

**SENATE . . . . . No. 00363**

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The Commonwealth of Massachusetts

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PRESENTED BY:

***Richard T. Moore***

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*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 passage of the accompanying bill:

An Act incorporating wetland stewardship and scenic resources into wetland protection.

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PETITION OF:

NAME:

*Richard T. Moore*  
*Dr. Jerome Carr*

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 *Natick, MA 01760-375*

# SENATE . . . . . No. 00363

By Mr. Moore, petition (accompanied by bill, Senate, No. 363) of Moore for legislation to incorporate wetland stewardship and scenic resources into wetland protection [Joint Committee on Environment, Natural Resources and Agriculture].

[SIMILAR MATTER FILED IN PREVIOUS SESSION  
SEE  
□ SENATE  
□ , NO. 412 OF 2009-2010.]

## The Commonwealth of Massachusetts

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**In the Year Two Thousand Eleven**  
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An Act incorporating wetland stewardship and scenic resources into wetland protection.

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

1 SECTION 1. Section 40 of Chapter 131 of the General Laws is hereby amended by  
2 inserting after the third paragraph, the following paragraph:

3 The goals of this section are to encourage land owners and land managers to practice  
4 stewardship via science based resource management to protect, manage, and enhance the values  
5 and functions traditionally associated with wetlands and open waters; such values being public  
6 and private water supply, groundwater supply, flood control, storm damage prevention,  
7 prevention of pollution, land containing shellfish, fisheries, and wetland wildlife habitat. The  
8 goals of this section include the goals of the North American Waterfowl Management Program  
9 and the National Recreational Fisheries Policy.

10 SECTION 2. Section 40 of Chapter 131 of the General laws is hereby amended by  
11 deleting the existing definitions of “bogs, freshwater wetlands, swamps, wet meadows, and  
12 marshes” and replacing those definitions with the following more accurate and precise  
13 definitions.

14 The term “freshwater wetlands” as used in this section shall mean areas where water is at or near  
15 the surface for a time period sufficient to produce anaerobic conditions at or near the surface  
16 during the growing season. Examples of freshwater wetlands include bogs, marshes, swamps and  
17 wet meadows.

18 The term “bogs,” as used in this section, shall mean areas where hydrology is dominated by  
19 direct rainfall, i.e. is ombrotrophic; the groundwater occurs at or near the surface for a time  
20 period sufficient to produce anaerobic conditions at or near the surface during the growing  
21 season; and the vegetated community is dominated by Sphagnum mosses and other peat forming  
22 mosses, sedges, heaths or acid tolerant trees and shrubs which live on substantial peat deposits.

23 The term “marshes,” as used in this section, shall mean areas where an emergent vegetative  
24 community exists in or near standing or flowing water during most of the growing season and  
25 where a significant part of the vegetative community is tolerant of sustained partial submergence.  
26 Deep marshes have near continuous standing water and are typically dominated by aquatic plants  
27 with floating leaves.

28 The term “swamps,” as used in this section, shall mean areas where groundwater is at or near the  
29 surface of the ground throughout much of the growing season, and where a significant part of the  
30 vegetative community is dominated by trees and shrubs which are tolerant of anaerobic  
31 conditions in the uppermost soil layer caused by sustained saturation.

32 The term “wet meadows,” as used in this section, shall mean areas where groundwater is at or  
33 near the surface throughout most of the growing season, and where a significant part of the  
34 vegetative community is composed of various grasses, sedges, rushes and wetland herbs which  
35 are tolerant of anaerobic conditions in the topsoil caused by sustained saturation.

36 SECTION 3. Section 40 of Chapter 131 of the General Laws is hereby amended by  
37 inserting, after the existing and revised definitions, the following additional definitions.

38 The term “access,” as used in this section, shall mean the ability to construct a road for two or  
39 more houses, or a driveway for one house or other land use. The term “water access,” as used in  
40 this section, shall mean the ability of a water craft to reach open water, or for a riparian or lake  
41 side property owner to reach a beach or open water.

42 The term “anaerobic” as used in this section means the absence of molecular oxygen (O<sub>2</sub>),  
43 specifically in the uppermost soil layer. Note that O<sub>2</sub> is typically found in the air in soil voids,  
44 and thus complete soil saturation is required within the uppermost soil layer for anaerobic  
45 conditions to evolve over the time required for all the dissolved oxygen to be consumed due to  
46 uptake by living organisms or by chemical reactions in the soil environment.

47 The term “at or near the surface,” as used in this section, shall be twelve (12) inches or less  
48 below the earth’s surface; except a depth of six (6) inches shall apply in very well drained soils,  
49 somewhat excessively drained soils, or excessively drained soils, as defined by the USDA  
50 Natural Resources Conservation Service.

51 The term “bank,” as used in this section, shall mean naturally occurring banks and beaches;  
52 specifically excluding dug ditches, and human-made channels lined with cement, paving, riprap,

53 placed stone, or pilings. If a channel was pre-existing the initial ditching, then straightening or  
54 moderate changes to the original bank will still qualify a stream channel as a regulated bank.

55 The term “base flow” as used in this section, shall mean the dry weather flow in any stream or  
56 river. Base flow is groundwater being released into the channel or open water bodies during  
57 periods lacking direct surface runoff. Maintenance of fisheries, fisheries habitat, and water  
58 quality requires preserving and enhancing as much upland groundwater recharge as practical so  
59 that base flows are maintained or enhanced.

60 The term “best management practices” as used in this section are structural and land use  
61 practices which can be incorporated into any proposed land use change or any existing land use;  
62 and which are used to accomplish any of the following goals; control erosion, reduce pollutant  
63 loading, reduce flooding, or enhance groundwater recharge. Best management practices are  
64 commonly incorporated into flood control programs and structures.

65 The term “dissolved oxygen” (DO) as used in this section, means that molecular oxygen (O<sub>2</sub>) is  
66 in existence in the saturated portions of the groundwater at or near the surface in the uppermost  
67 soil layer. To determine if dissolved oxygen is or is not present in the saturated groundwater,  
68 testing of the groundwater is required by the use of an EPA approved testing method. The  
69 groundwater sampling is best done in groundwater taken from shallow monitoring wells ranging  
70 in depths from 6 inches to no more than 16 inches, depending on the thickness of the uppermost  
71 soil layer or thin soil layers. Wet chemical methods are preferred, since electrodes need to be  
72 calibrated at specific air pressures, and air pressures are constantly changing throughout the work  
73 day. The use of buried oxidation-reduction electrodes is not accurate because negative readings  
74 do not always correlate with zero DO. No one is required to do testing for DO, but when it is

75 used on a site with altered vegetation, or suspected altered hydrology, or altered soils, then the  
76 regulating agencies must accept the results of the DO testing if the data covers one high water  
77 table season lacking continuous drought conditions. Daily DO testing is not required, but the  
78 testing should begin prior to the start of the growing season, and continue almost every week  
79 based on precipitation patters until the water depths in the shallow monitoring wells have below  
80 12 inches in depth, whichever is shallower.

81 The term “drought,” as used in this section, shall mean any period of time starting after three  
82 consecutive months when precipitation during each month is less than 90% of the median  
83 precipitation and averaging less than 60% of median monthly precipitation for the three months  
84 as recorded at the nearest rain gage, or interpolated from the nearest rain gages. Drought  
85 conditions lie outside the normal growing season for purposes of verifying wetland versus  
86 upland hydrology. The term “extended drought” as used in this section shall mean any period of  
87 time starting after four consecutive months when precipitation is below 90% the median value,  
88 and the average is less than 50% of monthly median precipitation for the four month period. This  
89 is used to determine intermittent versus perermial streams, and to determine regulatory pond  
90 size. A drought or an extended drought ends when monthly precipitation exceeds 90% of the  
91 median.

92 The terms “ecologically wet plant species” and “wet-dry tolerant plant species,” as used in this  
93 section, shall refer to obligate (OBL), facultative wet (FACW), and facultative (FAC) excluding  
94 facultative- minus (FAC-) plant species as specified in the latest edition of t’National List of  
95 Plant Species that Occur in Wetlands;” or any newer replacement document which applies to the  
96 northeastern part of the United States.

97 The morphology of growth associated with plants in wetland areas under the first condition  
98 above shall include the following: buttressed tree trunks, pneumatophores, adventitious roots,  
99 shallow root systems, inflated stems, greater plant height, enlarged leaf areas, denser root  
100 growth, or basal budding. Basal budding in cut areas does not apply since cutting also produces  
101 multiple stems.

102 There are also forms of growth which exclude listed wetland plants from counting as wetland  
103 indicators. These include but are not limited to the following features; stunted plant height,  
104 smaller leaf area, plant leaf die-off, and reduced root growth; when compared to the same plant  
105 species in other locales or nearby obvious functional wetlands.

106 The term “enhancement” as used in this section shall mean any activity increasing the value of  
107 one or more functions of an existing wetland. The term “enhancement project” as used in this  
108 section shall mean any project which includes steps undertaken to improve the quality, function  
109 or value of any wetland or open water body. Since adding a pond to a wetland is good for  
110 waterfowl, and since it renews the evolutionary cycle of wetlands, ponds are always to be  
111 counted as wetland enhancements.

112 The term “environmental model” as used in this section shall mean any descriptive or numerical  
113 model used to help understand the real world. While no model can fully duplicate the  
114 complexities of the real world, environmental models are useful and acceptable tools in the  
115 decision making process under this Act. Environmental models can be used for, but are not  
116 limited to, quantifying water resources, predicting flooding, predicting depth of scour for any  
117 structure in or over a flowing water body, evaluating fisheries and wetland wildlife habitat for

118 pre- and post-development conditions, and evaluating water quality and water quality impacts.

119 Any environmental model may be used to evaluate a project or project impacts.

120 However, if the model is not a published model, then the basis and references for the model

121 should be presented with the Notice of Intent or other permit application. Preference is to be

122 given to evaluations done using objective numerical models.

123 The term “growing season” as used in this section, shall mean the time period starting when local

124 valley wetland frosts cease in spring and ending with the first wetland frost in the fall. Since

125 almost all meteorological stations occur in uplands, and since cold air regularly flows down hill

126 into wetlands, the growing season begins when lowest daily air temperatures no longer reach 32°

127 F as recorded on-site, or at the nearest weather stations. The growing season ends on the day

128 when the first frost has occurred on a site or when the lowest air temperature at night has

129 dropped below 32° F as recorded at an on-site monitoring station or at the nearest weather

130 station. Because on rare occasions, frosts can occur during the summer season, these will not

131 represent the start or end of the growing season for purposes of this Act.

132 The term “hydrologic year” as used in this section, shall mean the period starting on the first of

133 October, and ending at the end of September of the following calendar year.

134 The term “median precipitation” as used in this section, shall mean the statistical median

135 monthly precipitation amount, i.e., where 50% of the time the amount of monthly precipitation

136 occurs. All regulations based on this section shall be based on median precipitation for at least 22

137 years of record if that duration of record exists.

138 The term “100 year flood” as used in this section shall be based on (a) statistical analyses of

139 actual stream flows from USGS qualified gauging stations for larger streams and rivers, or (b)



140 shall be based on peak flow analyses using the climatic precipitation atlases prepared by the  
141 Northeast Regional Climate Center at Cornell University, or any newer rainfall atlases which are  
142 created by newer climatic precipitation studies using a longer time record for rainfall analyses.

143 The term “regional” as used in this section, shall mean any group of cities or towns acting as a  
144 unified body for wetland or open water body management or enhancement purposes. “Regional”  
145 also applies to project impacts, beneficial or harmful, when significant impacts extend beyond  
146 the limits of any single city or town.

147 The term “relict wetland,” as used in this section, means any area that has been significantly  
148 drained or filled by the action of humans or nature, or has had substantial water diverted from it,  
149 so that a functional wetland no longer exists. Relict wetlands are recognized by any of the  
150 following; collapse or wasting (oxidation) of peat; failure to satisfy the soil saturation  
151 requirement during the late spring during a non-thought growing season; invasion of dry herbs,  
152 shrubs or trees; or younger shrubs or trees that do not show the form or vigor of wetland  
153 conditions; or by presence of dissolved oxygen in the saturated portion of the upper soil layers  
154 within 12 inches of the ground surface during the high water table season in a non- drought  
155 period. Older wetland trees and shrubs are expected to retain wetland growth forms in relict  
156 wetlands due to the longevity of such plants, but these long living forms are not indicative of  
157 active wetland conditions in relict wetlands. Relict wetlands are not regulated as wetlands under  
158 this section; however they may still be regulated as upland floodplain if they are shown by peak  
159 flow calculations to be flooded during a 100 year flood.

160 The term “riparian” as used in this section, shall mean land situated on, or abutting, the bank of  
161 any flowing water body. The term “flowing water body” as used in this section shall mean any  
162 river or interment stream, excluding dug ditches, gutter flow, or erosion gullies.

163 The term “significant negative impact” as used in this section, shall mean that the end result of a  
164 project or proposed land use change which is calculated to result in a violation of water quality  
165 standards or guidelines, or which increases downstream peak flows for rainfalls or runoff events  
166 from a 5 year flood or up to a 100 year flood, or which results in a negative change greater than  
167 20% in some other wetland or open waterbody character or function. Significant impacts can be  
168 positive or negative, and significant positive impacts are encouraged by this Act. The creation or  
169 expansion of a pond, or pond dredging to remove excessive plant growth or accumulated organic  
170 sediments is deemed a significant positive impact.

171 The term “soil saturation,” as used in this section, shall mean observed standing groundwater in a  
172 monitoring well, or in a freshly opened test pit. These soil saturation tests must yield positive  
173 results at or near the surface for much of growing season excluding droughts, for any area to be a  
174 wetland.

175 The term “uppermost soil layer” means the layer of soil, natural or altered, starting at the surface  
176 of the earth, excluding the layer of leaves or dead vegetation, and it stops at the depth where the  
177 B horizon starts, or 12 inches, which ever is less. In cases where there are thin layers of soil over  
178 a buried topsoil; e.g., thin layers inside a cranberry bog, or thin layers of sands deposited by  
179 flooding; the uppermost soil layer shall include all of these thin layers until a more consistent soil  
180 layer is reached, or the thickness of the thin layers reaches a depth of 12 inches.

181 The term “vernal pool,” as used in this section, shall mean confined basin depressions, which in  
182 most years hold water for a minimum of two continuous months, during the spring or summer,  
183 and which contain at least one-quarter acre-foot of water at least once per year, and which is  
184 permanently free of fish, and which is proven to breed reptiles or amphibians, and which stays  
185 flooded for a long enough time period to allow the immature forms of these vertebrates to  
186 complete metamorphoses into land dwelling forms, exclusive of drought conditions. Regulated  
187 vernal pools exclude man-made test holes, basement foundation holes, human made detention  
188 and retention basins; or other areas less than 1,000 square feet in size which at their deepest at  
189 average annual high water are less than 18 inches deep and thus are subject to drying up and  
190 killing tadpoles and other young aquatic stages of vertebrates in most years. Vernal pools can be  
191 enhanced as long as the work occurs outside the breeding and aquatic maturation seasons of  
192 reptiles and amphibians. Vernal pools can be replicated by relocation to distances of up to 600  
193 feet from the existing pool as long as there is one overlapping spring season to confirm  
194 successful replication and as long as 50% of the edge of the relocated replicated pool has an  
195 undisturbed forest or vegetated edge. Then the pre- existing vernal pool can be filled after the  
196 completion of the aquatic vertebrate maturation season.

197 Relocation of egg masses and immature animals is encouraged from the pre-existing pool to the  
198 replicated pool during the overlap season.

199 The terms “wetland banking” and “wetland mitigation banking,” as used in this section, shall  
200 mean activities of wetland restoration, enhancement, preservation, or creation for the purpose of  
201 providing compensating credit for future proposed wetland alterations, either on-site or off-site.  
202 Benefits credited on any site can be sold or credited for projects in the same city or town.

203 Regional projects can apply wetland banking to or from other cities or towns involved in any  
204 regional project.

205 The term “wetland border,” as used in this section, shall mean the line below which all three of  
206 the following conditions are satisfied in undisturbed natural sites. First, the vegetative  
207 community must consist of at least 50% of areal coverage of naturally occurring ecologically wet  
208 plant species that do not show signs of stunted growth; or wet-dry tolerant plant species showing  
209 the form or vigor (enlarged size) associated with wet conditions. This is known as the  
210 “facultative-neutral” method. Second, the soils must be wetland hydric soils. Third, anaerobic  
211 conditions must exist for a period of time for at least two weeks during the growing season in the  
212 uppermost soil layers. No one is required to do testing for DO, and thus the first two criteria may  
213 be used as a presumption of the third in undisturbed areas. See the definition of “dissolved  
214 oxygen” in this Section. However, if measured dissolved oxygen levels from DO testing are done  
215 per the definition of “dissolved oxygen” and testing results fail to show zero DO in shallow  
216 monitoring wells for the required time period of two continuous weeks in a non-drought high  
217 water table growing season, then the uninterrupted presence of dissolved oxygen, or lack of the  
218 two week duration of anaerobic conditions, means that the area in question is not a wetland due  
219 to lack of the driving force of anaerobic conditions. The jurisdictional limits of all types of  
220 vegetated wetlands are determined by a wetland border.

221 The terms “wetland hydric soils,” or “hydric soils” as used in this section, shall include peat,  
222 organic muck, or topsoils with immediately underlying portion of a subsoil layer showing  
223 gleying or low chroma redoximorphic features, soils with iron or manganese concretions, or soils  
224 satisfying the conditions described in the most recent edition of “Field Indicators for Identifying  
225 Hydric Soils in New England” or any superseding document. Soils with relict hydric features but

226 which do not have the required wetland hydrology or required anaerobic conditions are excluded  
227 as hydric soils and as wetlands.

228 The term “wetland succession,” as used in this section, shall mean the following generalized  
229 sequence in wetland evolution. For freshwater wetlands the sequence is pond, to deep marsh, to  
230 shallow marsh, to silt swamp, to forested swamp, to bog. For salt water wetlands the sequence  
231 is open water or salt pond, to low salt marsh, to high salt marsh, to fresh marsh, to fresh swamp,  
232 to bog.

233 The term “wetland wildlife,” as used in this section, shall mean those vertebrate animals that  
234 have one or more necessary habitat requirements which consist of features found only in  
235 vegetated wetlands or open waters. Examples of wetland wildlife include, but are not limited to;  
236 turtles, fish, waterfowl, wading birds, and aquatic mammals such as muskrat, mink, otter, and  
237 beaver. Protection, management and enhancement of the habitat for the larger of such listed  
238 animals is presumed to provide habitat benefits for all smaller wetland animals, unless the  
239 smaller animals are federally listed endangered or threatened species on site. Mass. State Listed  
240 Species that are not state listed species in adjoining states, or in Provinces of Canada, and which  
241 are merely at the limits of their range in Massachusetts shall not be given special protection  
242 under this section.

243 The terms “wetland wildlife habitat,” as used in this section, shall mean vegetated wetland and  
244 open water areas subject to this section which, due to their plant community composition and  
245 structure, hydrologic regime, or other characteristics; provide important food, shelter, migratory,  
246 over-wintering, or breeding areas for wetland wildlife. Upland floodplain areas beyond the 10  
247 year floodplain or uplands more than 25 feet from bordering wetlands are specifically excluded

248 from this definition. Any vegetated wetland less than 5% of an acre in size is presumed to be too  
249 small to have significant wetland wildlife habitat value; i.e., small puddled or damp areas are to  
250 be excluded from wetland wildlife habitat regulations unless they are certified vernal pools. Any  
251 part of a vegetated wetland less than 10 feet in width is exempt from wetland habitat regulation  
252 except that structures allowing passage of flows must also allow fish and wetland wildlife  
253 passage if applicable.

254 SECTION 4. Section 40 of Chapter 131 of the General Laws is hereby amended by  
255 inserting after the expanded list of definitions, the following paragraphs related to protection,  
256 management and enhancement of vegetated wetlands and open waters.

257 For upland areas that are adjacent to vegetated wetlands and open waters, and which are not in  
258 floodplains and riverfront areas, jurisdiction under this section is limited to sediment and erosion  
259 control, water quality maintenance using best management practices, and flood control. Beyond  
260 those three values, the use of adjacent uplands lying outside the floodplain or riverfront area may  
261 not be constrained by this section.

262 For access to uplands or isolated uplands under a single ownership; the ability to construct a road  
263 with sidewalks, or a driveway, shall not be infringed on, nor impaired, by this section. That is,  
264 this section does not deny reasonable access for use of uplands with a road width of normal size,  
265 Planning Board approved radius of curves, and standard construction. Standard construction  
266 includes the paved roadway; safety strips between roadway and sidewalk; one or more sidewalks  
267 as requested or required by the Planning Board, Fire Department, or Police Department; and a  
268 reasonably sloped bank. The use of retaining walls may not be mandated for any access, unless  
269 state-listed or federally listed endangered species are at risk. Two access roads or ways are

270 allowed for any project with over ten residential units, and under all circumstances where the  
271 Planning Board, Fire Department or Police Department shall require or request such double  
272 access for the public safety, well being, or welfare. This section acknowledges that upland access  
273 may sometimes result in a loss of on-site wetlands, especially in areas where the amount of  
274 isolated upland is small. In these cases, where on-site wetland replication is constrained, the  
275 difference can be made up by purchasing wetland banking credits from previously constructed  
276 wetlands in the same city or town or within the same drainnge basin in an abutting city or town.

277 Removal of accumulated organic sediments in existing ponds is to be routinely allowed  
278 providing there is an adequate erosion and sediment control program, and providing that there  
279 are no state-listed or federal endangered species on site. Maintenance of ponds including weed  
280 harvesting; and use of short lived chemical pesticides, herbicides, or nutrient inactivators such as  
281 alum or potassium permanganate; are procedures exempt from this section providing there are no  
282 federal or state listed species which would be impacted. if the timing of dredging or pond  
283 maintenance can be done when no federal or state listed animal species are present, then  
284 dredging or maintenance is to be routinely permitted. Wildlife management programs and  
285 activities conducted by, or funded by, the U.S. Fish and Wildlife Service; or which are part of, or  
286 which meet the standards of the North American Waterfowl Management Plan, are exempt from  
287 this section.

288 Any cranberry bog or wetland crop area expansion shall be approved with reasonable conditions  
289 as long as there is a net increase in wetland area with the cranberry bog or wetland crop land  
290 with associated ponds counting as a wetlands; as long as flood control is enhanced, as long as  
291 there is a reasonable effort to enhance wetland wildlife habitat; and as long as agricultural best  
292 management practices and integrated pest management programs are part of the cranberry bog or

293 wetland crop management program. Portions of cranberry bogs or wetland crop areas which  
294 were constructed in uplands, or which no longer have wetland hydrology without the application  
295 of irrigation water, are to be treated as uplands under this section.

296 The creation of salt ponds in coastal wetlands is allowed providing that the bottom of the  
297 proposed pond will be sand or gravel, and providing that there is to be an excavated meandering  
298 stable channel to a nearby major salt water body. A created salt pond may not be so large that it  
299 creates erosion problems which will affect the structural stability of surrounding marshes.

300 Any project that can be expected to improve a majority of wetland values that apply to a given  
301 wetland type; by use of modern environmental data, models, or evaluation techniques; must be  
302 approved with reasonable conditions, providing that flood control and wetland wildlife habitat  
303 values are two of the improvements. Since enhancement of a majority of wetland values and  
304 functions is to be a goal for any wetland alteration to be permitted, there is no area limitation to  
305 be applied to a wetland alteration or enhancement project.

306 Replacement of wetlands is not restricted to exact replication, but rather replacement is  
307 encouraged when an earlier wetland succession stage is offered as a replacement. The creation of  
308 ponds is allowed in vegetated wetlands and ponds may be used to replace or replicate other  
309 wetland types.

310 Any project that is projected to reduce the amount of tannic acid or dissolved iron or manganese  
311 released from a wetland shall be deemed to be an improvement to the prevention of pollution  
312 value under this section.

313 Increased flood detention is allowed in wetlands providing that water elevations are not  
314 permanently raised or lowered within the flooded area. Berms or other flood control structures



315 are allowed in wetlands without wetland replication but they must accommodate passage of  
316 wetland wildlife, and fish if applicable. Temporary increases in depth and duration of flooding  
317 from flood control activities are not considered to be a significant negative impact or alteration  
318 of a wetland, as long as the increase in flooding of 0.25 feet does not last for over five days after  
319 a 100 year 24-hour rainfall event, and as long as the projected long term normal groundwater  
320 elevation is not increased or decreased by more than one-quarter foot.

321 Retention and detention basins frequently have wetlands form at the bottom and sides of these  
322 flood control structures. Because retention and detention basins require routine maintenance,  
323 especially where best management practices are employed, the wetlands within the flood control  
324 basins shall not be regulated as jurisdictional wetlands under this section, and routine  
325 maintenance does not require an Order of Conditions nor a Notice of Intent as long as the flood  
326 control basin is not made smaller and as long as the hydraulics of the outlet structure is replaced  
327 but not significantly altered.

328 Any person or organizations may create a wetland mitigation banking project. After creation, the  
329 function of the wetland shall be evaluated by a natural scientist with at least a master's degree in  
330 botany, ecology, geology, geophysics, hydrology, wildlife management, zoology; or  
331 oceanography in the case of coastal wetlands. The value of the created wetland can be charged or  
332 credited towards proposed wetland alterations on-site or off-site in lieu of replication on a  
333 project-by-project or site-by-site basis. After completion of construction and evaluation, the  
334 completed mitigation banking value or credit can be sold or transferred. Mitigation banking can  
335 be charged or credited to any project in the same town or within five miles of the site within the  
336 same river basin. The Department of Environmental Protection shall keep a record of mitigation  
337 banking deposits and withdrawals, or may assign this duty to another state agency, or may

338 contract such record keeping to a non-profit or profit making organization. There may be a  
339 charge for wetland banking record keeping, fees not to exceed cost of record keeping plus a 10%  
340 profit. The final decision on record keeping shall be made on a cost-effective basis, by qualified  
341 persons at the lowest billable cost to the public.

342 Wetland management using procedures classed as Open Marsh Water Management (OMWM)  
343 and hitegrated Marsh Management (1MM) are to be routinely allowed as wetland management,  
344 and for creating enhanced wetland values for mitigation banking.

345 Water access to open waters from adjacent uplands is not to be prohibited by this section and  
346 wetland replication shall not be required for small boat channels or for docks that are safe  
347 enough for children to use.

348 The filing fee to be paid to the Commonwealth with any Notice of Intent shall not exceed \$1,000  
349 because the initial state review and assignment of a file number is not anticipated to involve over  
350 \$1,000 of manpower and related costs. The filing fee paid to any city of town under this section  
351 shall not exceed \$2,000. These upper limits of permitting cost can be adjusted for inflation every  
352 five years.

353 The provisions of this section shall not apply to normal maintenance and cleaning of existing  
354 ditches, farm ponds, existing culverts, and flood control structures; nor to relocation of farm  
355 ditches and farm ponds, nor to any continuous or intermittent land use or water use practice  
356 which has been on-going for over a decade, nor to plowing of wetland fingers which protrude  
357 into upland farm fields. Relocation of non-farm man-made ditches and ponds is allowed, but  
358 filing a Notice of Intent an Order of Conditions is required.

359 The removal of beaver dams which flood farm fields or any building, road, driveway or septic  
360 field is also allowed, however, the technique for removal of a beaver dam may not send a flood  
361 wave downstream which exceeds a two year flood peak, and a review of the removal method  
362 shall be expedited under emergency provisions of this section.

363 New waterfowl impoundments and pond creation are encouraged in wetlands as long as at least  
364 one-third of the pond edge is sloped and planted for waterfowl habitat.

365 Private gardens are of benefit to society at large. Existing private gardens; and new private  
366 gardens covering less than one-tenth of an acre of wetlands are exempt from the provisions of  
367 this Section as long as there is no change in elevation of the land surface in excess of one-half  
368 foot in any existing wetland.

369           SECTION 5. Section 40 of Chapter 131 of the General Laws is hereby amended by  
370 inserting the following paragraphs at the end of the last paragraph.

371 Within one year of passage of this bill, the department shall apply to take over federal wetland  
372 and dredging permits and incorporate them within the state wetland permit process. This is to  
373 eliminate duplication of federal and state permitting and the months of delay typical of federal  
374 permits which start after state permits have been issued. if a conservation commission or other  
375 board acting under Section 40 of Chapter 131 has failed to hold a hearing within the twenty-one  
376 day period as required, or if a commission or board, after holding and closing such hearing, has  
377 failed within twenty-one days therefrom to issue an order of conditions, then the project  
378 applicant may request that the department take over the permit process.

379 Given the time lost by delay on the part of the local permitting agency, the department shall  
380 conduct a hearing and/or site inspection within four weeks of receipt of an appeal due to inaction

381 on the part of the local board, and shall issue an Order of Conditions within 21 days of the site  
382 inspection, or hearing, or receipt of all requested information, If there is a legal challenge to a  
383 decision by the department, any party has the option of taking this matter before the land court,  
384 or the district or superior court system, rather than through the DEP Adjudicatory hearing  
385 process. Such a court trial may be de novo. From the date of the Governor signing this  
386 legislation, the DEP may no longer utilize its own administrative law judges, but they must use  
387 judges from the Dept. of Administrative Law Appeals (DALA) or its replacement agency.

388           SECTION 6. Section 40 of Chapter 131 of the General Laws is hereby amended by  
389 inserting the following paragraphs at the end of the last paragraph.

390 A wetland or open water enhancement project may be undertaken by any city or town, or by any  
391 group of cities or towns, or by a riparian land owner, or by any public action group which has  
392 acquired a riparian easement and right of access. if a city or town, or any group of cities and  
393 towns, desires to implement a wetland or open water body enhancement project, the project may  
394 be paid for by the cities or towns via routine taxing, or via a proposition two-and-a-half over-  
395 ride. The project must be approved by simple majority of the cumulative regional vote on a  
396 referendum held within cooperating cities and towns.

397 A possible enhancement project could be the Charles River Restoration Project, which shall have  
398 as its cornerstone the dredging of Cedar Swamp Pond in Milford. Reducing the nutrient load and  
399 improving the water quality of the outflow from this highly eutrophic wetland/pond system will  
400 benefit the entire Charles River and the bordering communities. The cost of this project can be  
401 funded by a state or federal agency, a non-profit organization, or shall be shared by the  
402 communities of Milford, Sherborn, Wellesley, Needham, Bellingham, Franklin, Millis, Norfolk,

403 Medfield, Dover, Dedham, Weston, and Waltham after a regional vote to approve the project and  
404 its funding. The Mass. Division of Environmental Management in cooperation with the Division  
405 of Fisheries and Wildlife shall review the full scope of the project and shall review project  
406 implementation and management.

407           SECTION 7. Section 43B of the General Laws is hereby amended by inserting the  
408 following paragraphs at the end of the last paragraph.

409 Any city or town which creates or has created a bylaw that affects or regulates work in or near  
410 wetlands, said local bylaw must have its definitions and time tables compatible with this section  
411 within two years of the signing or adoption of this law, and such local bylaw shall not exclude  
412 wetland mitigation banking, nor the enhancement and management goals of Chapter 131, Section  
413 40 as revised. Local wetland bylaws and regulations shall not have jurisdiction over the  
414 positioning of utilities or buildings in upland areas long as the building or the section of utility  
415 line does not intrude into wetland areas or lies more than fifteen feet from the wetland border.

416 For upland areas that are adjacent to vegetated wetlands and open waters, and which are not in  
417 floodplains and riverfront areas, jurisdiction under this section for any existing or new local  
418 wetland bylaw is limited to sediment and erosion control, water quality maintenance using best  
419 management practices, and flood control. Beyond those three values, the use of adjacent uplands  
420 lying outside the floodplain or riverfront area may not be constrained by any local town wetland  
421 bylaw, nor by local wetland regulation, nor written or unwritten local wetland policy. If a town  
422 or city wishes to impose local regulations on uplands adjacent to wetlands and open water  
423 bodies, or wishes to impose regulations in upland floodplains beyond that of erosion control,  
424 water quality maintenance, and flood control; via a local wetland bylaw, regulation, or written or

425 unwritten policy; then the city or town must purchase land use easements on each site at full cost  
426 of lost or restricted land use value.

427 For access to uplands or isolated uplands under a single ownership; the ability to construct a road  
428 with sidewalks, or a driveway, shall not be infringed on, nor impaired, by any local wetland  
429 bylaw unless the local government pays for full cost of the lost land value at full market value.

430 That is, unless paid for by the local government, this section does not deny reasonable access for  
431 use of uplands with a road width of normal size, Planning Board approved radius of curves, and  
432 standard construction. Standard construction includes the paved roadway; safety strips between  
433 roadway and sidewalk; one or more sidewalks as requested or required by the Planning Board,  
434 Fire Department, or Police Department; and a reasonably sloped bank. The use of retaining walls  
435 may not be mandated for any access, unless state-listed or federally listed endangered species are  
436 at risk. Two access roads or ways are allowed for any project with over ten residential units, and  
437 under all circumstances where the Planning Board, Fire Department or Police Department shall  
438 require or request such double access for the public safety, well being, or welfare. This section  
439 acknowledges that upland access may sometimes result in a net loss of wetlands, especially in  
440 areas where the amount of isolated upland is small. In these cases, wetland replication is limited  
441 to an area of less than 20% of the isolated upland under a single ownership if adjacent non-  
442 isolated upland is not available for wetland replication. The difference can be made up by  
443 purchasing wetland banking credits in the same city or town or within the same drainage basin in  
444 an abutting city or town.

445 Portions of cranberry bogs or wetland crop areas which were constructed in uplands, or which no  
446 longer have wetland hydrology without the application of irrigation water, are to be treated as  
447 uplands under all local wetland bylaws and regulations.

448 Flood control structures including detention and retention basins and their maintenance may not  
449 be regulated as wetlands under any local wetland bylaw, regulation, or written or unwritten  
450 policy.

451 Regional enhancement projects permitted under Chapter 131, section 40, are exempt from all  
452 local wetland bylaws.

453 If a Conservation Commission or other town board acting under a local wetland bylaw, shall fail  
454 to issue its local Order of Condition with 21 days of the closing of the hearing, such failure to act  
455 shall be deemed an approval of the application using the conditions of approval in the  
456 Superseding Order of Conditions issued under Chapter 131, section 40.

457 If there is a legal challenge to a decision under any local wetland bylaw, the applicant has the  
458 option of taking this matter before the land court, or the district or superior court system, rather  
459 than through the DEP adjudicatory hearing process. Such land court trial may be de novo. The  
460 local bylaw trial should be combined with any appealed Adjudicatory Decision under Chapter  
461 131, Section 40.

462           SECTION 8. Section 3AA is hereby added to Chapter 143 of the General Laws.

463 Maintenance of base flow is critical to fisheries and water quality. Reduction of runoff rates and  
464 volumes are important for purposes of flood control. Water and water quality impacts of new  
465 buildings and related impervious surfaces, regardless of their distances to wetlands and open  
466 water bodies, may have a negative impact on the public well being. To maintain the base flow to  
467 open water bodies, to reduce downstream flooding, and to reduce pollutant transport to wetlands  
468 and open water bodies, the following new performance standards are to be added to the state  
469 building code and all local building regulations.

470 For all new one and two family dwellings or private garages, or where the roof area is to be  
471 expanded for such existing buildings, there shall a dry well volume of 50 cubic feet for every 400  
472 square feet of roof surface or it must be demonstrated that soil permeability will recharge at least  
473 100% of the runoff from a 2 year 24 hour rainfall event. At least 90% of roof runoff must have  
474 direct access to these dry wells. Dry wells shall not be filled with sand or broken stone, but shall  
475 be a void space defined by uncemented dry well blocks, plastic recharge structures, or pre-cast  
476 concrete recharge galleys. Multi- family, commercial and industrial buildings, or expansion of  
477 the roof area thereto must also recharge roof runoff, but in lieu of the dry well volume required  
478 above, standard hydrological or engineering calculations and techniques may be required for site  
479 specific design of larger recharge structures. The design criteria for more than six unit multi-  
480 family, or for commercial and industrial buildings is to recharge at least a volume of from a 2  
481 year 24 hour storm from the total roof and other impervious areas. These requirements shall not  
482 apply in areas with exposed or shallow bedrock.

483           SECTION 9. Section 13 of Chapter 21A of the General Laws is hereby amended by  
484 adding the following paragraph at the end.

485 The use of hydrogen peroxide in industrial strength of up to 52% concentration by weight is  
486 allowed as a septic field restorative measure. Application of hydrogen peroxide is to be done  
487 only under the supervision of experienced professionals who have worked on hydrogen peroxide  
488 treatment of 25 or more septic fields and who are approved System Inspectors. Septic trench  
489 pumping is recommended but not required before hydrogen peroxide application to septic fields.  
490 Distribution box cleaning and pumping is mandatory prior to hydrogen peroxide application.



491 SECTION 10. Chapter 131A. Section 1, has the following definitions added or  
492 amended.

493 “Significant portion” as used in this Section shall mean 40% of the range of the species as of  
494 1990.

495 “Extirpation” as used in this section shall mean extinction or elimination over a significant  
496 portion of the range of any species. This means that species not threatened or endangered, or of  
497 special concern over a significant part of their entire range may not acquire special listing or  
498 protection in Massachusetts under Chapter 13 IA. For example, there are species that are cold  
499 climate species that will naturally become extirpated in Massachusetts if the climate warms, and  
500 there are species which are warm climate species that will naturally become extinct in  
501 Massachusetts if the climate turns colder. Efforts to protect these species under Chapter 13 1A  
502 will be futile in preventing extinction or extirpation in Massachusetts and will result in  
503 significant economic harm to land owners with no long term benefit to society.

504 Examples are as follows. The blue-spotted salamander *Ambystoma laterale* is a sub-arctic  
505 species with a range from Massachusetts to northern Illinois, to Manitoba to James Bay to  
506 southern Labrador to Nova Scotia. It is described as a relatively common species in many areas  
507 of its range. The marbled salamander *Ambystoma opacum* is a warm climate species ranging  
508 from southern New Hampshire, to northern Florida to east Texas to central Indiana. The species  
509 is common in much of its range. Species with such wide ranges and common occurrence are not  
510 to be classed as endangered, threatened, of special concern in Massachusetts under Chapter 13  
511 1A unless federally listed. The director of the Massachusetts Division of Fisheries and Wildlife  
512 is to review the list of endangered, threatened or special concern species in Massachusetts within

513 two years of passage of this law, and to remove all species from the species list which are just at  
514 or near the limits of the natural range in Massachusetts and which are not at risk for a significant  
515 portion of their natural range.

516 The definition of the term “Species of special concern” as defined, shall be amended by changing  
517 the last three words “within the commonwealth” to “over a significant portion of their range.”

518 The term “state-listed species” shall mean any species assigned the status of endangered,  
519 threatened or species of special concern within the Commonwealth of Massachusetts.

520 Animal species are to be removed from the list of state listed species when the number of known  
521 habitat areas exceeds 300 for any species, or when the total estimated habitat area exceeds three-  
522 percent of the area of the state. New animal species cannot be added to the state-listed species if  
523 the animal is not at risk over a significant part of its present range, or if the animal is moving  
524 into, or out of Massachusetts due to climate change associated with global warming or global  
525 cooling.

526 Habitat improvement for all state-listed species is allowed. Habitat improvement for species  
527 which are federally listed is also allowed after review and approval of the enhancement project  
528 by the U.S. Fish and Wildlife Service.

529           SECTION 11. Massachusetts General Laws, Chapter 30, §~ 61 through 62H are  
530 hereby amended as follows.

531 Since it is intended to encourage private citizens to enhance wetland functions and values, it is  
532 intended that permitting costs be reduced for modest size projects. Thus, alteration of freshwater  
533 wetlands and water bodies is exempt from this Act as long as the total area of wetland and

534 waterbody alteration is less than five acres and as long as the length of altered bank is less than  
535 2,000 feet in length. Alteration of saltwater wetlands are exempt from this section as long as the  
536 total area of salt water wetland and salt water body alteration is less than two acres. Wetland  
537 Projects using OMWM, 1MM, or doing their wetland replication via wetland banking, are  
538 exempt from this Act unless wetland alterations exceed ten acres.