<i>27th Middlesex</i>	<i>3/22/2023</i>
<i>John C. Velis</i>	<i>Hampden and Hampshire</i>	<i>4/11/2023</i>
<i>Marc R. Pacheco</i>	<i>Third Bristol and Plymouth</i>	<i>4/12/2023</i>
<i>Lydia Edwards</i>	<i>Third Suffolk</i>	<i>4/13/2023</i>
<i>Brendan P. Crighton</i>	<i>Third Essex</i>	<i>4/13/2023</i>

SENATE No. 452

By Ms. Creem, a petition (accompanied by bill, Senate, No. 452) of Cynthia Stone Creem, Patrick M. O'Connor, Steven Owens, Jack Patrick Lewis and other members of the General Court for legislation to establish the municipal reforestation program. Environment and Natural Resources.

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE SENATE, NO. 504 OF 2021-2022.]

The Commonwealth of Massachusetts

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

An Act establishing the Municipal Reforestation Program.

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

1 SECTION 1. Chapter 21A of the General Laws, as appearing in the 2020 Official
2 Edition, is hereby amended by adding the following section:-

3 Section 28. (a) There shall be established an advisory council under the executive office
4 of energy and environmental affairs, known as the urban forest advisory council. Members shall
5 be appointed by the secretary from public, private, and nongovernmental organizations with
6 expertise in urban forestry, ecology, arboriculture, landscape architecture, green infrastructure,
7 demand-side energy efficiency management, and climate change resilience and mitigation. Such
8 members may include representatives from the following: (i) municipal arboriculture or tree
9 warden associations; (ii) arboriculture or nursery industry associations; (iii) urban landscape

10 architecture associations; (iv) demand-side energy efficiency management organizations; (v)
11 green infrastructure and climate change resilience and mitigation organizations; (vi) nonprofit
12 organizations with experience in planting trees; (vii) environmental organizations with expertise
13 in energy conservation, energy efficiency, or green infrastructure building practices; (viii) local
14 affordable housing or community development organizations; (ix) workforce development
15 programs; (x) municipal departments of public works responsible for roads, water mains, sewers,
16 and utility infrastructure; (xi) researchers with expertise in data collection related to natural
17 resources, energy management, and climate change indicators; (xii) gas companies; (xiii) electric
18 distribution companies; (xiv) nonprofit transportation organizations with expertise in clean
19 transportation; (xv) nonprofit organizations with expertise in municipal finance; (xvi) the
20 Metropolitan Area Planning Council, other regional planning agencies, and the Massachusetts
21 Municipal Association; (xvii) small business associations; (xviii) organized labor associations;
22 (ix) municipal tree committees; (xx) officials from the department of conservation and
23 recreation, the department of environmental protection, and the department of transportation;
24 (xxi) agricultural high schools; (xxii) federally recognized and state acknowledged tribes within
25 the commonwealth; and (xxiii) the University of Massachusetts Amherst Center for Agriculture,
26 Food, and the Environment. At least one member of the advisory council shall have a
27 background in ecology and knowledge of native trees in urban settings.

28 (b) (1) The secretary shall convene the council to provide advice and technical assistance
29 to participating municipalities, tree-planting organizations, municipal arborists, state foresters,
30 gas and electric companies, and the department of transportation to ensure sufficient technical
31 and ecological expertise and oversight in the implementation of the municipal reforestation
32 program, pursuant to chapter 21P. The council shall use science-based guidelines to determine

33 urban tree canopy cover, for siting trees and to determine optimum native tree species to ensure
34 adequate root development and to achieve maximum reduction in consumer energy demand and
35 removal of greenhouse gas emissions while causing minimal disruption to public infrastructure.
36 The council shall develop guidelines to the secretary for approving plans submitted by
37 municipalities pursuant to chapter 21P, and shall advise the secretary on the merits of such plans,
38 including recommendations for improvement and approval. The council shall develop and
39 disseminate model tree retention ordinances and by-laws and other model ordinances and by-
40 laws that result in the preservation and expansion of tree canopy and make them available to
41 public on the website of the executive office of energy and environmental affairs. The secretary
42 shall provide such resources, expertise, and administrative support as necessary for the advisory
43 council to carry out its duties and responsibilities.

44 (2) The technical advice provided by the advisory council shall include, but is not limited
45 to: (i) approved tree lists, prioritizing the use of hardy, noninvasive and native tree species that
46 can thrive in the urban environment and the changing climate, and native tree species and their
47 cultivars that are most beneficial to local pollinator and bird species; (ii) specifications for
48 planting, installation, and maintenance, including guidelines for planting trees, size and species
49 of trees, soil volume and supplements, and minimum distances between newly planted trees and
50 existing infrastructure, including utility infrastructure; (iii) instructions for sufficient watering
51 and for long-term maintenance to be provided by recipients of trees to ensure survival of such
52 trees; (iv) technical planning assistance to municipalities and tree-planting organizations; (v)
53 procedures for inspection and quality control, including inspection for pests and diseases; (vi)
54 procedures for monitoring and collecting data on tree health and survival; (vii) procedures for
55 collecting data on energy conservation and climate mitigation benefits from the municipal

56 reforestation program; (viii) recommendations for workforce development and job training
57 programs on planting, maintenance, and preservation of urban forests, including collaboration
58 with secondary and higher education vocational programs; and (ix) any other technical advice as
59 required by the secretary, in consultation with the department of environmental protection, the
60 department of conservation and recreation, the department of public utilities, and the department
61 of transportation.

62 (c) The secretary and the urban forest advisory council, in consultation with the
63 department of environmental protection shall develop quantitative and qualitative measures,
64 using the best available scientific metrics and technology. for valuing the contribution that an
65 urban tree canopy cover makes to: mitigating climate change, including carbon sequestration and
66 other reductions of greenhouse gas emissions; energy conservation; reduction of the heat island
67 effect; storm water management; drought mitigation; air quality improvement; benefits to human
68 health; and ecological benefits to local pollinator and bird species. Such measures may be
69 updated as necessary to reflect current scientific research.

70 SECTION 2. The General Laws are hereby amended by inserting after chapter 21O the
71 following chapter:-

72 CHAPTER 21P

73 MUNICIPAL REFORESTATION PROGRAM

74 Section 1. (a) As used in this chapter, the following words, unless the context clearly
75 requires otherwise, shall have the following meanings:-

76 “Participating municipality”, each municipality in the commonwealth except those with
77 both a population of fewer than 10,000 residents and tree canopy cover of at least 60 percent;
78 provided, that a municipality with both a population of fewer than 10,000 residents and tree
79 canopy cover of at least 60 percent shall have the option to become a participating municipality
80 by a majority vote of the city or town council, by a majority vote of the board of selectmen or by
81 resolution of its legislative body, as may be appropriate; and provided further, that a federally
82 recognized or state acknowledged tribe within the commonwealth shall have the option to be
83 considered a participating municipality by a majority vote of its tribal council or by resolution of
84 its legislative body, as may be appropriate.

85 “Plan”, the municipal reforestation plan.

86 “Program”, the municipal reforestation program.

87 “Secretary”, the secretary of energy and environmental affairs.

88 “Urban tree canopy cover”, the surface area of the land covered by the combined leaves,
89 branches, and trunks of all standing trees in a given area when viewed from above.

90 (b) (1) The secretary, in consultation with the secretary of transportation, shall establish a
91 municipal reforestation program to allow participating municipalities access to funding and
92 technical assistance to plant and replace trees as well as maintain and preserve healthy trees
93 within the borders of their communities.

94 (2) The purpose and goals of the program include, but are not limited to: (i) removing
95 carbon dioxide emissions from the transportation sector within the municipalities of the
96 commonwealth through carbon sequestration provided by trees; (ii) improving public health by

97 mitigating harmful effects of excessive heat and cold; (iii) improving air quality by reducing
98 levels of particulate pollution in neighborhoods with low urban tree canopy cover; (iv)
99 strengthening climate resilience by strategically incorporating trees into urban green
100 infrastructure projects; (v) promoting community, economic, and workforce development by
101 incorporating green infrastructure into municipal transportation infrastructure and community
102 planning; (vi) recognizing trees as a key state-wide investment in transportation infrastructure
103 and workforce development in order to meet the mandates pursuant to chapter 21N; (vii)
104 prioritizing the inclusion of green, sustainable infrastructure in the development of transportation
105 infrastructure; (viii) prioritizing the expansion and preservation of the urban tree canopy cover in
106 environmental justice neighborhoods, including expanding parks and open spaces; (ix) providing
107 equitable access to funding for rural and urban neighborhoods for opportunities to develop green
108 infrastructure; (x) maintaining the health of newly planted and existing trees in the urban
109 environment by providing funding for maintenance and for inspection for invasive pests and
110 diseases; (xi) reversing the local decline in biodiversity by planting native trees and their
111 cultivars that are essential to the survival and maintenance of local pollinator and bird species
112 (xii) prioritizing the expansion and preservation of the urban tree canopy cover in municipalities
113 to achieve a tree canopy cover of at least 60 percent, where feasible.

114 Section 2. (a) The urban forest advisory council, pursuant to section 28 of chapter 21A, in
115 consultation with the secretary of energy and environmental affairs, the secretary of
116 transportation, and the secretary of administration and finance, shall establish a formula for the
117 disbursement of funding for the program to each participating municipality in the
118 commonwealth. Variables and weighted proportions of the formula shall include, but not be
119 limited to: (i) the total number of road mileage within the participating municipality; (ii) the total

120 population of the participating municipality; (iii) the total number of employed individuals
121 within the borders of the participating municipality; (iv) the number of environmental justice
122 criteria the participating municipality meets, as determined by the executive office of energy and
123 environmental affairs' environmental justice policy; and (v) the percentage of urban tree canopy
124 cover with a greater weighted calculation provided for neighborhoods within a participating
125 municipality having a tree canopy cover of 20 percent or less.

126 (b) All costs incurred by the secretary and the participating municipalities for the
127 planning, implementation and maintenance of the program shall be covered by section 3 of this
128 act. Funds shall be annually distributed to each municipality, pursuant to said section 3, no later
129 than August 1st and shall take effect 3 years following enactment of this act.

130 (c) Each participating municipality shall report annually to the secretary on the status of
131 the plan and the projects that were completed within the fiscal year and the plans for the
132 following year.

133 Section 3. (a) (1) Each participating municipality shall develop a municipal reforestation
134 plan within 3 years following enactment of this of act, appropriate to the size and needs of the
135 municipality. In developing a plan, participating municipalities shall follow the guidelines
136 developed by the urban forest advisory council established under section 28 of chapter 21A and
137 any other guidelines as determined necessary by the secretary. Participating municipalities may
138 solicit the technical advice and assistance from: the urban forest advisory council; the department
139 of transportation; the department of conservation and recreation; the department of
140 environmental protection; nonprofit tree-planting organizations; local environmental,
141 sustainability, and pollinator pathway organizations with knowledge of native trees; and

142 nonprofit transportation organizations; provided, however that such technical advice and
143 assistance is consistent with the guidelines developed by the urban forest advisory council. The
144 secretary shall make available other resources as needed by a participating municipality to
145 facilitate the development of its plan at no additional cost to the participating municipality. The
146 plan created by a participating municipality shall be broken down into projects to be completed
147 by the participating municipality and shall follow the project completion prioritization
148 requirements of this section.

149 (2) The plan shall include, but not be limited to: (i) an inventory of the participating
150 municipality's existing tree canopy cover, using established scientific protocols for determining
151 tree canopy cover, such as geographical information systems; (ii) an analysis to determine the
152 optimal sites for planting trees to achieve the goals the program, using established scientific
153 protocols for site selection; (iii) the current condition of the tree canopy cover of the
154 neighborhood where the projects will be located; (iv) how the tree species proposed to be planted
155 are suitable for the specific sites taking into account local environmental conditions and the
156 preference for native tree species and their cultivars; (v) the expected benefits from expansion of
157 the tree canopy cover on energy consumption, the heat island effect, wind reduction, storm water
158 runoff, drought mitigation, and other consequences related to climate change; (vi) the expected
159 benefits from expansion of the tree canopy cover on public health; (vii) plans to maintain and
160 provide follow-up care following the planting of trees; (viii) plans to engage community
161 residents in the planting and maintenance of the trees, including workforce development
162 programs; (ix) the relationship of the project to any municipal vulnerability preparedness
163 program; (x) plans to promote the preservation of existing tree canopy; (xi) a timeline for
164 completion for each project within the plan while ensuring equitable project prioritization of

165 projects for environmental justice neighborhoods when attainable; (xii) certification that tree pits
166 are free of methane leaking from gas pipeline infrastructure; and (xiii) any other information as
167 may be required by the secretary. Plans shall be submitted to the secretary to be certified
168 ensuring the plans meet the required criteria of this section.

169 (3) Trees planted under a certified plan may be planted in public rights of way, public
170 parks, and on private residential and commercial property, provided that priority for project
171 completion shall be given to: (i) sites in neighborhoods with low tree canopy cover with first
172 priority given to sites with less than 20 percent tree canopy cover; (ii) sites in neighborhoods
173 with levels of particulate pollutants above the levels determined by the department of
174 environmental protection and the department of public health to be hazardous to human health;
175 (iii) sites in environmental justice neighborhoods; (iv) neighborhoods that are deemed to be heat
176 islands; and (v) locations where passengers wait at public transit stations and bus stops and
177 designated cool corridors for walking and bicycling. Second priority shall be given to sites with
178 less than 40 percent tree canopy cover. Third priority shall be given to sites with less than 60
179 percent tree canopy cover and to sites with any other criteria determined by the secretary, in
180 consultation with the department of environmental protection, the department of conservation
181 and recreation, and the department of transportation. To achieve optimal tree canopy cover, trees
182 may be planted by a participating municipality on private residential and commercial property
183 using funds allocated under sections 2 and 3 of this act, provided, however that the cost of
184 maintenance for such trees shall be the responsibility of the owner of such property, through
185 written agreement between the owner of the property and the participating municipality as a
186 condition of such owner receiving the trees.

187 (4) Participating municipalities shall update their plans for recertification every 5 years.
188 In order to revise a certified plan prior to the next recertification, a participating municipality
189 shall submit the proposed revisions to the executive office of energy and environmental affairs
190 for approval and recertification by the secretary. The secretary may seek technical advice for
191 reviewing such proposed revisions from the secretary of transportation and the urban forest
192 advisory council established under section 28 of chapter 21A.

193 Section 4. (a) Beginning 3 years following the enactment of this act, each participating
194 municipality shall annually submit to the secretary for approval a summary of the projects to be
195 completed from the participating municipality's reforestation plan within the next fiscal year and
196 a plan for the next 4 fiscal years.

197 (b) The total costs of the projects shall include: (i) the cost of purchasing trees
198 appropriate for the selected sites, including trees purchased as part of a purchasing agreement
199 pursuant to subsection (c) of this section; (ii) the cost of planting trees; (iii) the cost of preparing
200 the sites where trees are to be planted; (iv) the cost of infrastructure to create adequate tree pits
201 and planting conditions, including but not limited to, water collection and water retention
202 technologies; (v) the cost of making reasonable modifications to adjoining infrastructure; (vi) the
203 cost of labor; (vii) the cost of community outreach and recruitment of volunteers, including any
204 stipends provided to volunteers who agree to care for public shade trees in their neighborhoods;
205 (viii) the cost of necessary machinery used to plant trees; (ix) the cost of maintaining trees
206 planted under the plan, including sufficient watering and monitoring of trees planted on public
207 rights of way, public parks, and other public property; (x) the cost for subcontractors to perform
208 work that the applicant demonstrates to be beyond its capacity to perform; (xi) reasonable
209 administrative costs incurred by a participating municipality in planning and implementing the

210 project and in follow-up maintenance of the trees; and (xii) other reasonable costs as determined
211 by the secretary. Upon the request of a participating municipality and where cost effective, the
212 department of conservation and recreation may provide oversight project management for a
213 project.

214 (c) Certified projects intending to use funding allocated under subsection (b) of section 2
215 of this chapter shall not exceed the participating municipality's total funding allocation for the
216 fiscal year.

217 (d) If a participating municipality submits projects for the fiscal year that exceed the
218 participating municipality's total funding allocation under subsection (b) of section 2 of this
219 chapter, the secretary may certify such projects if the participating municipality submits the
220 corresponding required financial forms, as determined by the secretary, indicating that the
221 participating municipality has the difference of the costs of the projects acquired through cash or
222 in-kind contributions from the participating municipality, individuals, nonprofit organizations,
223 corporations, or other entities.

224 (e) Funding from public or private sources as authorized by section 9 of chapter 21A may
225 be acquired by the secretary to finance projects to expand urban forests and the municipal
226 reforestation program. The secretary shall seek any federal funding that is available to support
227 urban forests and the municipal reforestation program and the urban forest advisory council shall
228 assist municipalities, nonprofit organizations, regional planning agencies, and other eligible
229 entities in identifying and applying for any federal funding that is available to support urban
230 forests and the municipal reforestation program.

231 (f) Participating municipalities, when feasible, shall prioritize purchasing trees that are
232 planted for projects financed under their municipal reforestation plans from nurseries located in
233 the commonwealth. A participating municipality may enter into a purchasing agreement with
234 another participating municipality, a regional group of participating municipalities, a regional
235 planning agency, or with the department of conservation and recreation to purchase in bulk trees
236 to be planted under their municipal reforestation plans and other tree planting programs under the
237 authority of the department of conservation and recreation; provided, however, that the trees
238 purchased through any agreement come at a reduced cost for all entities.

239 (g) A participating municipality may enter into an agreement with another participating
240 municipality, a regional group of participating municipalities, or a regional planning agency to
241 jointly develop and implement their municipal reforestation plans, including sharing personnel or
242 equipment or jointly contracting with another entity to perform work that the participating
243 municipalities demonstrate to be beyond their capacity to perform.

244 Section 5. The secretary shall report annually, no later than October 1, on the results
245 achieved by the municipal reforestation program to the governor and to the clerks of the house of
246 representatives and the senate, who shall forward such report to the president of the senate, the
247 speaker of the house of representatives, and the chairs of the house and senate committees on
248 ways and means.

249 Section 6. The secretary may promulgate such rules and regulations as are necessary to
250 administer this chapter.

251 SECTION 3. Chapter 29 of the General Laws, as appearing in the 2020 Official Edition,
252 is hereby amended by inserting after section 2QQQQQ the following section:-

253 Section 2RRRRR. There shall be established and set up on the books of the
254 commonwealth a separate fund, to be known as the Municipal Reforestation Trust Fund, to be
255 expended, without further appropriation, by the secretary of energy and environmental affairs for
256 the municipal reforestation program established in chapter 21P and the urban forest advisory
257 council established in section 28 of chapter 21A. The trust fund shall be credited with: (i) any
258 appropriations, bond proceeds or other monies authorized by the general court and specifically
259 designated to be credited thereto; (ii) funds from public and private sources and other gifts,
260 grants and donations; and (iii) any income derived from the investment of amounts credited to
261 the trust fund. All amounts credited to the trust fund shall be held in trust and used solely for
262 activities and expenditures consistent with the public purpose of the trust fund and the ordinary
263 and necessary expenses of administration and operation associated with the trust fund. All
264 available monies in the trust fund that are unexpended at the end of each fiscal year shall not
265 revert to the General Fund, shall be available for expenditure in the subsequent fiscal year, and
266 shall not be subject to section 5C.