

SENATE BILL NO. 537

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the House Committee on Counties, Cities and Towns

on \_\_\_\_\_)

(Patron Prior to Substitute--Senator Marsden)

A BILL to amend and reenact §§ 15.2-961 and 15.2-961.1 of the Code of Virginia and to amend the Code of Virginia by adding sections numbered 15.2-961.3 and 15.2-961.4, relating to powers of local government; replacement and conservation of trees during development process.

**Be it enacted by the General Assembly of Virginia:**

**1. That §§ 15.2-961 and 15.2-961.1 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding sections numbered 15.2-961.3 and 15.2-961.4 as follows:**

**§ 15.2-961. Replacement of trees during development process in certain localities.**

A. Any locality with a population density of at least 75 persons per square mile or any locality within the Chesapeake Bay watershed may adopt an ordinance providing for the planting and replacement of trees during the development process pursuant to the provisions of this section. Population density shall be based upon the latest population estimates of the Cooper Center for Public Service of the University of Virginia.

B. The ordinance shall require that the site plan for any subdivision or development include the planting or replacement of trees on the site to the extent that, at 20 years, minimum tree canopies or covers will be provided in areas to be designated in the ordinance, 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 10 but less than 20 units per acre; and
- 4. Twenty percent tree canopy for a residential site zoned 10 units or less per acre.

26           However, the City of Williamsburg may require at 10 years the minimum tree canopies or covers  
27 set out above.

28           C. The ordinance shall require that the site plan for any subdivision or development include, at 20  
29 years, that a minimum 10 percent tree canopy will be provided on the site of any cemetery as defined in §  
30 54.1-2310, notwithstanding any other provision of this section. In no event shall any local tree replacement  
31 or planting ordinance adopted pursuant to this section exceed the requirements of this subsection.

32           D. The ordinance shall provide for reasonable provisions for reducing the tree canopy requirements  
33 or granting tree cover credit in consideration of the preservation of existing tree cover or for preservation  
34 of trees of outstanding age, size or physical characteristics.

35           E. The ordinance shall provide for reasonable exceptions to or deviations from these requirements  
36 to allow for the reasonable development of farm land or other areas devoid of healthy or suitable woody  
37 materials, for the preservation of wetlands, or otherwise when the strict application of the requirements  
38 would result in unnecessary or unreasonable hardship to the developer. In such instances, the ordinance  
39 may provide for a tree canopy bank whereby a portion of a development's tree canopy requirement may  
40 be met from off-site planting or replacement of trees at the direction of the locality. The following shall  
41 be exempt from the requirements of any tree replacement or planting ordinance promulgated under this  
42 section: dedicated school sites, playing fields and other nonwooded recreation areas, and other facilities  
43 and uses of a similar nature.

44           F. The ordinance may designate tree species that cannot be planted to meet minimum tree canopy  
45 requirements due to tendencies of such species to (i) negatively impact native plant communities, (ii)  
46 cause damage to nearby structures and infrastructure, or (iii) possess inherent physiological traits that  
47 cause such trees to structurally fail. All trees to be planted shall meet the specifications of the  
48 AmericanHort. The planting of trees shall be done in accordance with either the standardized landscape  
49 specifications jointly adopted by the Virginia Nursery and Landscape Association, the Virginia Society of  
50 Landscape Designers and the Virginia Chapter of the American Society of Landscape Architects, or the  
51 road and bridge specifications of the Virginia Department of Transportation.

52 G. Existing trees which are to be preserved may be included to meet all or part of the canopy  
53 requirements, and may include wooded preserves, if the site plan identifies such trees and the trees meet  
54 standards of desirability and life-year expectancy which the locality may establish.

55 H. For purposes of this section:

56 "Tree canopy" or "tree cover" includes all areas of coverage by plant material exceeding five feet  
57 in height, and the extent of planted tree canopy at 10 or 20 years maturity. Planted canopy at 10 or 20  
58 years maturity shall be based on published reference texts generally accepted by landscape architects,  
59 nurserymen, and arborists in the community, and the texts shall be specified in the ordinance.

60 I. Penalties for violations of ordinances adopted pursuant to this section shall be the same as those  
61 applicable to violations of zoning ordinances of the locality.

62 J. In no event shall any local tree replacement or planting ordinance adopted pursuant to this  
63 section exceed the requirements set forth herein.

64 K. Nothing in this section shall invalidate any local ordinance adopted pursuant to the provisions  
65 of this section prior to July 1, 1990, which imposes standards for tree replacement or planting during the  
66 development process.

67 L. Nothing in this section shall invalidate any local ordinance adopted by the City of Williamsburg  
68 that imposes standards for 10-year-minimum tree cover replacement or planting during the development  
69 process.

70 M. Nothing in this section shall invalidate any local ordinance adopted pursuant to the provisions  
71 of this section after July 1, 1990, which imposes standards for 20-year-minimum tree cover replacement  
72 or planting during the development process.

73 N. Nothing in this section shall prohibit or unreasonably limit silvicultural practices in accordance  
74 with § 10.1-1126.1.

75 **§ 15.2-961.1. Conservation of trees during land development process in localities belonging**  
76 **to a nonattainment area for air quality standards.**

77 A. For purposes of this section, "tree canopy" or "tree cover" includes all areas of canopy coverage  
78 by self-supporting and healthy woody plant material exceeding five feet in height, and the extent of planted  
79 tree canopy at 20-years maturity.

80 B. Any locality within Planning District 8 that meets the population density criteria of subsection  
81 A of § 15.2-961 and is classified as an eight-hour nonattainment area for ozone under the federal Clean  
82 Air Act and Amendments of 1990, in effect as of July 1, 2008, may adopt an ordinance providing for the  
83 conservation of trees during the land development process pursuant to the provisions of this section. In no  
84 event shall any local tree conservation ordinance adopted pursuant to this section also impose the tree  
85 replacement provisions of § 15.2-961.

86 C. The ordinance shall require that the site plan for any subdivision or development provide for  
87 the preservation or replacement of trees on the development site such that the minimum tree canopy or  
88 tree cover percentage 20 years after development is projected to be as follows:

- 89 1. Ten percent tree canopy for a site zoned business, commercial, or industrial;
- 90 2. Ten percent tree canopy for a residential site zoned 20 or more units per acre;
- 91 3. Fifteen percent tree canopy for a residential site zoned more than eight but less than 20 units per  
92 acre;
- 93 4. Twenty percent tree canopy for a residential site zoned more than four but not more than eight  
94 units per acre;
- 95 5. Twenty-five percent tree canopy for a residential site zoned more than two but not more than  
96 four units per acre; and
- 97 6. Thirty percent tree canopy for a residential site zoned two or fewer units per acre.

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

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

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

111 1. Meeting the preservation target would prevent the development of uses and densities otherwise  
112 allowed by the locality's zoning or development ordinance.

113 2. The predevelopment condition of vegetation does not meet the locality's standards for health  
114 and structural condition.

115 3. Construction activities could be reasonably expected to impact existing trees to the extent that  
116 they would not likely survive in a healthy and structurally sound manner. This includes activities that  
117 would cause direct physical damage to the trees, including root systems, or cause environmental changes  
118 that could result in or predispose the trees to structural and health problems.

119 If, in the opinion of the developer, the project cannot meet the tree preservation target due to the  
120 conditions described in subdivision 1, 2, or 3, the developer may request a deviation from the preservation  
121 requirement in subsection D. In the request for deviation, the developer shall provide a letter to the locality  
122 that provides justification for the deviation, describes how the deviation is the minimum necessary to  
123 afford relief, and describes how the requirements of subsection C will be met through tree planting or a  
124 tree canopy bank or fund established by the locality. Proposed deviations shall be reviewed by the  
125 locality's urban forester, arborist, or equivalent in consultation with the locality's land development or  
126 licensed professional civil engineering review staff. The locality may propose an alternative site design  
127 based upon adopted land development practices and sound vegetation management practices that take into  
128 account the relationship between the cost of conservation and the benefits of the trees to be preserved as  
129 described in ANSI A300 (Part 5) -- 2005 Management: Tree, Shrub, and Other Woody Plant Maintenance  
130 -- Standard Practices, Management of Trees and Shrubs During Site Planning, Site Development, and

131 Construction, Annex A, A-1.5, Cost Benefits Analysis (or the latest version of this standard). The  
132 developer shall consider the alternative and redesign the plan accordingly, or elect to satisfy the unmet  
133 portion of the preservation threshold through on-site tree planting or through the off-site planting  
134 mechanisms identified in subsection G, so long as the developer provides the locality with an explanation  
135 of why the alternative design recommendations were rejected. Letters of explanation from the developer  
136 shall be prepared and certified by a licensed professional engineer as defined in § 54.1-400. If  
137 arboricultural issues are part of explanation then the letter shall be signed by a Certified Arborist who has  
138 taken and passed the certification examination sponsored by the International Society of Arboriculture  
139 and who maintains a valid certification status or by a Registered Consulting Arborist as designated by the  
140 American Society of Consulting Arborists. If arboricultural issues are the sole subject of the letter of  
141 explanation then certification by a licensed professional engineer shall not be required.

142 F. The ordinance shall provide for deviations of the overall canopy requirements set forth in  
143 subsection C to allow for the preservation of wetlands, the development of farm land or other areas  
144 previously devoid of healthy and/or suitable tree canopy, or where the strict application of the  
145 requirements would result in unnecessary or unreasonable hardship to the developer.

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

155 1. A tree canopy bank may be established in order for the locality to facilitate off-site tree  
156 preservation, tree planting, stream bank, and riparian restoration projects. Banking efforts shall provide  
157 tree canopy that is preserved in perpetuity through conservation easements, deed restrictions, or similar

158 protective mechanisms acceptable to the locality. Projects used in off-site banking will meet the same  
159 ordinance standards established for on-site tree canopy; however, the locality may also require the  
160 submission of five-year management plans and funds to ensure the execution of maintenance and  
161 management obligations identified in those plans. Any such bank shall occur within the same  
162 nonattainment area in which the locality approving the tree banking is situated.

163           2. A tree canopy fund may be established to act as a fiscal mechanism to collect, manage, and  
164 disburse fees collected from developers that cannot provide full canopy requirements on-site. The locality  
165 may use this fund directly to plant trees on public property, or the locality may elect to disburse this fund  
166 to community-based organizations exempt from taxation under § 501(c)(3) of the Internal Revenue Code  
167 with tree planting or community beautification missions for tree planting programs that benefit the  
168 community at large. For purposes of establishing consistent and predictable fees, the ordinance shall  
169 establish cost units that are based on average costs to establish 20-year canopy areas using two-inch caliper  
170 nursery stock trees. Any funds collected by localities for these purposes shall be spent within a five-year  
171 period established by the collection date, or the locality shall return such funds to the original contributor,  
172 or legal successor.

173           H. The following uses shall be exempt from the requirements of any ordinance promulgated under  
174 this section: bona fide silvicultural activity as defined by § 10.1-1181.1 and the areas of sites included in  
175 lakes, ponds, and the normal water elevation area of stormwater retention facilities. The ordinance shall  
176 modify the canopy requirements of dedicated school sites, playing fields, and other nonwooded active  
177 recreation areas by allowing these and other facilities and uses of a similar nature to provide 10 percent  
178 tree canopy 20 years after development.

179           I. 1. In recognition of the added benefits of tree preservation, the ordinance shall provide for an  
180 additional tree canopy credit of up to one and one-quarter times the canopy area at the time of plan  
181 submission for individual trees or the coalesced canopy of forested areas preserved from the  
182 predevelopment tree canopy.

183           2. The following additional credits may be provided in the ordinance in connection with tree  
184 preservation:

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

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

195 J. The following additional credits shall be provided in the ordinance in connection with tree  
196 planting:

197 1. The ordinance shall provide canopy credits of one and one-half the area normally projected for  
198 trees planted to absorb or intercept air pollutants, tree species that produce lower levels of reactive volatile  
199 organic compounds, or trees that act to reduce air pollution or greenhouse gas emissions by conserving  
200 the energy used to cool and heat buildings.

201 2. The ordinance shall provide canopy credits of one and one-quarter the area normally projected  
202 for trees planted for water quality-related reforestation or afforestation projects, and for trees planted in  
203 low-impact development and bioretention water quality facilities. The low-impact development practices  
204 and designs shall conform to local standards in order for these supplemental credits to apply.

205 3. The ordinance shall provide canopy credits of one and one-half the area normally projected for  
206 native tree species planted to provide food, nesting, habitat, and migration opportunities for wildlife. These  
207 canopy credits may also apply to cultivars of native species if the locality determines that such a cultivar  
208 is capable of providing the same type and extent of wildlife benefit as the species it is derived from.

209 4. The ordinance shall provide canopy credits of one and one-half the area normally projected for  
210 use of native tree species that are propagated from seed or tissue collected within the mid-Atlantic region.



211           5. The ordinance shall provide canopy credits of one and one-quarter the area normally projected  
212 for the use of cultivars or varieties that develop desirable growth and structural patterns, resist decay  
213 organisms and the development of cavities, show high levels of resistance to disease or insect infestations,  
214 or exhibit high survival rates in harsh urban environments.

215           K. Tree preservation areas and individual trees may not receive more than one application of  
216 additional canopy credits provided in subsection I. Individual trees planted to meet these requirements  
217 may not receive more than two categories of additional canopy credits provided in subsection J. Canopy  
218 credits will only be given to trees with trunks that are fully located on the development site, or in the case  
219 of tree banking projects only to trees with trunks located fully within easements or other areas protected  
220 by deed restrictions listed in subsection G.

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

224           M. In order to provide higher levels of biodiversity and to minimize the spread of pests and  
225 diseases, or to limit the use of species that cause negative impacts to native plant communities, cause  
226 damage to nearby structures, or possess inherent physiological traits that prone trees to structural failure,  
227 the ordinance may designate species that cannot be used to meet tree canopy requirements or designate  
228 species that will only receive partial 20-year tree canopy credits.

229           N. The locality may allow the use of tree seedlings for meeting tree canopy requirements in large  
230 open spaces, low-density residential settings, or in low-impact development reforestation/afforestation  
231 projects. In these cases, the ordinance shall allow the ground surface area of seedling planting areas to  
232 equate to a 20-year canopy credit area. Tree seedling plantings will be comprised of native species and  
233 will be planted in densities that equate to 400 seedlings per acre, or in densities specified by low-impact  
234 development designs approved by the locality. The locality may set standards for seedling mortality rates  
235 and replacement procedures if unacceptable rates of mortality occur. The locality may elect to allow native  
236 woody shrubs or native woody seed mix to substitute for tree species as long as these treatments do not

237 exceed 33 percent of the overall seedling planting area. The number of a single species may not exceed  
238 10 percent of the overall number of trees or shrubs planted to meet the provisions of this subsection.

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

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

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

247 3. The site plan shall include the 20-year tree canopy calculations on a worksheet provided by the  
248 locality.

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

254 P. The ordinance shall provide a list of commercially available tree species, varieties, and cultivars  
255 that are capable of thriving in the locality's climate and ranges of planting environments. The ordinance  
256 will also provide a 20-year tree canopy area credit for each tree. The amount of tree canopy area credited  
257 to individual tree species, varieties, and cultivars 20 years after they are planted shall be based on  
258 references published or endorsed by Virginia academic institutions such as the Virginia Polytechnic  
259 Institute and State University and accepted by urban foresters, arborists, and horticulturalists as being  
260 accurate for the growing conditions and climate of the locality.

261 Q. The ordinance shall establish standards of health and structural condition of existing trees and  
262 associated plant communities to be preserved. The ordinance may also identify standards for removal of  
263 trees or portions of trees that are dead, dying, or hazardous due to construction impacts. Such removal

264 standards may allow for the retention of trunk snags where the locality determines that these may provide  
 265 habitat or other wildlife benefits and do not represent a hazardous condition. In the event that existing tree  
 266 canopy proposed to be preserved for tree canopy credits dies or must be removed because it represents a  
 267 hazard, the locality may require the developer to remove the tree, or a portion of the tree and to replace  
 268 the missing canopy area by the planting of nursery stock trees, or if a viable alternative, by tree seedlings.  
 269 Existing trees that have been granted credits will be replaced with canopy area determined using the same  
 270 supplemental credit multipliers as originally granted for that canopy area.

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

273 S. In no event shall any local tree conservation ordinance adopted pursuant to this section exceed  
 274 the requirements set forth herein; however, any local ordinance adopted pursuant to the provisions of §  
 275 15.2-961 prior to July 1, 1990, may adopt the tree conservation provisions of this section based on 10-  
 276 year minimum tree canopy requirements.

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

278 U. Nothing in this section shall prohibit or unreasonably limit silvicultural practices in accordance  
 279 with § 10.1-1126.1.

280 **§ 15.2-961.3. Replacement of trees during development process in localities.**

281 A. Any locality may adopt an ordinance providing for the planting and replacement of trees during  
 282 the development process pursuant to the provisions of this section.

283 B. The ordinance shall require that the site plan for any subdivision or development include the  
 284 planting or replacement of trees on the site to the extent that, at 20 years, minimum tree canopies or covers  
 285 will be provided in areas to be designated in the ordinance, as follows:

- 286 1. Ten percent tree canopy for a site zoned business, commercial, or industrial;
- 287 2. Ten percent tree canopy for a residential site zoned 20 or more units per acre;
- 288 3. Fifteen percent tree canopy for a residential site zoned more than 10 but less than 20 units per  
 289 acre;
- 290 4. Twenty percent tree canopy for a residential site zoned 10 units or less per acre; and

291 5. The tree canopy percentage for a mixed-use development shall be the percentage applicable to  
292 the predominant use of the development. For purposes of this subdivision, "predominant use" means the  
293 use within the development that constitutes the largest percentage of gross land area or, in the case of a  
294 building or buildings, the largest percentage of the total floor area.

295 However, the City of Williamsburg may require at 10 years the minimum tree canopies or covers  
296 set out in this subsection.

297 C. The ordinance shall require that the site plan for any subdivision or development include, at 20  
298 years, that a minimum 10 percent tree canopy will be provided on the site of any cemetery as defined in §  
299 54.1-2310, notwithstanding any other provision of this section. In no event shall any local tree replacement  
300 or planting ordinance adopted pursuant to this section exceed the requirements of this subsection.

301 D. The ordinance shall provide for reasonable provisions for reducing the tree canopy requirements  
302 of subsection B or granting tree cover credit in consideration of the preservation of existing tree cover or  
303 for preservation of trees of outstanding age, size, or physical characteristics.

304 E. The ordinance shall provide for reasonable exceptions to or deviations from these requirements  
305 to allow for the reasonable development of farm land or other areas devoid of healthy or suitable woody  
306 materials, for the preservation of wetlands, or otherwise when the strict application of the requirements  
307 would result in unnecessary or unreasonable hardship to the developer. In such instances, the ordinance  
308 may provide for a tree canopy bank whereby a portion of a development's tree canopy requirement may  
309 be met from off-site planting or replacement of trees at the direction of the locality. Any such bank shall  
310 be within the locality and located as closely as feasible to where the development project is situated. If  
311 there is no bank within the locality of the development project with sufficient credits to meet the project's  
312 off-site needs, and with the approval of the locality where the development project is located, the unmet  
313 portion of a development's tree canopy requirement may be met by payment of an amount equal to no less  
314 than the development project's avoided costs for the unmet portion to the state treasury and credited to the  
315 Natural Resources Commitment Fund, pursuant to subsection A of § 10.1-2128.1. Amounts credited to  
316 the Natural Resources Commitment Fund pursuant to this subsection shall be distributed to the Virginia  
317 Agricultural Best Management Practices Cost-Share Program and applied to the implementation of

318 riparian forested buffer best management practices. The following shall be exempt from the requirements  
319 of any tree replacement or planting ordinance promulgated under this section: dedicated school sites,  
320 playing fields and other nonwooded recreation areas, and other facilities and uses of a similar nature.

321 F. The ordinance may designate tree species that cannot be planted to meet minimum tree canopy  
322 requirements due to tendencies of such species to (i) negatively impact native plant communities, (ii)  
323 cause damage to nearby structures and infrastructure, or (iii) possess inherent physiological traits that  
324 cause such trees to structurally fail. All trees to be planted shall meet the specifications of the  
325 AmericanHort. The planting of trees shall be done in accordance with either the standardized landscape  
326 specifications adopted by the Virginia Nursery and Landscape Association, the Virginia Society of  
327 Landscape Designers, or the Virginia Chapter of the American Society of Landscape Architects or, if  
328 applicable, the road and bridge specifications of the Virginia Department of Transportation.

329 G. Existing trees that are to be preserved may be included to meet all or part of the canopy  
330 requirements, and may include wooded preserves, if the site plan identifies such trees and the trees meet  
331 standards of desirability and life-year expectancy that the locality may establish.

332 H. For purposes of this section, "tree canopy" or "tree cover" includes all areas of coverage by  
333 plant material exceeding five feet in height, and the extent of planted tree canopy at 10 or 20 years'  
334 maturity. Planted canopy at 10 or 20 years' maturity shall be based on published reference texts generally  
335 accepted by landscape architects, nurserymen, and arborists in the community or standards adopted by the  
336 Virginia State Forester, and the texts shall be specified in the ordinance.

337 I. Penalties for violations of ordinances adopted pursuant to this section shall be the same as those  
338 applicable to violations of zoning ordinances of the locality.

339 J. In no event shall any local tree replacement or planting ordinance adopted pursuant to this  
340 section exceed the requirements set forth herein. Nothing in this section shall prohibit or unreasonably  
341 limit silvicultural practices in accordance with § 10.1-1126.1.

342 K. Nothing in this section shall invalidate any local ordinance adopted by the City of Williamsburg  
343 that imposes standards for 10-year-minimum tree cover replacement or planting during the development  
344 process.

345 L. Nothing in this section shall invalidate any local ordinance adopted pursuant to the provisions  
346 of § 15.2-961 or 15.2-961.1.

347 **§ 15.2-961.4. Conservation of trees during land development process in localities.**

348 A. For purposes of this section, "tree canopy" or "tree cover" includes all areas of canopy coverage  
349 by self-supporting and healthy woody plant material exceeding five feet in height and the extent of planted  
350 tree canopy at 20 years' maturity.

351 B. Any locality may adopt an ordinance providing for the conservation of trees during the land  
352 development process pursuant to the provisions of this section. In no event shall any local tree  
353 conservation ordinance adopted pursuant to this section also impose the tree replacement provisions of §  
354 15.2-961, 15.2-961.1, or 15.2-961.3.

355 C. The ordinance shall require that the site plan for any subdivision or development provide for  
356 the preservation or replacement of trees on the development site such that the minimum tree canopy or  
357 tree cover percentage 20 years after development is projected to be as follows:

- 358 1. Ten percent tree canopy for a site zoned business, commercial, or industrial;
- 359 2. Ten percent tree canopy for a residential site zoned 20 or more units per acre;
- 360 3. Fifteen percent tree canopy for a residential site zoned more than eight but less than 20 units per  
361 acre;
- 362 4. Twenty percent tree canopy for a residential site zoned more than four but not more than eight  
363 units per acre;
- 364 5. Twenty-five percent tree canopy for a residential site zoned more than two but not more than  
365 four units per acre;
- 366 6. Thirty percent tree canopy for a residential site zoned two or fewer units per acre;
- 367 7. The tree canopy percentage for a mixed-use development shall be the percentage applicable to  
368 the predominant use of the development. For purposes of this subdivision, "predominant use" means the  
369 use within the development that constitutes the largest percentage of gross land area or, in the case of a  
370 building or buildings, the largest percentage of the total floor area; and

371 8. A locality may increase any of the tree canopy percentages applicable to a subdivision or  
372 development as established in subdivisions 1 through 6 by an amount not to exceed 10 percent of the  
373 percentage authorized in each subdivision of this subsection if as provided in its ordinance (i) the locality  
374 grants to such subdivision or development either administrative approval of a mutually agreed-upon  
375 reduction of lot size requirements, setback requirements, yard requirements, or parking requirements or  
376 administrative approval of a mutually agreed-upon increase in density or (ii) 20 percent or more of the  
377 land area of the subdivision or development is within an enhanced tree canopy area. However, if a locality  
378 increases the required canopies pursuant to clause (i) or (ii), it shall specify in its ordinance the increased  
379 percentages applicable to each of the uses enumerated in subdivisions 1 through 6.

380 In meeting these percentages, (a) the ordinance shall first emphasize the preservation of existing  
381 tree canopy where that canopy meets local standards for health and structural condition and where it is  
382 feasible to do so within the framework of design standards and densities allowed by the local zoning and  
383 other development ordinances and (b) second, where it is not feasible in whole or in part for any of the  
384 justifications listed in subsection E to preserve existing canopy in the required percentages listed in this  
385 subsection, the ordinance shall provide for the planting of new trees to meet the required percentages.  
386 Computation of achievement of the percentage of tree canopy or tree cover percentage required for the  
387 applicable use by the ordinance shall be determined by the locality using standards adopted by the Virginia  
388 State Forester.

389 For purposes of this subdivision:

390 "Enhanced tree canopy area" means any land area that is (i) a Resource Protection Area (RPA) as  
391 defined by local ordinance adopted pursuant to the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et  
392 seq.); (ii) a wetland that is not determined by the Department of Environmental Quality to be an isolated  
393 wetland of minimal ecological value as defined in subsection B of 9VAC25-210-10; (iii) located in a  
394 Federal Emergency Management Agency-designated 100-year floodplain; (iv) identified by the Virginia  
395 Natural Heritage Program as a rare or state significant natural community; (v) comprised of, at the time  
396 of permit application for the subdivision or development, tree canopy that covers an area equal to 3,000  
397 square feet or more per quarter acre of the property with an understory of vegetation that is not managed

398 turf; or (vi) found as a result of compliance with any applicable existing state or federal permitting  
399 requirements to contain listed federal or state threatened or endangered species.

400 Nothing in this subdivision shall be deemed to alter existing law or regulation governing land  
401 disturbance or other construction activity in any enhanced tree canopy area.

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

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

409 1. Meeting the preservation target would prevent the development of uses and densities otherwise  
410 allowed by the locality's zoning or development ordinance.

411 2. The predevelopment condition of vegetation does not meet the locality's standards for health  
412 and structural condition or for trees that should be preserved.

413 3. An International Society of Arboriculture certified arborist, ASCA Registered Consulting  
414 Arborist, or licensed landscape architect determines and demonstrates in writing to the locality why  
415 construction activities that cannot reasonably be avoided could be reasonably expected to impact existing  
416 trees to the extent that they would not likely survive in a healthy and structurally sound manner. This  
417 includes activities that would cause direct physical damage to the trees, including root systems, or cause  
418 environmental changes that could result in or predispose the trees to structural and health problems.

419 4. The development is a redevelopment project and a certified arborist or licensed landscape  
420 architect determines and provides in writing to the locality that the planting of trees on site will better  
421 achieve the applicable canopy goal.

422 The allowable deviations provided in subdivisions 1 through 4 shall be included verbatim in the  
423 ordinance and in any guidance or worksheets provided to applicants on meeting the requirements of the  
424 ordinance.



425 If, in the opinion of the developer, the project cannot meet the tree preservation target due to the  
426 conditions described in subdivision 1, 2, 3, or 4, the developer may request a deviation from the  
427 preservation requirement in subsection D. In the request for deviation for conditions described in  
428 subdivision 1, 2, or 3, the developer shall provide a letter to the locality from an International Society of  
429 Arboriculture certified arborist, ASCA Registered Consulting Arborist, or licensed landscape architect  
430 that provides justification for the deviation, describes how the deviation is the minimum necessary to  
431 afford relief, and describes how the requirements of subsection C will be met through tree planting or a  
432 tree canopy bank or fund established by the locality. In the request for a deviation for the condition  
433 described in subdivision 4, the developer's letter shall describe how the requirements of subsection C will  
434 be met through tree planting on site. Proposed deviations shall be reviewed by the locality's employed or  
435 retained urban forester, International Society of Arboriculture certified arborist, ASCA Registered  
436 Consulting arborist, licensed landscape architect, or in consultation with the locality's land development  
437 or licensed professional civil engineering review staff, who may propose an alternative site design based  
438 upon adopted land development practices and sound vegetation management practices that take into  
439 account the relationship between the cost of conservation and the benefits of the trees to be preserved as  
440 described in ANSI A300 (Part 5) -- 2019 Management: Tree, Shrub, and Other Woody Plant Maintenance  
441 -- Standard Practices, Management of Trees and Shrubs During Site Planning, Site Development, and  
442 Construction, Annex A, A-1.5, Cost Benefits Analysis (or the latest version of this standard). The  
443 developer shall consider the alternative and redesign the plan accordingly, or elect to satisfy the unmet  
444 portion of the tree preservation target through onsite tree planting or through the off-site planting  
445 mechanisms identified in subsection G, so long as the developer provides the locality with an explanation  
446 of why the alternative design recommendations were rejected. Letters of explanation from the developer  
447 for any request to deviate from the alternative site design proposed by the locality shall be prepared and  
448 certified by a licensed professional engineer as defined in § 54.1-400, International Society of  
449 Arboriculture certified arborist, ASCA Registered Consulting Arborist, licensed landscape architect, or  
450 other authorized licensed professional. If arboricultural issues are part of the explanation, then the letter  
451 shall be signed by a licensed landscape architect. If arboricultural issues are the sole subject of the letter

452 of requesting a deviation from a locality-proposed alternative site design, then certification by a licensed  
453 professional engineer shall not be required.

454 F. The ordinance shall provide for deviations of the overall canopy requirements set forth in  
455 subsection C (i) to allow for the preservation of wetlands, (ii) to allow for the development of farmland or  
456 other areas previously devoid of healthy or suitable tree canopy, or (iii) where the strict application of the  
457 requirements would result in unreasonable hardship to the developer. Nothing in this subsection shall  
458 prevent a locality from adopting the discretionary increase in canopy requirements authorized in  
459 subdivision C 8. Nothing in this section shall prohibit or unreasonably limit silvicultural practices in  
460 accordance with § 10.1-1126.1.

461 G. The ordinance shall provide for the establishment or use of a tree canopy bank or fund whereby  
462 any portion of the tree canopy requirement that cannot be met on site may be met through off-site tree  
463 preservation or tree planting efforts. Such provisions may be offered where it can be demonstrated that  
464 application of the tree canopy requirements of subsection C would cause irresolvable conflicts with other  
465 local site development requirements or standards, where sites or portions of sites lack sufficient space for  
466 future tree growth, where planting spaces will not provide adequate space for healthy root development,  
467 where trees will cause unavoidable conflicts with underground or overhead utilities, or where it can be  
468 demonstrated that trees are likely to cause damage to public infrastructure. The ordinance may utilize any  
469 of the following off-site canopy establishment mechanisms:

470 1. A tree canopy bank may be established by a locality, a for-profit entity, or an Internal Revenue  
471 Service-qualified § 501(c)(3) nonprofit organization that is qualified in tree planting and maintenance in  
472 order for the locality to facilitate off-site tree preservation, tree planting, stream bank, and riparian  
473 restoration projects. Banking efforts shall provide tree canopy that is preserved in perpetuity through  
474 conservation easements, deed restrictions, or similar protective mechanisms acceptable to the locality.  
475 Development projects that use off-site banking shall meet the same ordinance standards established for  
476 onsite tree canopy; however, the locality may also require the submission of five-year management plans  
477 and funds to ensure the execution of maintenance and management obligations identified in those plans.  
478 Any such bank shall be within the locality and located as closely as feasible to where the development

479 project is situated. If there is no bank within the locality of the development project with sufficient credits  
480 to meet the project's off-site needs, and with the approval of the locality where the development project is  
481 located, the unmet portion of a development's tree canopy requirement may be met by payment of an  
482 amount equal to no less than the development project's avoided costs for the unmet portion to the state  
483 treasury and credited to the Natural Resources Commitment Fund, pursuant to subsection A of § 10.1-  
484 2128.1. Amounts credited to the Natural Resources Commitment Fund pursuant to this subsection shall  
485 be distributed to the Virginia Agricultural Best Management Practices Cost-Share Program and applied to  
486 the implementation of riparian forested buffer best management practices.

487 2. A tree canopy fund may be established to act as a fiscal mechanism to collect, manage, and  
488 disburse fees collected from developers that cannot provide full canopy requirements onsite. The locality  
489 may use this fund directly to plant and then maintain trees on public property, or the locality may elect to  
490 disburse this fund, for tree planting programs that benefit the community at large, to community-based  
491 organizations exempt from taxation under § 501(c)(3) of the Internal Revenue Code that are focused on  
492 tree planting or community beautification or on advancing environmental goals, such as pollution  
493 reduction, stormwater management, flood mitigation, urban heat reduction, and similar goals. For the  
494 purposes of establishing consistent and predictable fees, the ordinance shall establish cost units that are  
495 based on average costs to establish 20-year canopy areas using two-inch caliper nursery stock trees. Any  
496 funds collected by localities for these purposes shall be spent within a five-year period established by the  
497 collection date by the locality or disbursed to a community-based organization for tree planting and  
498 subsequent maintenance provided for in this subsection, or the locality shall return such funds to the  
499 original contributor or legal successor.

500 H. The following uses shall be exempt from the requirements of any ordinance promulgated under  
501 this section: bona fide silvicultural activity as defined by § 10.1-1181.1 and the areas of sites included in  
502 lakes, ponds, and the normal water elevation area of stormwater retention facilities. The ordinance shall  
503 modify the canopy requirements of dedicated school sites, playing fields, and other nonwooded active  
504 recreation areas by allowing these and other facilities and uses of a similar nature to provide 10 percent  
505 tree canopy 20 years after development. The ordinance shall require that the site plan for any subdivision

506 or development include, at 20 years, that a minimum 10 percent tree canopy will be provided on the site  
507 of any cemetery as defined in § 54.1-2310, notwithstanding any other provision of this section.

508 I. 1. In recognition of the added benefits of tree preservation, the ordinance shall provide for an  
509 additional tree canopy credit of up to one and one-quarter times the canopy area at the time of plan  
510 submission for individual trees or the coalesced canopy of forested areas preserved from the  
511 predevelopment tree canopy.

512 2. The following additional credits may be provided in the ordinance in connection with tree  
513 preservation:

514 a. The ordinance may provide canopy credits of up to one and one-half times the actual canopy  
515 area for the preservation of forest communities that achieve environmental, ecological, and wildlife  
516 conservation objectives set by the locality.

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

520 J. The following additional credits shall be provided in the ordinance in connection with tree  
521 planting of one and one-half the area normally projected for:

522 1. Trees planted to absorb or intercept air pollutants, tree species that produce lower levels of  
523 reactive volatile organic compounds, or trees that act to reduce air pollution or greenhouse gas emissions  
524 by conserving the energy used to cool and heat buildings.

525 2. Trees planted for water quality-related reforestation or afforestation projects, and for trees  
526 planted in approved low-impact development and bioretention water quality facilities.

527 3. Native tree species planted to provide food, nesting, habitat, and migration opportunities for  
528 wildlife. These canopy credits may also apply to cultivars of native species if the locality determines that  
529 such a cultivar is capable of providing the same type and extent of wildlife benefit as the species it is  
530 derived from.

531 4. Native tree species that are propagated from seed or tissue collected within the mid-Atlantic  
532 region.

533 5. The use of cultivars or varieties that develop desirable growth and structural patterns, resist  
534 decay organisms and the development of cavities, show high levels of resistance to disease or insect  
535 infestations, or exhibit high survival rates in harsh urban environments.

536 6. Trees planted as a best management practice (BMP) approved pursuant to the Stormwater  
537 Management Act (§ 62.1-44.15:24 et seq.) and Erosion and Sediment Control Law (§ 62.1-44.15:51 et  
538 seq.).

539 If the developer and the locality agree upon a canopy for the subdivision or development that  
540 exceeds the canopy percentage required by subsection C by more than 10 percent, the ordinance may  
541 provide that 50 percent of the amount by which the canopy exceeds the required canopy may be used by  
542 the applicant as credits toward meeting a canopy requirement on another project within the locality. Such  
543 credits may only be earned if the project receiving the credits is identified in the canopy plan for the project  
544 generating the credits or is identified in writing to the locality by the applicant within one year of issuance  
545 of the building permit for the project.

546 K. Tree preservation areas and individual trees may not receive more than one application of  
547 additional canopy credits provided in subsection I. Individual trees planted to meet these requirements  
548 may not receive more than two categories of additional canopy credits provided in subsection J. Canopy  
549 credits will only be given to trees with trunks that are fully located on the development site, or in the case  
550 of tree banking projects only to trees with trunks located fully within easements or other areas protected  
551 by deed restrictions listed in subsection G.

552 L. All trees planted for tree cover credits shall meet the specifications of the AmericanHort and  
553 shall be planted in accordance with the publication entitled "Tree and Shrub Planting Guidelines,"  
554 published by the Virginia Cooperative Extension.

555 M. In order to provide higher levels of biodiversity and to minimize the spread of pests and  
556 diseases, or to limit the use of species that cause negative impacts to native plant communities, cause  
557 damage to nearby structures, or possess inherent physiological traits that prone trees to structural failure,  
558 the ordinance may designate species that cannot be used to meet tree canopy requirements or designate  
559 species that will only receive partial 20-year tree canopy credits.

560 N. The locality may allow the use of tree seedlings for meeting tree canopy requirements. In these  
561 cases, the ordinance shall allow the ground surface area of seedling planting areas to equate to a 20-year  
562 canopy credit area. The locality may set standards for seedling mortality rates and replacement procedures  
563 if unacceptable rates of mortality occur. The locality may elect to allow native woody shrubs or native  
564 woody seed mix to substitute for tree species as long as these treatments do not exceed 33 percent of the  
565 overall seedling planting area. The number of a single species may not exceed 10 percent of the overall  
566 number of trees or shrubs planted to meet the provisions of this subsection.

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

569 1. The site plan shall graphically delineate the edges of predevelopment tree canopy, the proposed  
570 limits of disturbance on grading or erosion and sedimentation control plans, and the location of tree  
571 protective fencing or other tree protective devices allowed in the Virginia Erosion and Sediment Control  
572 Handbook or any successor publication issued by the Department of Environmental Quality.

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

575 3. The site plan shall include the 20-year tree canopy calculations on a worksheet provided by the  
576 locality that adheres to standards established by the Virginia State Forester for computation of  
577 achievement of tree canopy percentages.

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

583 P. The ordinance shall provide a list of commercially available tree species, varieties, and cultivars  
584 that are capable of thriving in the locality's climate and ranges of planting environments. The ordinance  
585 will also provide a 20-year tree canopy area credit for each tree. The amount of tree canopy area credited  
586 to individual tree species, varieties, and cultivars 20 years after they are planted shall be based on

587 references published or endorsed by Virginia academic institutions such as the Virginia Polytechnic  
588 Institute and State University and accepted by urban foresters, arborists, landscape architects, and  
589 horticulturalists as being accurate for the growing conditions and climate of the locality.

590 Q. In the event that existing tree canopy proposed to be preserved for tree canopy credits dies or  
591 must be removed because it represents a hazard, the locality may require the developer to remove the tree,  
592 or a portion of the tree and to replace the missing canopy area by the planting of nursery stock trees, or if  
593 a viable alternative, by tree seedlings. Existing trees that have been granted credits will be replaced with  
594 canopy area determined using the same supplemental credit multipliers as originally granted for that  
595 canopy area.

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

598 S. Except as provided in subsection C, no local tree conservation ordinance adopted pursuant to  
599 this section shall exceed the requirements set forth herein.

600 T. Nothing in this section shall invalidate any local ordinance adopted pursuant to the provisions  
601 of § 15.2-961 or 15.2-961.1.

602 **2. That stakeholders representing at least one representative of each of the six sectors represented**  
603 **on the Collaborative Decision-Making Group that served during completion of the report required**  
604 **by Chapters 89 and 90 of the Acts of Assembly of 2021, Special Session I, as well as certified**  
605 **arborists, licensed landscape architects, and urban foresters employed by both the public and**  
606 **private sectors and representatives of localities within Planning Districts 17 and 18, the Southwest**  
607 **and Southside regions of Virginia, and the State Forester shall meet at least twice prior to the 2023**  
608 **Session of the General Assembly to consider (i) the provisions of § 15.2-961.4 of the Code of Virginia,**  
609 **as created by this act; (ii) information and recommendations related to the tree canopy percentage**  
610 **standards to be adopted by the State Forester necessary for the provisions §§ 15.2-961.3 and 15.2-**  
611 **961.4 of the Code of Virginia, as created by this act; (iii) whether additional allowances should be**  
612 **permitted for tree planting and the use of in-lieu funds outside the locality where the development**  
613 **project occurs; (iv) any changes warranted to address the needs of rural localities; and (v) how**

614 technical assistance could best be provided to all localities implementing the tree canopy ordinances  
615 provided by this act. The participants shall make recommendations to the Chairmen of the House  
616 Committee on Counties, Cities and Towns and the Senate Committee on Agriculture, Conservation  
617 and Natural Resources by December 1, 2022.

618 3. That the provisions of § 15.2-961.3 of the Code of Virginia, as created by this act, shall become  
619 effective 30 days after the publication of a statewide urban and community forestry plan by the  
620 Department of Forestry.

621 4. That the provisions of § 15.2-961.4 of the Code of Virginia, as created by this act, shall not become  
622 effective unless reenacted by the 2023 Session of the General Assembly.

623 #