

**SENATE . . . . . No. 2196**

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**The Commonwealth of Massachusetts**

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**In the One Hundred and Ninetieth General Court**  
**(2017-2018)**  
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SENATE, Monday, October 30, 2017

The committee on Ways and Means, to whom was referred the Senate Bill providing for the establishment of a comprehensive adaptation management plan in response to climate change (Senate, No. 472),-- reports, recommending that the same ought to pass with an amendment substituting a new draft with the same title (Senate, No. 2196).

For the committee,  
Karen E. Spilka

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## The Commonwealth of Massachusetts

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In the One Hundred and Ninetieth General Court  
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An Act providing for the establishment of a comprehensive adaptation management plan in response to climate change.

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

### CHAPTER 21P.

#### COMPREHENSIVE ADAPTATION MANAGEMENT

#### PLAN TO ADDRESS CLIMATE CHANGE.

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

5           “Adaptation”, a response and process of adjustment to actual or expected climate change  
6 and its effects that seeks to increase the resiliency and reduce the vulnerability of the  
7 commonwealth’s built and natural environments and seeks to moderate or avoid harm or exploit  
8 beneficial opportunities to reduce the safety and health risks that vulnerable human populations  
9 and resources may encounter due to climate change.

10 “Executive office”, the executive office of energy and environmental affairs.

11 “Hazard mitigation”, an effort using nonstructural measures to reduce loss of life and  
12 property by lessening the impacts of major storms.

13 “Plan”, the comprehensive adaptation management plan to address climate change and  
14 any revised plans developed pursuant to this chapter.

15 “Public utility company”, shall have the same meaning as defined in the second  
16 paragraph of subsection (j) of section 5 of chapter 21E.

17 “Resilience”, the ability to respond and adapt to changing conditions and withstand and  
18 rapidly recover with minimal damage from disruption due to climate-related events and impacts  
19 that may include, but shall not be limited to, shoreline improvement, seawall maintenance and  
20 expansion, infrastructure improvement and innovative building design and construction.

21 “State agency”, a legal entity of state government established by the legislature as an  
22 agency, board, bureau, department, office or division of the commonwealth with a specific  
23 mission that may report to an executive office or secretariat or be an independent division or  
24 department.

25 “State authority”, a body politic and corporate constituted as a public instrumentality of  
26 the commonwealth and established by law to serve an essential governmental function; provided,  
27 however, that “state authority” shall include energy generation and transmission, solid waste,  
28 drinking water, wastewater and stormwater and telecommunication utilities serving areas  
29 identified by the executive office as subject to material risk of flooding; provided further, that  
30 unless designated as such by the secretary of energy and environmental affairs, “state authority”

31 shall not include: (i) a state agency; (ii) a city or town; (iii) a body controlled by a city or town;  
32 or (iv) a separate body politic for which the governing body is elected, in whole or in part, by the  
33 general public or by representatives of member municipalities.

34 Section 2. (a) The secretary of energy and environmental affairs and the secretary of  
35 public safety and security, in consultation with appropriate secretariats as determined by the  
36 governor, shall develop, draft and adopt a comprehensive adaptation management plan to address  
37 climate change. The plan shall be revised at least once every 5 years. The plan shall be  
38 developed and revised with guidance from the comprehensive adaptation management plan  
39 advisory commission established in section 3.

40 The plan shall include policies to encourage and provide guidance to state agencies, state  
41 authorities, municipalities and regional planning agencies to proactively address the impacts of  
42 climate change. The plan shall also provide a process for local and regional climate vulnerability  
43 assessment and adaptation strategy development and implementation and may encourage and  
44 provide guidance to municipalities on how to proactively address the impacts of climate change.

45 Upon the adoption of the plan, all certificates, licenses, permits, authorizations, grants,  
46 financial obligations, projects, actions and approvals issued thereafter by a state agency or state  
47 authority shall be consistent, to the maximum extent practicable, with the plan. A copy of the  
48 plan and any revisions thereof shall be filed with clerks of the senate and house of  
49 representatives.

50 (b) The plan shall include, but not be limited to: (i) a statement setting forth the  
51 commonwealth's goals, expected outcomes and a path for achieving results and priorities and  
52 principles for ensuring effective prioritization for the resiliency, preservation, protection,

53 restoration and enhancement of the commonwealth's built and natural infrastructure; (ii) a  
54 commitment to sound management practices that takes into account the existing natural, built  
55 and economic characteristics of the commonwealth's most vulnerable areas and human  
56 populations; (iii) data on existing and projected climate trends that is based on the latest data,  
57 forecasting and models regarding climate change indicators and trends that shall include, but not  
58 limited to, extreme weather events, changes for temperature, precipitation, drought, sea level,  
59 inland and coastal flooding and wildfire; (iv) a statement on the preparedness and vulnerabilities  
60 in the commonwealth's emergency response and infrastructure resiliency that shall include, but  
61 not be limited to, energy, transportation, communications, health and other systems; (v) an  
62 assessment of economic vulnerability that shall include, but not limited to, an assessment of local  
63 businesses in high-risk communities; (vi) an assessment of natural resources and ecosystems that  
64 identifies vulnerabilities and strategies to preserve, protect, restore and enhance the natural  
65 resources and ecosystems; (vii) approaches for the commonwealth to increase the resiliency of  
66 government operations; and (viii) policies and strategies for ensuring that adaptation and  
67 resiliency efforts complement efforts to reduce greenhouse gas emissions and contribute towards  
68 the commonwealth's ability to meet the statewide emission limits established pursuant to chapter  
69 21N.

70           Section 3. (a) There shall be a comprehensive adaptation management plan advisory  
71 commission to assist the secretary of energy and environmental affairs and the secretary of  
72 public safety and security in developing the plan under section 2. The commission shall consist  
73 of: the secretary of energy and environmental affairs or a designee; the secretary of public safety  
74 and security or a designee; 1 member to be appointed by the president of the University of  
75 Massachusetts who shall be employed by the university and have expertise in climate science

76 and 19 persons to be appointed jointly by the secretary of energy and environmental affairs and  
77 the secretary of public safety and security, 1 of whom shall be an employee at the Massachusetts  
78 emergency management agency, 1 of whom shall have expertise in transportation and built  
79 infrastructure, 1 of whom shall have expertise in commercial, industrial and manufacturing  
80 activities, 1 of whom shall have expertise in commercial and residential property management  
81 and real estate, 1 of whom shall have expertise in energy generation and distribution, 1 of whom  
82 shall have expertise in wildlife and land conservation, 1 of whom shall have expertise in water  
83 supply and conservation, 1 of whom shall have expertise in the outdoor recreation economy, 1 of  
84 whom shall have expertise in economic and environmental justice, 1 of whom shall have  
85 expertise in ecosystem dynamics, 1 of whom shall have expertise in coastal zones and oceans, 1  
86 of whom shall have expertise in rivers and wetlands, 1 of whom shall be a professional engineer,  
87 1 of whom shall be from a statewide nonprofit land and water conservation organization; 1 of  
88 whom shall have expertise in historic and cultural resources, 1 of whom shall be a property  
89 owner in a coastal community, 1 of whom shall have expertise in small business administration,  
90 1 of whom shall be a certified floodplain manager and 1 of whom shall have expertise in local  
91 government. The secretary of energy and environmental affairs and the secretary of public safety  
92 and security shall jointly designate 1 commission member to serve as chair.

93 (b) The advisory commission shall prepare a report that:

94 (i) identifies: (A) how the secretary of energy and environmental affairs can  
95 support existing adaptation, resilience and hazard mitigation efforts of state agencies, such as the  
96 StormSmart Coasts program in the office of coastal zone management, the coastal erosion  
97 commission report, BioMap2 at the department of fish and game and vulnerability studies being  
98 conducted by state agencies; (B) new actions that may be implemented immediately using

99 existing state agency legal authority, state resources and funding based upon the  
100 recommendations included in the climate change impact report prepared pursuant to section 9 of  
101 chapter 298 of the acts of 2008 and existing climate change plans prepared by regional planning  
102 agencies and municipalities; (C) unilateral actions that may be taken by the executive branch to  
103 increase climate adaptation, resilience and hazard mitigation which shall include, but not be  
104 limited to, executive orders and policy directives issued by the governor or policies, regulations  
105 and guidance issued by the secretary of energy and environmental affairs; (D) recommendations  
106 of new climate resilience and adaptation actions that require legislative approval, state resources  
107 or funding, including identification of funds to leverage opportunities through public and private  
108 partnerships; and (E) the cost of climate adaptation management within the 5-year term of the  
109 plan based upon the adaptation actions recommended in the report, existing climate adaptation  
110 plans, including those prepared by regional planning councils and municipalities, and state  
111 agency cost assessments outlined in section 4; and

112 (ii) provides information relative to the risks associated with climate change, both  
113 means and extremes, including, but not limited to, the risks associated with changes in  
114 temperature, drought, increased precipitation and coastal and inland flooding identified in the  
115 report of the advisory committee on flood risks created by climate change established in section  
116 39 of chapter 52 of the acts of 2014.

117 The advisory commission shall submit revisions or amendments to the report as  
118 necessary.

119 Section 4. Each state agency, state authority and public utility company as designated by  
120 the secretary of environmental affairs and the secretary of public safety and security shall, in

121 consultation with the executive office and at least once every 5 years, develop and update a  
122 vulnerability and adaptation assessment for the portfolio of assets of the state agency, state  
123 authority or public utility company. The vulnerability assessment shall be based on the relevant  
124 scientific data and information collected by the comprehensive adaptation management plan  
125 advisory commission pursuant to section 3.

126         The vulnerability assessments shall classify the economic losses over time associated  
127 with each major asset for the relevant climate risks as unacceptable, noncritical or immaterial;  
128 provided, however, that such climate risks shall include, but not be limited to, coastal and inland  
129 flooding and extreme heat. For assets exposed to unacceptable losses, the vulnerability  
130 assessment shall include order-of-magnitude cost-estimates for: (i) measures to protect the  
131 assets; (ii) measures to make the assets resilient; and (iii) removal and relocation of the assets  
132 from exposed areas. Estimates shall also be prepared for the economic, social and environmental  
133 damages if adaptation actions are not taken. Qualitative cost-benefit discussions of projected  
134 social impacts of flood prevention versus flood resilience shall also be included in the  
135 vulnerability assessment.

136         Section 5. The secretary of energy and environmental affairs and the secretary of public  
137 safety and security shall, not less than 6 months before establishing the plan pursuant to this  
138 chapter, provide for public access to the draft plan in electronic and printed copy form and shall  
139 provide for a public comment period that shall include at least 5 public hearings across the  
140 commonwealth. The secretary of energy and environmental affairs and the secretary of public  
141 safety and security shall publish notice of a public hearing in the Environmental Monitor not less  
142 than 30 days but not more than 35 days before the date of a hearing. Notice of a public hearing  
143 shall also be published at least once a week for the 4 consecutive weeks preceding a public

144 hearing in newspapers of general circulation serving the municipality in which the hearing shall  
145 be held. The public comment period shall remain open for not less than 60 days from the date of  
146 the final public hearing. After the close of the public comment period, the secretary of energy  
147 and environmental affairs and the secretary of public safety and security shall issue a final plan.  
148 The plan, together with legislation necessary to implement the plan, if any, shall be filed with the  
149 clerks of the senate and house of representatives.

150           Section 6. The plan shall be consistent with this chapter and any other relevant general  
151 and special laws. Nothing in the plan shall be construed to supersede existing general or special  
152 laws or to confer any rights or adversely impact existing rights or remedies in addition to those  
153 conferred by general or special laws existing on the effective date of this chapter.

154           Section 7. The secretary of energy and environmental affairs shall develop and support a  
155 comprehensive adaptation management plan grant program. The program shall consist of: (i)  
156 financial assistance to municipalities for the development and implementation of comprehensive  
157 cost-effective adaptation management plans; (ii) technical planning guidance for adaptive  
158 municipalities through climate vulnerability assessments and adaptation strategy development;  
159 and (iii) development of a definition of impacts by supporting municipalities conducting climate  
160 vulnerability assessments. The grants shall be used to advance efforts to adapt land use, zoning,  
161 infrastructure, policies and programs to reduce the vulnerability of the built and natural  
162 environment to changing environmental conditions that are a result of climate change. The  
163 secretary of energy and environmental affairs shall develop and implement an outreach and  
164 education program about climate change and its effects in low-income and urban areas. The  
165 department of energy resources may make available monies from amounts collected by the

166 Department of Energy Resources Credit Trust Fund established in section 13 of chapter 25A for  
167 the grant program.

168 Comprehensive adaptation management plans shall include, but not be limited to: (i) a  
169 climate vulnerability assessment and adaptation strategy development; (ii) a demonstrated  
170 understanding of municipal characteristics, including environmental and socioeconomic  
171 characteristics; and (iii) prioritization of protecting identified inland and coastal vulnerable  
172 locations not yet built upon.

173 Section 8. The executive office, in consultation with the division of capital asset  
174 management and maintenance, may acquire, by purchase from willing sellers and for  
175 conservation and recreation purposes, land that abuts or is adjacent to areas that are subject to the  
176 ebb and flow of the tide or on barrier beaches or in velocity zones of flood plain areas and on  
177 which structures have been substantially and repeatedly damaged by severe weather, including  
178 those areas that have been rejected by the Pre-Disaster Mitigation Grant Program and the Hazard  
179 Mitigation Grant Program administered by the Federal Emergency Management Agency.

180 Prior to the acquisition of land under this section, the executive office shall, after  
181 consultation with the municipality in which the land is located, develop a conservation and  
182 recreation management plan and a coastal erosion mitigation and management plan for the land.  
183 The plan shall set forth the priority, description and location of lands to be acquired and any land  
184 management agreement reached between the agency and municipality that provides for local  
185 responsibility to carry out the development and management of the property. Land acquired  
186 pursuant to this section shall contain a deed restriction stating that the land shall be used for  
187 conservation and recreation purposes only.

188 Land shall not be acquired under this section until after a public hearing to consider the  
189 management plan has been held by the executive office in the municipality in which the land is  
190 located. The executive office shall notify the mayor or city manager and city council or board of  
191 alderman in a city or the board of selectmen, planning board and conservation commission, if  
192 any, of a town not later than 10 days before such a hearing.

193 If the executive office deems it necessary to make appraisals, surveys, soundings,  
194 borings, test pits or other related examinations to obtain information to carry out this section, the  
195 executive office or its authorized agent or employee may, after due notice by registered mail,  
196 enter upon lands, water and premises, not including buildings, to make such an appraisal, survey,  
197 sounding, boring, test pit or other related examination and the entry shall not be a trespass. The  
198 executive office shall provide reimbursement for any injury or actual damages resulting to the  
199 land, water or premises caused by an act of the executive office or its authorized agent or  
200 employee and shall, so far as possible, restore the land, water or premises to its condition prior to  
201 the appraisal, survey, sounding, boring, test pit or other related examination.

202 Section 9. (a) The executive office, acting for and on behalf of the commonwealth, may  
203 lease to a municipality or nonprofit organization certain property acquired by the commonwealth  
204 pursuant to section 8 or by the Federal Emergency Management Agency under 42 U.S.C. § 4001,  
205 et seq for use as conservation and recreation areas. The lease shall be for not more than 25 years.

206 A lease shall be in such form and contain such provisions as the secretary of energy and  
207 environmental affairs, in consultation with the division of capital asset management and  
208 maintenance, shall determine, including terms and conditions necessary to comply with laws  
209 relative to the protection of barrier beaches; provided, however, that the form shall be approved

210 by the attorney general. A lease shall include express conditions that the land shall be used for  
211 conservation and recreation purposes only and that permanent structures shall not be erected on  
212 the land and a reversionary clause that requires the lease to be terminated if the leased land is  
213 used in violation of a law relative to barrier beaches or a condition of the lease.

214 (b) In consideration for the granting of a lease authorized in subsection (a), the lessee  
215 municipality or nonprofit organization shall agree to maintain the acquired land as a clean, safe  
216 and orderly conservation or recreation area.

217 SECTION 2. Funds shall be expended from item 2000-7070 of section 2A of chapter  
218 286 of the acts of 2014 for the comprehensive adaptation management plan grant program  
219 established in section 7 of chapter 21P of the General Laws.

220 SECTION 3. Not later than 180 days after the effective date of this act, the  
221 commissioner of environmental protection shall promulgate rules regulating the dredging, filling  
222 or altering of land subject to coastal storm flowage pursuant to section 40 of chapter 131 of the  
223 General Laws.

224 SECTION 4. The comprehensive adaptation management plan advisory commission shall  
225 complete the report required by subsection (b) of section 3 of chapter 21P of the General Laws  
226 not later than January 1, 2019.