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HOUSE BILL NO. 1437

Offered January 14, 2008

A *BILL to amend the Code of Virginia by adding a section numbered 15.2-961.1, relating to the conservation of trees during land development process in localities.*

Patrons—Bulova, Barlow, Caputo, Marsden, Plum, Toscano, Vanderhye, Ward and Watts

Committee Referral Pending

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 15.2-961.1 as follows:

§ 15.2-961.1. Conservation of trees during land development process in localities belonging to a nonattainment area for air quality standards.

A. For purposes of this section, "tree canopy" or "tree cover" includes all areas of canopy coverage by self-supporting and healthy woody plant material exceeding five feet in height, and the extent of planted tree canopy at 10-years maturity.

B. Notwithstanding the provisions of § 15.2-961, any Virginia locality that meets the population density criteria of subsection A of § 15.2-961 and is classified by the United States Environmental Protection Agency under the federal Clean Air Act and Amendments of 1990 as being located, in whole or in part, within a nonattainment area for ozone in effect as of July 1, 2008, or designated thereafter, may adopt an ordinance providing for the conservation of trees during the land development process pursuant to the provisions of this section.

C. The ordinance shall require that the site plan for any subdivision or development provide for the preservation or replacement of trees on the development site such that the minimum tree canopy or tree cover percentage 10 years after development is projected to be as follows:

- 1. Ten percent tree canopy for a site zoned business, commercial, or industrial;*
- 2. Ten percent tree canopy for a residential site zoned 20 or more units per acre;*
- 3. Fifteen percent tree canopy for a residential site zoned more than eight but less than 20 units per acre;*
- 4. Twenty percent tree canopy for a residential site zoned more than four but not more than eight units per acre;*
- 5. Twenty-five percent tree canopy for a residential site zoned more than two but not more than four units per acre; and*
- 6. Thirty percent tree canopy for a residential site zoned two or less units per acre.*

In meeting these percentages, (i) the ordinance shall first emphasize the preservation of existing tree canopy where that canopy meets local standards for health and structural condition, and where it is feasible to do so within the framework of design standards and densities allowed by the local zoning and other development ordinances; and (ii) second, where it is not feasible in whole or in part for any of the justifications listed in subsection E to preserve existing canopy in the required percentages listed above, the ordinance shall provide for the planting of new trees to meet the required percentages.

D. Except as provided in subsection E, the percentage of the site covered by tree canopy at time of plan submission shall equate to the minimum portion of the requirements identified in subsection C that shall be provided through tree preservation. This portion of the canopy requirements shall be identified as the "tree preservation target" and shall be included in site plan calculations or narratives demonstrating how the overall requirements of subsection C have been met.

E. The ordinance shall provide deviations, in whole or in part, from the canopy preservation target defined in subsection D under the following conditions:

- 1. Meeting the preservation target would prevent the development of uses and densities otherwise allowed by the locality's zoning or development ordinance.*
- 2. The predevelopment condition of vegetation does not meet the locality's standards for health and structural condition.*
- 3. Construction activities could be reasonably expected to impact existing trees to the extent that they would not likely survive in a healthy and structurally sound manner. This includes activities that would cause direct physical damage to the trees, including root systems, or cause environmental changes that could result in or predispose the trees to structural and health problems.*

If one or more of these circumstances apply, then the site plan must provide justification as to why the preservation threshold cannot be met, and describe how the requirements of subsection C could then be met through tree planting. The locality shall evaluate the justification provided. If it is determined that the justification is based on sound land development practices or sound vegetation management

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59 practices, and no viable alternative to the proposed site design can be implemented, then the
60 preservation target shall be allowed to be modified and met through the planting of trees in whole, or
61 in part, depending on site-specific circumstances. Proposed modifications to the preservation target shall
62 be reviewed by the locality's urban forester, arborist, or equivalent in consultation with the locality's
63 land development or civil engineering review staff.

64 F. The ordinance shall provide for deviations of the overall canopy requirements set forth in
65 subsection C to allow for the preservation of wetlands or where the strict application of the
66 requirements would result in unnecessary or unreasonable hardship to the developer.

67 G. The ordinance may provide for the establishment of a tree canopy bank or fund whereby any
68 portion of the tree canopy requirement that cannot be met on-site may be met through off-site tree
69 preservation or tree planting efforts. Such provisions may be offered where it can be demonstrated that
70 application of the requirements of subsection C would cause irresolvable conflicts with other local site
71 development requirements, standards, or comprehensive planning goals, where sites or portions of sites
72 lack sufficient space for future tree growth, where planting spaces will not provide adequate space for
73 healthy root development, where trees will cause unavoidable conflicts with underground or overhead
74 utilities, or where it can be demonstrated that trees are likely to cause damage to public infrastructure.
75 Off-site canopy establishment mechanisms shall include the following:

76 1. A tree canopy bank may be established in order for the locality to facilitate off-site tree
77 preservation, tree planting, stream bank and riparian restoration projects. Banking efforts must provide
78 tree canopy that is preserved in perpetuity through conservation easements, deed restrictions, or similar
79 protective mechanisms acceptable to the locality. Projects used in off-site banking will meet the same
80 ordinance standards established for on-site tree canopy; however, the locality may also require the
81 submission of five-year management plans and funds to ensure the execution of maintenance and
82 management obligations identified in those plans. Any such bank must occur within the same
83 nonattainment area in which the locality approving the tree banking is situated.

84 2. A tree canopy fund may be established to act as a fiscal mechanism to collect, manage, and
85 disburse fees collected from developers that cannot provide full canopy requirements on-site. The
86 locality may use this fund directly to plant trees on public property, or the locality may elect to disburse
87 this fund to community-based organizations exempt from taxation under § 501 (c) (3) of the Internal
88 Revenue Code with tree planting or community beautification missions for tree planting programs that
89 benefit the community at large. For purposes of establishing consistent and predictable fees, the
90 ordinance shall establish cost units that are based on average costs to establish 10-year canopy areas
91 using two-inch caliper nursery stock trees. Any funds collected by localities for these purposes must be
92 spent within a five-year period established by the collection date, or the locality shall return such funds
93 to the original contributor, or legal successor.

94 H. The following uses shall be exempt from the requirements of any ordinance promulgated under
95 this section: bona fide silvicultural activity as defined by § 10.1-1181.1 and the areas of sites included
96 in lakes, ponds, and the normal water elevation area of stormwater retention facilities. The ordinance
97 shall modify the canopy requirements of dedicated school sites, playing fields, and other nonwooded
98 active recreation areas by allowing these and other facilities and uses of a similar nature to provide 10
99 percent tree canopy 10 years after development.

100 I. In recognition of the added benefits of tree preservation, the ordinance shall provide tree canopy
101 credit of up to one and one-quarter times the canopy area at the time of plan submission for individual
102 trees or the coalesced canopy of forested areas preserved from the predevelopment tree canopy.

103 J. The following additional credits may be provided in the ordinance:

104 1. The ordinance may provide canopy credits of up to one and one-half times the actual canopy area
105 for the preservation of forest communities that achieve environmental, ecological, and wildlife
106 conservation objectives set by the locality. The ordinance may establish minimal area, dimensional and
107 viability standards as prerequisites for the application of credits. Forest communities shall be identified
108 using the nomenclature of either the federal National Vegetation Classification System (FGDC-STD-005,
109 or latest version) or The Natural Communities of Virginia Classification of Ecological Community
110 Groups, Second Approximation (Version 2.2, or latest version).

111 2. The ordinance may provide canopy credits of up to three times the actual canopy area of trees
112 that are officially designated for preservation in conjunction with local tree conservation ordinances
113 based on the authority granted by § 10.1-1127.1.

114 3. The ordinance may provide canopy credits of up to one and one-half the area normally projected
115 for 10-year canopy area for preservation or planting of trees that are effective in directly absorbing or
116 intercepting air pollutants, produce lower levels of reactive volatile organic compounds, or indirectly act
117 to reduce air pollution or greenhouse gas emissions by conserving the energy used to cool and heat
118 buildings.

119 4. The ordinance may provide canopy credits of up to one and one-quarter the area normally
120 projected for 10-year canopy area for trees planted for water quality-related reforestation or

121 afforestation projects, and for trees planted in low-impact development water quality facilities. The
122 low-impact development practices and designs must conform to local standards in order for these
123 supplemental credits to apply.

124 5. The ordinance may provide canopy credits of up to one and one-half the area normally projected
125 for 10-year canopy area for native tree species planted to provide food, nesting, and habitat
126 opportunities for wildlife. These canopy credits may also apply to cultivars of native species if the
127 locality determines that such a cultivar is capable of providing the same type and extent of wildlife
128 benefit as the species it is derived from.

129 6. The ordinance may provide canopy credits of up to one and one-half the area normally projected
130 for 10-year canopy area for use of native tree species that are grown within the mid-Atlantic region.

131 7. The ordinance may provide canopy credits of up to one and one-quarter the area normally
132 projected for 10-year canopy for the use of cultivars or varieties that develop desirable growth and
133 structural patterns, resist decay organisms and the development of cavities, show high levels of
134 resistance to disease or insect infestations, or exhibit high survival rates in harsh urban environments.

135 K. Tree preservation areas and individual trees may not receive more than one application of tree
136 canopy credits provided in subsections I and J. Canopy credits will only be given to trees with trunks
137 that are fully located on the development site, or in the case of tree banking projects only to trees with
138 trunks located fully within easements or other areas protected by deed restrictions listed in subsection
139 G.

140 L. All trees planted for tree cover credits shall meet the specifications of the American Association of
141 Nurserymen and shall be planted in accordance with the publication entitled "Tree and Shrub Planting
142 Guidelines," published by the Virginia Cooperative Extension.

143 M. In order to provide higher levels of biodiversity and to minimize the spread of pests and diseases,
144 or to limit the use of species that cause negative impacts to native plant communities, cause damage to
145 nearby structures, or possess inherent physiological traits that prone trees to structural failure, the
146 ordinance may designate species that cannot be used to meet tree canopy requirements or designate
147 species that will only receive partial 10-year tree canopy credits.

148 N. The locality may allow the use of tree seedlings for meeting tree canopy requirements in large
149 open spaces, low-density residential settings, or in low-impact development reforestation/afforestation
150 projects. In these cases, the ordinance shall allow the ground surface area of seedling planting areas to
151 equate to a 10-year canopy credit area. Tree seedling plantings will be comprised of native species and
152 will be planted in densities that equate to 400 seedlings per acre, or in densities specified by low-impact
153 development designs approved by the locality. The locality may set standards for seedling mortality rates
154 and replacement procedures if unacceptable rates of mortality occur. The locality may elect to allow
155 native woody shrubs or native woody seed mix to substitute for tree species as long as these treatments
156 do not exceed 33 percent of the overall seedling planting area. The number of a single species may not
157 exceed 10 percent of the overall number of trees or shrubs planted to meet the provisions of this
158 subsection.

159 O. The following process shall be used to demonstrate achievement of the required percentage of
160 tree canopy listed in subsection C:

161 1. The site plan shall graphically delineate the edges of predevelopment tree canopy, the proposed
162 limits of disturbance on grading or erosion and sedimentation control plans, and the location of tree
163 protective fencing or other tree protective devices allowed in the Virginia Erosion and Sediment Control
164 Handbook.

165 2. Site plans proposing modification to tree canopy requirements or claiming supplemental tree
166 canopy credits will require a text narrative.

167 3. The site plan shall include the 10-year tree canopy calculations on a worksheet provided by the
168 locality.

169 4. Site plans requiring tree planting shall provide a planting schedule that provides botanical and
170 common names of trees, the number of trees being planted, the total of tree canopy area given to each
171 species, variety or cultivars planted, total of tree canopy area that will be provided by all trees, planting
172 sizes, and associated planting specifications. The site plan will also provide a landscape plan that
173 delineates where the trees shall be planted.

174 P. The ordinance shall provide a list of commercially available trees species, varieties, and cultivars
175 that are capable of thriving in the locality's climate and ranges of planting environments. The ordinance
176 will also provide a 10-year tree canopy area credit for each tree. The amount of tree canopy area
177 credited to individual tree species, varieties, and cultivars 10 years after they are planted shall be based
178 on references published or endorsed by Virginia academic institutions such as the Virginia Polytechnic
179 Institute and State University and accepted by urban foresters, arborists, and horticulturalists as being
180 accurate for the growing conditions and climate of the locality.

181 Q. The ordinance shall establish standards of health and structural condition of existing trees and

182 *associated plant communities to be preserved. The ordinance may also identify standards for removal of*
183 *trees or portions of trees that are dead, dying, or hazardous due to construction impacts. Such removal*
184 *standards may allow for the retention of trunk snags where the locality determines that these may*
185 *provide habitat or other wildlife benefits and do not represent a hazardous condition. In the event that*
186 *existing tree canopy proposed to be preserved for tree canopy credits dies or must be removed because*
187 *it represents a hazard, the locality may require the developer to remove the tree, or a portion of the*
188 *tree and to replace the missing canopy area by the planting of nursery stock trees, or if a viable*
189 *alternative, by tree seedlings. Existing trees that have been granted credits will be replaced with canopy*
190 *area determined using the same supplemental credit multipliers as originally granted for that canopy*
191 *area.*

192 *R. Penalties for violation of ordinances adopted pursuant to this section shall be the same as those*
193 *applicable to violations of zoning ordinances of the locality.*

194 *S. In no event shall any local tree conservation ordinance adopted pursuant to this section exceed*
195 *the requirements set forth herein.*

196 *T. Nothing in this section shall invalidate any local ordinance adopted pursuant to § 15.2-961.*