

SENATE No. 383

The Commonwealth of Massachusetts

PRESENTED BY:

Richard T. Moore

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:

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

PETITION OF:

NAME:

Richard T. Moore
Dr. Jerome Carr

DISTRICT/ADDRESS:

Worcester and Norfolk
17 Waban Street
 Wellesley, MA 02482

SENATE No. 383

By Mr. Richard T. Moore, a petition (accompanied by bill, Senate, No. 383) of Richard T. Moore and Dr. Jerome Carr for legislation to incorporate wetland stewardship and scenic resources into wetland protection. Environment, Natural Resources and Agriculture.

[SIMILAR MATTER FILED IN PREVIOUS SESSION

SEE

□ □ SENATE
□ , NO. 363 OF 2011-2012.]

The Commonwealth of Massachusetts

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
2 amended by inserting after the third paragraph, the following paragraph:

3 The goals of this section are to encourage land owners and land managers to
4 practice stewardship via science based resource management to protect, manage, and enhance the
5 values and functions traditionally associated with wetlands and open waters; such values being
6 public 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
11 by 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
15 or near the surface for a time period sufficient to produce anaerobic conditions at or near the
16 surface during the growing season. Examples of freshwater wetlands include bogs, marshes,
17 swamps and wet meadows.

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

28 The term “swamps,” as used in this section, shall mean areas where groundwater is at or
29 near the surface of the ground throughout much of the growing season, and where a significant
30 part of the vegetative community is dominated by trees and shrubs which are tolerant of
31 anaerobic 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
33 at or 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
37 amended by inserting, after the existing and revised definitions, the following additional
38 definitions.

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

43 The term “anaerobic” as used in this section means the absence of molecular oxygen
44 (O₂), specifically in the uppermost soil layer. Note that O₂ is typically found in the air in soil
45 voids, and thus complete soil saturation is required within the uppermost soil layer for anaerobic
46 conditions to evolve over the time required for all the dissolved oxygen to be consumed due to
47 uptake by living organisms or by chemical reactions in the soil environment.

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

52 The term “bank,” as used in this section, shall mean naturally occurring banks and
53 beaches; specifically excluding dug ditches, and human-made channels lined with cement,
54 paving, riprap, placed stone, or pilings. If a channel was pre-existing the initial ditching, then
55 straightening or moderate changes to the original bank will still qualify a stream channel as a
56 regulated bank.

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

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

67 The term “dissolved oxygen” (DO) as used in this section, means that molecular oxygen
68 (O₂) is in existence in the saturated portions of the groundwater at or near the surface in the
69 uppermost soil layer. To determine if dissolved oxygen is or is not present in the saturated
70 groundwater, testing of the groundwater is required by the use of an EPA approved testing
71 method. The groundwater sampling is best done in groundwater taken from shallow monitoring
72 wells ranging in depths from 6 inches to no more than 16 inches, depending on the thickness of
73 the uppermost soil layer or thin soil layers. Wet chemical methods are preferred, since electrodes
74 need to be calibrated at specific air pressures, and air pressures are constantly changing
75 throughout the work day. The use of buried oxidation-reduction electrodes is not accurate
76 because negative readings do not always correlate with zero DO. No one is required to do testing
77 for DO, but when it is used on a site with altered vegetation, or suspected altered hydrology, or
78 altered soils, then the regulating agencies must accept the results of the DO testing if the data
79 covers one high water table season lacking continuous drought conditions. Daily DO testing is
80 not required, but the testing should begin prior to the start of the growing season, and continue
81 almost every week based on precipitation patterns until the water depths in the shallow monitoring
82 wells have below 12 inches in depth, whichever is shallower.

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

90 and the average is less than 50% of monthly median precipitation for the four month period. This
91 is used to determine intermittent versus perennial streams, and to determine regulatory pond
92 size. A drought or an extended drought ends when monthly precipitation exceeds 90% of the
93 median.

94 The terms “ecologically wet plant species” and “wet-dry tolerant plant species,” as used
95 in this section, shall refer to obligate (OBL), facultative wet (FACW), and facultative (FAC)
96 excluding facultative- minus (FAC-) plant species as specified in the latest edition of the National
97 List of Plant Species that Occur in Wetlands;” or any newer replacement document which
98 applies to the northeastern part of the United States.

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

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

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

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

122 However, if the model is not a published model, then the basis and references for the
123 model should be presented with the Notice of Intent or other permit application. Preference is to
124 be given to evaluations done using objective numerical models.

125 The term “growing season” as used in this section, shall mean the time period starting
126 when local valley wetland frosts cease in spring and ending with the first wetland frost in the fall.
127 Since almost all meteorological stations occur in uplands, and since cold air regularly flows
128 down hill into wetlands, the growing season begins when lowest daily air temperatures no longer
129 reach 32° F as recorded on-site, or at the nearest weather stations. The growing season ends on
130 the day when the first frost has occurred on a site or when the lowest air temperature at night has
131 dropped below 32° F as recorded at an on-site monitoring station or at the nearest weather
132 station. Because on rare occasions, frosts can occur during the summer season, these will not
133 represent the start or end of the growing season for purposes of this Act.

134 The term “hydrologic year” as used in this section, shall mean the period starting on the
135 first of October, and ending at the end of September of the following calendar year.

136 The term “median precipitation” as used in this section, shall mean the statistical median
137 monthly precipitation amount, i.e., where 50% of the time the amount of monthly precipitation
138 occurs. All regulations based on this section shall be based on median precipitation for at least 22
139 years of record if that duration of record exists.

140 The term “100 year flood” as used in this section shall be based on (a) statistical analyses
141 of actual stream flows from USGS qualified gauging stations for larger streams and rivers, or (b)
142 shall be based on peak flow analyses using the climatic precipitation atlases prepared by the
143 Northeast Regional Climate Center at Cornell University, or any newer rainfall atlases which are
144 created by newer climatic precipitation studies using a longer time record for rainfall analyses.

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

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

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

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

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

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

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

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

201 The terms “wetland banking” and “wetland mitigation banking,” as used in this section,
202 shall mean activities of wetland restoration, enhancement, preservation, or creation for the
203 purpose of providing compensating credit for future proposed wetland alterations, either on-site
204 or off-site. Benefits credited on any site can be sold or credited for projects in the same city or
205 town. Regional projects can apply wetland banking to or from other cities or towns involved in
206 any regional project.

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

223 The terms “wetland hydric soils,” or “hydric soils” as used in this section, shall include
224 peat, organic muck, or topsoils with immediately underlying portion of a subsoil layer showing
225 gleying or low chroma redoximorphic features, soils with iron or manganese concretions, or soils
226 satisfying the conditions described in the most recent edition of “Field Indicators for Identifying
227 Hydric Soils in New England” or any superseding document. Soils with relict hydric features but
228 which do not have the required wetland hydrology or required anaerobic conditions are excluded
229 as hydric soils and as wetlands.

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

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

245 The terms “wetland wildlife habitat,” as used in this section, shall mean vegetated
246 wetland and open water areas subject to this section which, due to their plant community
247 composition and structure, hydrologic regime, or other characteristics; provide important food,
248 shelter, migratory, over-wintering, or breeding areas for wetland wildlife. Upland floodplain
249 areas beyond the 10 year floodplain or uplands more than 25 feet from bordering wetlands are
250 specifically excluded from this definition. Any vegetated wetland less than 5% of an acre in size
251 is presumed to be too small to have significant wetland wildlife habitat value; i.e., small
252 puddled or damp areas are to be excluded from wetland wildlife habitat regulations unless they
253 are certified vernal pools. Any part of a vegetated wetland less than 10 feet in width is exempt
254 from wetland habitat regulation except that structures allowing passage of flows must also allow
255 fish and wetland wildlife passage if applicable.

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

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

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

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

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

291 Any cranberry bog or wetland crop area expansion shall be approved with reasonable
292 conditions as long as there is a net increase in wetland area with the cranberry bog or wetland
293 crop land with associated ponds counting as a wetlands; as long as flood control is enhanced, as
294 long as there is a reasonable effort to enhance wetland wildlife habitat; and as long as
295 agricultural best management practices and integrated pest management programs are part of the
296 cranberry bog or wetland crop management program. Portions of cranberry bogs or wetland crop
297 areas which were constructed in uplands, or which no longer have wetland hydrology without the
298 application of irrigation water, are to be treated as uplands under this section.

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

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

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

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

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

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

331 Any person or organizations may create a wetland mitigation banking project. After
332 creation, the function of the wetland shall be evaluated by a natural scientist with at least a
333 master's degree in botany, ecology, geology, geophysics, hydrology, wildlife management,
334 zoology; or oceanography in the case of coastal wetlands. The value of the created wetland can
335 be charged or credited towards proposed wetland alterations on-site or off-site in lieu of
336 replication on a project-by-project or site-by-site basis. After completion of construction and
337 evaluation, the completed mitigation banking value or credit can be sold or transferred.
338 Mitigation banking can be charged or credited to any project in the same town or within five
339 miles of the site within the same river basin. The Department of Environmental Protection shall
340 keep a record of mitigation banking deposits and withdrawals, or may assign this duty to another
341 state agency, or may contract such record keeping to a non-profit or profit making organization.
342 There may be a charge for wetland banking record keeping, fees not to exceed cost of record
343 keeping plus a 10% profit. The final decision on record keeping shall be made on a cost-effective
344 basis, by qualified persons at the lowest billable cost to the public.

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

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

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

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

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

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

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

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

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

380 hearing, has failed within twenty-one days therefrom to issue an order of conditions, then the
381 project applicant may request that the department take over the permit process.

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

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

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

400 A possible enhancement project could be the Charles River Restoration Project, which
401 shall have as its cornerstone the dredging of Cedar Swamp Pond in Milford. Reducing the
402 nutrient load and improving the water quality of the outflow from this highly eutrophic
403 wetland/pond system will benefit the entire Charles River and the bordering communities. The
404 cost of this project can be funded by a state or federal agency, a non-profit organization, or shall
405 be shared by the communities of Milford, Sherborn, Wellesley, Needham, Bellingham, Franklin,
406 Millis, Norfolk, Medfield, Dover, Dedham, Weston, and Waltham after a regional vote to
407 approve the project and its funding. The Mass. Division of Environmental Management in
408 cooperation with the Division of Fisheries and Wildlife shall review the full scope of the project
409 and shall review project implementation and management.

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

412 Any city or town which creates or has created a bylaw that affects or regulates work in or
413 near wetlands, said local bylaw must have its definitions and time tables compatible with this
414 section within two years of the signing or adoption of this law, and such local bylaw shall not
415 exclude wetland mitigation banking, nor the enhancement and management goals of Chapter
416 131, Section 40 as revised. Local wetland bylaws and regulations shall not have jurisdiction over

417 the positioning of utilities or buildings in upland areas long as the building or the section of
418 utility line does not intrude into wetland areas or lies more than fifteen feet from the wetland
419 border.

420 For upland areas that are adjacent to vegetated wetlands and open waters, and which are
421 not in floodplains and riverfront areas, jurisdiction under this section for any existing or new
422 local wetland bylaw is limited to sediment and erosion control, water quality maintenance using
423 best management practices, and flood control. Beyond those three values, the use of adjacent
424 uplands lying outside the floodplain or riverfront area may not be constrained by any local town
425 wetland bylaw, nor by local wetland regulation, nor written or unwritten local wetland policy. If
426 a town or city wishes to impose local regulations on uplands adjacent to wetlands and open water
427 bodies, or wishes to impose regulations in upland floodplains beyond that of erosion control,
428 water quality maintenance, and flood control; via a local wetland bylaw, regulation, or written or
429 unwritten policy; then the city or town must purchase land use easements on each site at full cost
430 of lost or restricted land use value.

431 For access to uplands or isolated uplands under a single ownership; the ability to
432 construct a road with sidewalks, or a driveway, shall not be infringed on, nor impaired, by any
433 local wetland bylaw unless the local government pays for full cost of the lost land value at full
434 market value. That is, unless paid for by the local government, this section does not deny
435 reasonable access for use of uplands with a road width of normal size, Planning Board approved
436 radius of curves, and standard construction. Standard construction includes the paved roadway;
437 safety strips between roadway and sidewalk; one or more sidewalks as requested or required by
438 the Planning Board, Fire Department, or Police Department; and a reasonably sloped bank. The
439 use of retaining walls may not be mandated for any access, unless state-listed or federally listed
440 endangered species are at risk. Two access roads or ways are allowed for any project with over
441 ten residential units, and under all circumstances where the Planning Board, Fire Department or
442 Police Department shall require or request such double access for the public safety, well being,
443 or welfare. This section acknowledges that upland access may sometimes result in a net loss of
444 wetlands, especially in areas where the amount of isolated upland is small. In these cases,
445 wetland replication is limited to an area of less than 20% of the isolated upland under a single
446 ownership if adjacent non-isolated upland is not available for wetland replication. The difference
447 can be made up by purchasing wetland banking credits in the same city or town or within the
448 same drainage basin in an abutting city or town.

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

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

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

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

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

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

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

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

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

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

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

498 "Significant portion" as used in this Section shall mean 40% of the range of the species
499 as of 1990.

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

509 Examples are as follows. The blue-spotted salamander *Ambystoma laterale* is a sub-arctic
510 species with a range from Massachusetts to northern Illinois, to Manitoba to James Bay to
511 southern Labrador to Nova Scotia. It is described as a relatively common species in many areas
512 of its range. The marbled salamander *Ambystoma opacum* is a warm climate species ranging
513 from southern New Hampshire, to northern Florida to east Texas to central Indiana. The species
514 is common in much of its range. Species with such wide ranges and common occurrence are not
515 to be classed as endangered, threatened, of special concern in Massachusetts under Chapter 13
516 1A unless federally listed. The director of the Massachusetts Division of Fisheries and Wildlife
517 is to review the list of endangered, threatened or special concern species in Massachusetts within
518 two years of passage of this law, and to remove all species from the species list which are just at
519 or near the limits of the natural range in Massachusetts and which are not at risk for a significant
520 portion of their natural range.

521 The definition of the term "Species of special concern" as defined, shall be amended by
522 changing the last three words "within the commonwealth" to "over a significant portion of their
523 range."

524 The term "state-listed species" shall mean any species assigned the status of endangered,
525 threatened or species of special concern within the Commonwealth of Massachusetts.

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

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

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

537 Since it is intended to encourage private citizens to enhance wetland functions and
538 values, it is intended that permitting costs be reduced for modest size projects. Thus, alteration of
539 freshwater wetlands and water bodies is exempt from this Act as long as the total area of wetland
540 and waterbody alteration is less than five acres and as long as the length of altered bank is less
541 than 2,000 feet in length. Alteration of saltwater wetlands are exempt from this section as long as
542 the total area of salt water wetland and salt water body alteration is less than two acres. Wetland
543 Projects using OMWM, 1MM, or doing their wetland replication via wetland banking, are
544 exempt from this Act unless wetland alterations exceed ten acres.