

SENATE No. 504

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>First Middlesex and Norfolk</i>	
<i>Lori A. Ehrlich</i>	<i>8th Essex</i>	
<i>Jack Patrick Lewis</i>	<i>7th Middlesex</i>	<i>2/23/2021</i>
<i>Joseph A. Boncore</i>	<i>First Suffolk and Middlesex</i>	<i>6/22/2021</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	<i>6/29/2021</i>
<i>Erika Uytterhoeven</i>	<i>27th Middlesex</i>	<i>8/31/2021</i>
<i>Diana DiZoglio</i>	<i>First Essex</i>	<i>9/14/2021</i>
<i>Joanne M. Comerford</i>	<i>Hampshire, Franklin and Worcester</i>	<i>11/4/2021</i>
<i>Sonia Chang-Diaz</i>	<i>Second Suffolk</i>	<i>12/1/2021</i>
<i>Nika C. Elugardo</i>	<i>15th Suffolk</i>	<i>1/10/2022</i>
<i>Lydia Edwards</i>	<i>First Suffolk and Middlesex</i>	<i>1/31/2022</i>

SENATE No. 504

By Ms. Creem, a petition (accompanied by bill, Senate, No. 504) of Cynthia Stone Creem, Lori A. Ehrlich and Jack Patrick Lewis for legislation to establish the municipal reforestation program. Environment, Natural Resources and Agriculture.

The Commonwealth of Massachusetts

**In the One Hundred and Ninety-Second General Court
(2021-2022)**

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 is hereby amended by adding the
2 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, arboriculture, landscape architecture, green infrastructure, demand-
7 side energy efficiency management, and climate change resilience and mitigation. Such members
8 may include representatives from the following: (i) municipal arboriculture or tree warden
9 association; (ii) arboriculture or nursery industry association; (iii) urban landscape architecture
10 association; (iv) demand-side energy efficiency management; (v) green infrastructure and
11 climate change resilience and mitigation; (vi) nonprofit organization with experience in planting
12 trees; (vii) environmental organization with expertise in energy conservation, energy efficiency,

13 or green infrastructure building practices; (viii) local affordable housing or community
14 development organizations; (ix) workforce development programs; (x) municipal departments of
15 public works responsible for roads, water mains, sewers, and utility infrastructure; (xi)
16 researchers with expertise in data collection related to natural resources, energy management,
17 and climate change indicators; (xii) gas company infrastructure; (xiii) electric company
18 infrastructure; (xiv) nonprofit transportation organizations with expertise in clean transportation;
19 (xv) nonprofit organizations with expertise in municipal finance; (xvi) Metropolitan Area
20 Planning Council, other regional planning councils, or the Massachusetts Municipal Association;
21 (xvii) small business associations; (xviii) organized labor associations; (ix) municipal tree
22 committees; and (xx) officials from the department of conservation and recreation, the
23 department of environmental protection, and the department of transportation.

24 (b) (1) The secretary shall convene the council to provide advice and technical assistance
25 to municipalities, tree-planting organizations, municipal arborists, state foresters, gas and electric
26 companies, and the department of transportation to ensure sufficient technical expertise and
27 oversight in the implementation of the municipal reforestation program, pursuant to chapter 21P.
28 The council shall use science-based guidelines to determine urban tree canopy cover, for siting
29 trees and to determine optimum tree species to ensure adequate root development and to achieve
30 maximum reduction in consumer energy demand and removal of greenhouse gas emissions while
31 causing minimal disruption to public infrastructure. The council shall develop guidelines to the
32 secretary for approving plans submitted by municipalities pursuant to chapter 21P, and shall
33 advise the secretary on the merits of such plans, including recommendations for improvement
34 and approval. The secretary shall provide such resources, expertise, and administrative support
35 as necessary for the advisory council to carry out its duties and responsibilities.

36 (2) The technical advice provided by the advisory council shall include, but is not limited
37 to: (i) approved tree lists, emphasizing the use of hardy, noninvasive and native tree species that
38 can thrive in the urban environment and the changing climate, and tree species that are favored
39 by pollinators and birds; (ii) specifications for planting, installation, and maintenance, including
40 guidelines for planting trees, size and species of trees, soil volume and supplements, and
41 minimum distances between newly planted trees and existing infrastructure, including utility
42 infrastructure; (iii) instructions for sufficient watering and for long-term maintenance to be
43 provided by recipients of trees to ensure survival of such trees; (iv) technical planning assistance
44 to municipalities and tree-planting organizations; (v) procedures for inspection and quality
45 control, including inspection for pests and diseases; (vi) procedures for monitoring and collecting
46 data on tree health and survival; (vii) procedures for collecting data on energy conservation and
47 climate mitigation benefits from the municipal reforestation program; (viii) recommendations for
48 workforce development and job training programs on planting and maintenance of urban forests,
49 including collaboration with secondary and higher education vocational programs; and (ix) any
50 other technical advice as required by the secretary, in consultation with the department of
51 environmental protection, the department of conservation and recreation, the department of
52 public utilities, and the department of transportation.

53 (c) The secretary and the urban forest advisory council, in consultation with the
54 department of environmental protection shall develop quantitative and qualitative measures for
55 valuing the contribution that an urban tree canopy cover makes to mitigate the effects of climate
56 change, including removal of greenhouse gas emissions, energy conservation, reduction of heat
57 island effect, storm water management, drought mitigation, air quality improvement, carbon

58 sequestration, and benefits to human health, using the best available scientific metrics and
59 technology. Such measures may be updated as necessary to reflect current scientific research.

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

62 CHAPTER 21P^[L]_[SEP]

63 MUNICIPAL REFORESTATION PROGRAM^[L]_[SEP]

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

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

67 “Plan”, the municipal reforestation plan.

68 “Program”, the municipal reforestation program.

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

71 (b) (1) The secretary, in consultation with the secretary of transportation, shall establish a
72 municipal reforestation program to allow municipalities access to funding and technical
73 assistance to plant and replace trees as well as maintain healthy trees within the borders of their
74 communities.

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

78 mitigating harmful effects of excessive heat and cold; (iii) improving air quality by reducing
79 levels of particulate pollution in neighborhoods with low urban tree canopy cover; (iv)
80 strengthening climate resilience by strategically incorporating trees into urban green
81 infrastructure projects; (v) promoting community, economic, and workforce development by
82 incorporating green infrastructure into municipal transportation infrastructure and community
83 planning; (vi) recognizing trees as a key state-wide investment in transportation infrastructure
84 and workforce development in order to meet the mandates pursuant to chapter 21N; (vii)
85 prioritizing the inclusion of green, sustainable infrastructure in the development of transportation
86 infrastructure; (viii) prioritizing the expansion of the urban tree canopy cover in environmental
87 justice neighborhoods, including expanding parks and open spaces; (ix) providing equitable
88 access to funding for rural and urban neighborhoods for opportunities to develop green
89 infrastructure; (x) maintaining the health of newly planted and existing trees in the urban
90 environment by providing funding for maintenance and for inspection for pests and diseases; (xi)
91 prioritizing the expansion of the urban tree canopy cover in municipalities to achieve a tree
92 canopy cover of at least 60 percent.

93 Section 2. (a) The urban forest advisory council, pursuant to section 28 of chapter 21A, in
94 consultation with the secretary of energy and environmental affairs, the secretary of
95 transportation, and the secretary of administration and finance, shall establish a formula for the
96 disbursement of funding for the program to each municipality in the commonwealth. Variables
97 and weighted proportions of the formula shall include, but not be limited to: (i) the total number
98 of road mileage within the municipality; (ii) the total population of the municipality; (iii) the
99 total number of employed individuals within the borders of the municipality; (iv) the number of
100 environmental justice criteria the municipality meets, as determined by the executive office of

101 energy and environmental affairs' environmental justice policy; and (v) the percentage of urban
102 tree canopy cover with a greater weighted calculation provided for neighborhoods within a
103 municipality having a tree canopy cover of 20 percent or less.

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

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

110 Section 3. (a) (1) Each municipality shall develop a municipal reforestation plan within 3
111 years following enactment of this of act, appropriate to the size and needs of the municipality. In
112 developing a plan, such municipality shall follow the guidelines developed by the urban forest
113 advisory council established under section 28 of chapter 21A and any other guidelines as
114 determined necessary by the secretary. Municipalities may solicit the technical advice and
115 assistance from the urban forest advisory council, the department of transportation, the
116 department of conservation and recreation, the department of environmental protection, nonprofit
117 tree-planting organizations, nonprofit transportation organizations; provided, however that such
118 technical advice and assistance is consistent with the said guidelines developed by the urban
119 forest advisory council. The secretary shall make available other resources as needed by a
120 municipality to facilitate the development of its plan at no additional cost to the municipality.
121 The plan created by the municipality shall be broken down into projects to be completed by the
122 municipality and shall follow the project completion prioritization requirements of this section.

123 (2) The plan shall include, but not be limited to: (i) an inventory of the municipality’s
124 existing tree canopy cover, using established scientific protocols for determining tree canopy
125 cover, such as geographical information systems; (ii) an analysis to determine the optimal sites
126 for planting trees to achieve the goals the program, using established scientific protocols for site
127 selection; (iii) the current condition of the tree canopy cover of the neighborhood where the
128 projects will be located; (iv) how the tree species proposed to be planted are suitable for the
129 specific sites taking into account local environmental conditions; (v) the expected benefits from
130 expansion of the tree canopy cover on energy consumption, heat island effect, wind reduction,
131 storm water runoff, drought mitigation, and other consequences related to climate change; (vi)
132 the expected benefits from expansion of the tree canopy cover on public health; (vii) plans to
133 maintain and provide follow-up care following the planting of the trees; (viii) plans to engage
134 community residents in the planting and maintenance of the trees, including workforce
135 development programs; (ix) the relationship of the project to any municipal vulnerability
136 preparedness program; (x) a timeline for completion for each project within the plan while
137 ensuring equitable project prioritization of projects for environmental justice neighborhoods
138 when attainable; (xi) certification that tree pits are free of methane leaking from gas pipeline
139 infrastructure; and (xii) any other information as may be required by the secretary. Plans shall be
140 submitted to the secretary to be certified ensuring the plans meet the required criteria of this
141 section.

142 (3) Trees planted under a certified plan may be planted in public rights of way, public
143 parks, and on private residential and commercial property, provided that priority for project
144 completion shall be given to: (i) sites in neighborhoods with low tree canopy cover with first
145 priority given to sites with less than 20 percent tree canopy cover; (ii) sites in neighborhoods

146 with levels of particulate pollutants above the levels determined by the department of
147 environmental protection and the department of public health to be hazardous to human health;
148 (iii) sites in environmental justice neighborhoods; and (iv) neighborhoods that are deemed to be
149 heat islands. Second priority shall be given to sites with less than 40 percent tree canopy cover.
150 Third priority shall be given to sites with less than 60 percent tree canopy cover and to sites with
151 any other criteria determined by the secretary, in consultation with the department of
152 environmental protection, the department of conservation and recreation, and the department of
153 transportation. To achieve optimal tree canopy cover, trees may be planted by a municipality on
154 private residential and commercial property using funds allocated under sections 2 and 3 of this
155 act, provided, however that the cost of maintenance for such trees shall be the responsibility of
156 the owner of such property, through written agreement between the owner of the property and
157 the municipality as a condition of such owner receiving the trees.

158 (4) Municipalities shall update their plans for recertification every 5 years. In order to
159 revise a certified plan prior to the next recertification, the municipality shall submit the proposed
160 revisions to the executive office of energy and environmental affairs for approval and
161 recertification by the secretary. The secretary may seek technical advice for reviewing such
162 proposed revisions from the secretary of transportation and the urban forest advisory council
163 established under section 28 of chapter 21A.

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

168 (b) The total costs of the projects shall include: (i) the cost of purchasing trees
169 appropriate for the selected sites, including trees purchased as part of a purchasing agreement
170 pursuant to subsection (c) of this section; (ii) the cost of planting trees; (iii) the cost of preparing
171 the sites where trees are to be planted; (iv) the cost of infrastructure to create adequate tree pits
172 and planting conditions, including but not limited to, water collection and water retention
173 technologies; (v) the cost of making reasonable modifications to adjoining infrastructure; (vi) the
174 cost of labor; (vii) the cost of community outreach and recruitment of volunteers; (viii) the cost
175 of necessary machinery used to plant trees; (ix) the cost of maintaining trees planted under the
176 plan, including sufficient watering and monitoring of trees planted on public rights of way,
177 public parks, and other public property; (x) the cost for subcontractors to perform work that the
178 applicant demonstrates to be beyond its capacity to perform; (xi) reasonable administrative costs
179 for a municipality incurred in planning and implementing the project and in follow-up
180 maintenance of the trees; and (xii) other reasonable costs as determined by the secretary. Upon
181 the request of the municipality and where cost effective, the department of conservation and
182 recreation may provide oversight project management for a project.

183 (c) Certified projects intending to use funding allocated under subsection (b) of section 2
184 of this chapter shall not exceed the municipal's total funding allocation for the fiscal year.

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

191 (e) Funding from other public or private sources as authorized by section 9 of chapter
192 21A may be acquired by the secretary, provided, however, that such funds are used to finance
193 projects to expand urban forests and the municipal reforestation program.

194 (f) Municipalities, when feasible, shall prioritize purchasing trees that are planted for
195 projects financed under their municipal reforestation plans from nurseries located in the
196 commonwealth. A municipality may enter into a purchasing agreement with another
197 municipality, regional group of municipalities, or with the department of conservation and
198 recreation to purchase in bulk trees to be planted under their municipal reforestation plans and
199 other tree planting programs under the authority of the department of conservation and
200 recreation; provided, however, that the trees purchased through any agreement come at a reduced
201 cost for all entities.

202 Section 5. The secretary shall report annually, no later than October 1, on the results
203 achieved by the municipal reforestation program to the governor and to the clerks of the house of
204 representatives and the senate who shall forward such report to the president of the senate, the
205 speaker of the house of representatives, and the chairs of the house and senate committees on
206 ways and means.

207 Section 6. The secretary may adopt rules, regulations, and guidelines for the
208 administration and implementation of this chapter.

209 SECTION 3. (a) Notwithstanding any general or special law to the contrary, a percentage
210 of the monies collected by the commonwealth through market-based compliance mechanisms
211 pursuant to section 7 of chapter 21N of the General Laws to address greenhouse gas emissions
212 from the transportation section, to be determined by the secretary of energy and environmental

213 affairs in consultation with the secretary of transportation, shall be used to fund the municipal
214 reforestation program pursuant to chapter 21P. Said percentage of monies shall meet no less than
215 the minimum amount sufficient to cover the entire cost of the municipal reforestation program
216 pursuant to chapter 21P.