



Agenda Report

2725 Judge Fran Jamieson
Way
Viera, FL 32940

New Business - Development and Environmental Services Group

J.1.

3/10/2020

Subject:

Legislative Intent and Permission to Advertise Amendments to Chapter 62, Article XIII, Division 2, entitled Landscaping, Land Clearing and Tree Protection

Fiscal Impact:

FY20/21: Advertising Costs

Dept/Office:

Natural Resources Management Department

Requested Action:

Staff requests legislative intent and permission to advertise amendments to Chapter 62, Article XIII, Division 2, entitled Landscaping, Land Clearing and Tree Protection

Summary Explanation and Background:

On January 21, 2020, the Board of County Commissioners (Board) requested that Natural Resources Management Department (Natural Resources) compile information regarding preservation requirements as the Landscaping, Land Clearing and Tree Protection Ordinance (Ordinance) does not provide protection of Specimen or Protected Trees for the majority of single-family residence (S.F.R.) properties in unincorporated Brevard County. The concern was brought forward by a Brevard County citizen, who requested that the Board amend the portion of the Ordinance exempting single-family lots, 1.25 acres and less, with and without a Certificate of Occupancy (C.O.), from all tree canopy and tree preservation requirements. Specifically, the citizen requested a reduction in current lot size exemptions from 1.25 acres to 0.25 acres, thereby requiring more lots to preserve trees.

Options for Board Consideration

Option 1: Approve legislative intent and permission to advertise amendments to Chapter 62, Article XIII, Division 2, entitled Landscaping, Land Clearing and Tree Protection, for single-family lots for which a building permit is being sought, as follows:

- **Option 1a:** Consistent with the citizen request, reduce the removal and replacement exemption threshold from 1.25 to 0.25 acres for single-family lots.
- **Option 1b:** Reduce the removal and replacement exemption threshold from 1.25 to 0.75 acres for single-family lots.

Option 2: Approve legislative intent and permission to advertise amendments to Chapter 62, Article XIII, Division 2, entitled Landscaping, Land Clearing and Tree Protection, for single-family lots that have a C.O., and 398

where no building permit is being sought, as follows:

- **Option 2a:** Consistent with the citizen request, reduce the tree preservation exemption threshold for single-family lots with a C.O. from 1.25 to 0.25 acres.
- **Option 2b:** Reduce the tree preservation exemption threshold for single-family lots with a C.O. from 1.25 acres to no exemptions.

Option 3: Approve legislative intent and permission to advertise amendments to Chapter 62, Article XIII, Division 2, entitled Landscaping, Land Clearing and Tree Protection, for a combination of above options or alternate lot size thresholds.

Option 4: Update Ordinance to provide exemptions consistent with State law such as the recent state legislation on the removal of dangerous trees.

Option 5: Take no action.

Option 6: Provide other direction.

Background

The adopted Ordinance finds that the health, safety, and welfare of its citizens can best be protected by land development regulations that encourage the protection of Heritage or Specimen Trees. Property owners that are able to provide preservation typically enjoy quantifiable savings and benefits in reduced energy costs, intercepted rainfall and runoff, reduced atmospheric carbon dioxide, and removal of air pollutants as outlined by the United States Forest Service's i-Tree Design Tool, and tree valuation studies by City of Tampa, City of Gainesville, and Environmental Protection Agency. Property owners that do not provide preservation or planting during the construction process do not enjoy these advantages, nor does the county or municipality realize the benefits of property owners' reduced runoff and pollutant treatment.

In 2005, and again in 2008, two Board-directed Taskforces overhauled the Ordinance. The resulting (current) Ordinance is more flexible for development with considerably reduced preservation, landscaping, and tree replacement requirements. The 2005 and 2008 amendments are comparable to, or more flexible than, neighboring county and city landscaping, land clearing, and tree protection codes.

Since those modifications, Brevard County has experienced a population increase of almost 10% from 543,376 in 2010 to 596,849 in 2019. In 2010, Brevard County issued 318 building permits for construction of new S.F.R. homes. In 2019, this number increased three-fold to 969 S.F.R. building permits. Between 2010 and 2019, over 6,400 S.F.R. building permits were issued in unincorporated Brevard County. Development has a significant effect on trees due to the lot size threshold used to determine tree protection and replacement exemptions.

Preliminary Analysis

Natural Resources conducted an initial analysis of the number of S.F.R. lots in unincorporated Brevard County that would be affected by the citizen request. Approximately 110,075, or 88%, of S.F.R. lots, are 1.25 acres or less, and are currently exempt from preservation of any tree canopy including Specimen and Protected Trees. 399

Protected Trees on the mainland are hardwoods (e.g., oaks) $\geq 10''$ diameter at breast height (D.B.H.) and softwoods (e.g., pines) $\geq 14''$ D.B.H. Specimen Trees are large species hardwood or softwood trees $\geq 24''$ D.B.H. and understory trees $\geq 10''$ D.B.H.

The citizen request proposed reducing the Specimen Tree protection threshold from 1.25 acres to 0.25 acres for all S.F.R. lots, with and without a Certificate of Occupancy (C.O.). Based on staff experience and analysis, there may be a need to separate the evaluation of tree protection for lots with a C.O. (after a home is built) versus lots without a C.O. (lots for which a building permit is sought). During the building permit process, reducing the exemption threshold for preservation to 0.25 acres may not be practical due to adverse site conditions such as topography, easements, utilities, and distribution of trees on small lots. Staff found that a threshold of 0.75 acre typically allows property owners to place all desired and required improvements on the lot, provide preservation of trees, if applicable, and still have more than one-third of the lot for open space (See attached Percentage of Free Lot Area table). For all single-family lots with structures already in place (after C.O.), a tree removal exemption is currently provided in the Ordinance, and in Chapter 2019-155, Florida Statutes, allowing for removal of a tree that is evaluated as dangerous per an International Society of Arboriculture (ISA) certified arborist. A summary is presented in the attached S.F.R. Lots Size Comparison Matrix.

Comprehensive Plan Policies

Multiple Brevard County Comprehensive Plan policies require the reduction of the urban heat island effect, erosion, and flooding through the planting or preservation of landscaping and trees. Mature tree canopy and root systems provide the following benefits that are supported by Comprehensive Plan policies:

- **Conservation Element Policy 1.8** - Improve air quality by oxygen production, and intake of carbon and other pollutants.
- **Conservation Element Policy 2.1.C** - Provide cooling effect through evapotranspiration; natural misting. Provide shade that reduces water usage, and energy demands associated with cooling homes/buildings.
- **Conservation Element Objective 3 & Coastal Element Policy 2.3.A** - Improve water quality by reducing excess nutrient and pollutant loading into water bodies (surface water and groundwater) by uptake through roots.
- **Conservation Element Objective 4** - Reduce flooding by stormwater run-off uptake through roots, thereby increasing flood storage capacity.
- **Conservation Element Policy 7.1 & Coastal Element Policy 2.3.A, 4.1.A** - Reduce/prevent erosion & sediment run-off into surface water bodies by stabilizing soils/dunes.
- **Conservation Element Policy 7.1.D, 2.1 & Coastal Element Policy 4.1.A** - Provide wind control that protects structures and reduce heating costs.

- **Conservation Element Policy 8.5** - Provide shade and block solar radiation to reduce Heat Island Effects associated with impervious surfaces and urban sprawl. Impervious areas can be 1.8 to 5.4 degrees hotter than rural areas.
- **Conservation Element Policy 8.5.B, 1.8** - Provide screening: visual, noise, light, odor, and traffic emissions.
- **Conservation Element Objective 9, Policy 9.1** - Provide habitat for valuable wildlife and migrating birds.

Other Exemptions and Minor Modifications

In researching tree maintenance/preservation and collaborating with other county departments, staff discovered a need to simplify removal and maintenance exemption, particularly with regards to right-of-way clearance. Specifically, maintaining limb clearance consistent with Florida Statutes regarding vehicular height standards has been a challenge in certain areas of the county. Staff believes clarification to the exemptions would be beneficial. Additionally, updating the existing Small Scale Land Clearing Permit could reduce existing conflicts between maintenance and preservation of trees and vehicular/pedestrian safety and access.

Lastly, staff requests permission to provide minor modifications to the Ordinance, updating departmental name, clarifying consistency with recent state law regarding the removal of dangerous trees, and other housekeeping items.

Clerk to the Board Instructions:

None.



March 11, 2020

M E M O R A N D U M

TO: Virginia Barker, Natural Resources Management Director Attn: Darcie McGee

RE: Item J.1. Legislative Intent and Permission to Advertise Amendments to Chapter 62, Article XIII, Division 2, Entitled Landscaping, Land Clearing and Tree Protection

The Board of County Commissioners, in regular session on March 10, 2020, discussed legislative intent and permission to advertise amendments to Chapter 62, Article XIII, Division 2, Entitled Landscaping, Land Clearing, and Tree Protection, but took no formal action.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

/kp

Percentage of Free Lot Area - Based on Lot Size, Planted & Preserved Trees, and Impervious Areas							
Lot Size (Acres)	Lot Size ¹ (SF)	Typical Size of Area of Alteration ² (SF)	10% Canopy Preservation Area ³ (SF)	10% Planting Area ⁴ (SF)	Typical Developed Impervious Area ⁵ (SF)	Free Area ⁶ (SF)	Free Area ⁷ (%)
0.25	10,890	10,890	1,361	4,356	6,067	(894)	-8%
0.3	13,068	13,068	1,634	5,227	6,600	(393)	-3%
0.35	15,246	15,246	1,906	6,098	7,280	(38)	0%
0.4	17,424	17,424	2,178	6,970	7,838	438	3%
0.5	21,780	18,593	2,324	7,437	8,746	3,272	15%
0.75	32,670	19,270	2,409	7,708	12,255	10,298	32%
1	43,560	24,125	3,016	9,650	13,060	17,834	41%
1.25	54,450	28,196	3,525	11,279	13,843	25,804	47%
2.5	108,900	50,863	6,358	20,345	19,850	62,347	57%
¹ Acres converted to Square Feet (SF)							
² The Area of Alteration is the sum of the Area of Disturbance cleared for development plus the Preserved Canopy Area.							
This value will be lower if there is no canopy to preserve.							
Specimen and Protected tree canopy can be used toward meeting 10% canopy preservation - not in addition to 10%.							
Typically, a lot that is part of a formal subdivision is completely cleared and does not have canopy to preserve.							
GIS study found most new development on lots between 0.25 & 0.45 acres were completely cleared.							
³ 10% Canopy Preservation Area = 0.1 x Area of Alteration. This value is multiplied by a factor of 1.25 to account for any further growth of the existing preserved canopy.							
⁴ 10% Planting Area = 0.1 x Area of Alteration. This vauue is multiplied by a factor of 4 to account for size of tree canopy at full maturity							
⁵ Impervious area based on actual GIS measurements that include house, porch, garage, shed, pool, deck, driveway, sidewalks and other impervious structures.							
⁶ Area of lot left over after typical developed/impervious areas and tree requirements are subtracted from total lot size area.							
Note that free area does not include shade areas under canopy trees that are also available for use.							
⁷ Values will be higher if there is less than 10% canopy to preserve.							

Single-Family Residential Lots Size Comparison Matrix – Current Code Versus Proposed Code Modification Options

<p>Vacant Lots</p>	<p>Current code: Section 62-4338, Land Clearing Performance Standards, provides for all lot sizes:</p> <p>Small Scale Land Clearing Permit – Allows removal of up to 10 % of native trees. Removal of a Specimen Tree cannot be approved for removal.</p> <p>No code modification is proposed for vacant lots</p>
	<p>Lot Size Exemptions</p>
<p>Lots applying for a building permit and without a Certificate of Occupancy (C.O.). Includes permits for a home, detached structure, pool, porch, shed, etc.</p>	<p>Current code: Section 62-4341, Landscaping Performance Standards - Lots 1.25 acres or less are exempt from removal and replacement criteria for native canopy, Protected and Specimen Trees.</p> <p>Proposed code modification options:</p> <ul style="list-style-type: none"> • Option 1a - Citizen request: Lots 0.25 acres or less are exempt from removal and replacement criteria for native canopy, Protected and Specimen Trees. • Option 1b: Lots less than 0.75 acres are exempt from removal and replacement criteria for native canopy, Protected and Specimen Trees.
<p>Lot is built out, has a Certificate of Occupancy (C.O.), and is not applying for a building permit.</p>	<p>Current code: Section 62-4334, Exemptions - Lots 1.25 acres or less are exempt from preservation requirements of native canopy, Protected and Specimen Trees.</p> <p>Proposed code modification options:</p> <ul style="list-style-type: none"> • Option 2a - Citizen request: Lots 0.25 acres or less are exempt from preservation requirements of canopy, Protected and Specimen Trees. • Option 2b: No lots are exempt from preservation requirements of native canopy, Protected and Specimen Trees. *

* Any size tree that is evaluated as dangerous by an International Society of Arboriculture (ISA) certified arborist, may be removed per Florida Statue.