

**SENATE . . . . . No. 452**

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**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>

**SENATE . . . . . No. 452**

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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.

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[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)**  
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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.