

# **TC-06-10    An Ordinance to Revise the Regulations Associated with the City's Tree Conservation Ordinance**

**A proposal to amend the Tree Conservation Ordinance to implement changes that fall into one of five categories:** Ordinance Modifications, Increased Flexibility, Ordinance Simplification, and Protection of the Right Trees.

## **Proposed Regulations:**

### **Ordinance Modifications:**

- Clarify primary tree conservation areas in Metro Park Overlay District (MPOD), increase minimum tree size to be saved, and increase buffer yard width to 32 ft.
- Eliminate Code conflicts with other sections of the Municipal Code.
- Eliminate loop holes.
- Disallow (in most cases) use of treeless areas as tree conservation areas.
- Disallow inclusion of dead, unhealthy, or hazardous trees in determining tree density.
- Disallow inclusion of various easements that may result in tree removal or tree disturbance as tree conservation area.
- Establish consistency in various Municipal Code-specified standards related to trees.

### **Increased Flexibility:**

- Change requirements for CM-zoned land as primary tree conservation area, minimum 30% required, area has to have trees with 30 basal area or planted.
- Increased flexibility of pre-development removal of trees.
- Change the tree replacement size requirement for prohibited-pruning violations.
- Accept Tree Preservation as a credit towards tree planting requirements.
- Allow alternate locations of preservation of individual trees to any location on a property.
- An optional method to determine basal area for large tracts of land.
- Simplify survey metes and bounds requirements for abutting tree conservation areas that are similarly regulated.

- Allow alternate methods of compliance to preserve tree conservation areas.
- Flexibility in planting sizes for Reservoir Watershed Protection Area Overlay Districts.

**Ordinance Simplification:**

- Simplify survey metes and bounds requirements for abutting tree conservation areas that are similarly regulated.
- Simplify requirements for surveys of Neuse riparian buffers.
- Clarify the ordinance in places where it has been unclear to the public and staff.

**Protection of the Right Trees:**

- New definitions: Hazardous tree, Heritage tree
- Refined definitions: Critical root zone, Tree disturbing activity
- Establish a 30 basal area requirement for primary tree conservation areas in districts zoned: Thoroughfare District, SHOD Yards 1 – 4.
- Add an optional, incentive-based component to preserve large (Heritage) trees.



# Certified Recommendation

Raleigh Planning Commission

CR# 11398

## Case Information: TC-6-10/Tree Conservation Regulations

### Comprehensive Plan Guidance

<i>Applicable Policy Statements</i>	<b>EP 1.8 - Sustainable Sites</b> <b>EP 2.1 – Green Infrastructure</b> <b>EP 2.4 - Scenic Vistas and Views</b> <b>EP 5.1 – Urban Forestry</b> <b>EP 5.4—Tree Selection</b>
<i>Action Items</i>	<b>EP 5.1 - Tree and Landscape Ordinance Amendments</b>

### Summary of Text Change

<i>Summary</i>	A proposal to amend the Tree Conservation Ordinance to implement changes that fall into one of four categories: Ordinance Modifications, Increased Flexibility, Ordinance Simplification, and Protection of the Right Trees.
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### Summary of Impacts

<i>Impacts Identified</i>	<p><u>Adoption of TC-6-10:</u></p> <p>Based on the fact that TC-6-10 was developed to improve the effectiveness of the Tree Conservation Ordinance following months of public review and negotiation by numerous parties, adverse impacts were not attempted to be identified by this document.</p> <p><u>No Action:</u></p> <p>Under the “no action” alternative, the current ordinance would continue to be overly complex, conflict with other sections of the City Code, allow loopholes and be inflexible.</p>
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### Public Meetings

<i>Public Hearing</i>	<i>Committee</i>		<i>Planning Commission</i>	
7-20-10	9-21-10	Text Change Committee	9-28-10	Referred to Committee of the Whole

	10-5-10 11-2-10	Committee of the Whole	11-9-10	Approval, as revised.
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#### Attachments

1. Staff report
2. Summary
3. Ordinance

### Planning Commission Recommendation

<i>Recommendation</i>	<p>(1) That this text change be approved, as revised;</p> <p>(2) That the City Council appropriate the necessary funds to update the Tree Conservation User's Manual accordingly; and</p> <p>(3) That the City Council initiate the process of authorizing a text change to designate the Planning Commission as the hearing board for interpretations to the Landscape Ordinance's Alternate Method of Compliance section on an appeal to an administratively-approved development plan. Currently, the Board of Adjustment serves in this function.</p>
<i>Findings &amp; Reasons</i>	<p>That this text change is the result of a thorough review of the City's Tree Conservation Ordinance beginning 2 years following its effective date (May 1, 2005). As directed by the City Council, the Tree Conservation Task Force reconvened and identified shortcomings and conflicts with the current ordinance. Working with the City Attorney's office, the Inspections, Public Works, Planning and Parks and Recreation Department, these proposed modifications removes conflicts with other sections of the City Code and will increase flexibility and simplify the current ordinance.</p> <p>The Planning Commission recommends the following revisions to TC-6-10:</p> <ul style="list-style-type: none"> <li>• To expand the definition of "Heritage Tree" to include understory trees 12" DBH or larger;</li> <li>• To provide a no-mow, natural succession option within designated Tree Conservation Areas which are treeless in lieu of requiring the planting of trees;</li> </ul>

	<ul style="list-style-type: none"> <li>• Clarifies the conditions for determining penalties for unlawful “tree disturbing activity”.</li> <li>• Typo referencing “§10-9040” within Section 28.</li> </ul> <p>The Planning Commission believes that interpretation appeals to a proposed Alternate Methods of Compliance to the Landscape Ordinance are not clear “black or white” issues and that their meetings will serve as a better public forum for making these decisions.</p>
<i>Motion and Vote</i>	<p>Motion: Harris Edmisten Second: Bartholomew</p> <p>In Favor: Anderson, Bartholomew, Butler, Fleming, Harris Edmisten, Haq, Mattox, Mullins, Smith, Sterling Lewis</p>

This document is a true and accurate statement of the findings and recommendations of the Planning Commission. Approval of this document incorporates all of the findings of the attached Staff Report.

		11/9/10	
_____ Planning Director	_____ Date	_____ Planning Commission Chairperson	_____ Date

Staff Coordinator:      Greg Hallam: [greg.hallam@raleighnc.gov](mailto:greg.hallam@raleighnc.gov)



## Zoning Staff Report – TC-6-10

### Tree Conservation Text Change

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#### Request

<i>Section Reference</i>	<b>10-2082.14 Establishment and Protection of Tree Conservation Areas</b>
<i>Basic Information</i>	A proposal to amend the Tree Conservation Ordinance to implement changes that fall into one of four categories: Ordinance Modifications, Increased Flexibility, Ordinance Simplification, and Protection of the Right Trees.
<i>PC Recommendation Deadline</i>	November 2, 2010

#### Comprehensive Plan Guidance

<i>Applicable Policies</i>	<p><b>EP 1.8 - Sustainable Sites</b> Encourage the use of environmentally-friendly site planning and landscape design approaches and techniques such as those developed by the Sustainable Sites Initiative.</p> <p><b>EP 2.1 – Green Infrastructure</b> Ensure protection of Raleigh's unique and significant green infrastructure, its natural resources, landscapes, and ecological systems through best practices management, stewardship and land use regulations.</p> <p><b>EP 2.4 - Scenic Vistas and Views</b> Explore options for protecting and creating scenic vistas and views of natural landscapes and features that are important in establishing, enhancing, and protecting the visual character of the City, mindful of other goals such as preserving and enhancing the City's tree canopy.</p> <p><b>EP 5.1 – Urban Forestry</b> Expand and strengthen urban forestry and tree preservation programs to protect the existing tree cover and add to it.</p> <p><b>EP 5.4—Tree Selection</b> Tree species should be selected for site suitability, superior form, disease resistance, regional performance, drought tolerance, urban tolerance, diversity, and mature size by an ISA Certified Arborist or a professional approved by the Parks and Recreation Department's Urban Forestry staff.</p>
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<p><i>Action Items</i></p>	<p><b>EP 5.1 - Tree and Landscape Ordinance Amendments</b></p> <p>Amend existing regulations as needed to ensure that the urban forest is conserved during the development process, with priority given to preserving the most ecologically beneficial trees or grouping of trees. Review the criteria for allowing alternates to improve the effectiveness of the ordinance. Evaluate the appropriateness of locating primary tree save areas along the frontage of the property.</p>
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## Contact Information

<p><i>Staff Coordinator</i></p>	<p>Greg Hallam: <a href="mailto:greg.hallam@raleighnc.gov">greg.hallam@raleighnc.gov</a> ; 516.2636</p>
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## History/Overview

The City's Tree Conservation Ordinance was adopted by the City Council on January 4, 2005 and became effective on May 1, 2005. As directed by the City Council, the ordinance was developed jointly between the Inspections Department, the City Attorney's office, the Department of City Planning and the City Council-appointed Tree Conservation Task Force. At the time of its adoption, the City Council directed Administration to undertake a full review of the new ordinance 2 years following its inception; the intent being to review the effectiveness of the ordinance and identify any shortcomings or conflicts which limited its effectiveness. With 2 years of working experience, the work group reconvened. TC-6-10 is the result of the Council's directive and represents the issues identified and the changes proposed, as overseen by the Council's Comprehensive Planning Committee.

### **TC-6-10 proposes the following revisions to the City's Tree Conservation Ordinance:**

- Clarifies primary tree conservation areas in Metro Park Overlay District (MPOD), increase minimum tree size to be saved, and increase buffer yard width to 32 ft.
- Eliminates Code conflicts with other sections of the Municipal Code.
- Eliminates loop holes.
- Disallows (in most cases) use of treeless areas as tree conservation areas.
- Disallows inclusion of dead, unhealthy, or hazardous trees in determining tree density.
- Disallows inclusion of various easements that may result in tree removal or tree disturbance as tree conservation area.
- Establishes consistency in various Municipal Code-specified standards related to trees.
- Changes requirements for CM-zoned land as primary tree conservation area, minimum 30% required, area has to have trees with 30 basal area or planted.
- Increased flexibility of pre-development removal of trees.
- Changes the tree replacement size requirement for prohibited-pruning violations.
- Accepts Tree Preservation as a credit towards tree planting requirements.
- Allows alternate locations of preservation of individual trees to any location on a property.
- An optional method to determine basal area for large tracts of land.
- Simplifies survey metes and bounds requirements for abutting tree conservation areas that are similarly regulated.
- Allows alternate methods of compliance to preserve tree conservation areas.
- Flexibility in planting sizes for Reservoir Watershed Protection Area Overlay Districts.
- Simplifies survey metes and bounds requirements for abutting tree conservation areas that are similarly regulated.
- Simplifies requirements for surveys of Neuse riparian buffers.
- Clarifies the ordinance in places where it has been unclear to the public and staff.
- New definitions: Hazardous tree, Heritage tree
- Refined definitions: Critical root zone, Tree disturbing activity
- Establishes a 30 basal area requirement for primary tree conservation areas in districts zoned: Thoroughfare District, SHOD Yards 1 – 4.
- Adds an optional, incentive-based component to preserve large (Heritage) trees.

## Purpose and Need

TC-6-10 proposes necessary modifications to the Tree Conservation Ordinance in order to meet its original intent. These changes include text clarifications, increased flexibility, ordinance simplification and rules for preserving the "right" trees.



## **Alternatives Considered**

TC-6-10 represents modifications to the Tree Conservation Ordinance following months of review and agreement between administration, the Tree Conservation Task Force and the City Council's Comprehensive Planning Committee. Therefore, the only alternative considered is a No Action alternative.

## **Scoping of Impacts**

Potential adverse impacts of the proposed text change have been identified as follows:

1. Based on the fact that TC-6-10 was developed to improve the effectiveness of the Tree Conservation Ordinance following months of public review and negotiation by numerous parties, adverse impacts were not attempted to be identified by this document.

The adverse impacts of taking no action (retaining the existing regulations) have been identified as follows:

1. Retaining the Tree Conservation Ordinance, as currently drafted, will continue to contain conflicts with other sections of the City Code, allow identified loopholes, remain overly complex and inflexible.

## **Impacts Summary**

### **Adoption of Proposed Text Change**

Adverse impacts were not attempted to be identified by this document.

### **No action**

Under the "no action" alternative, the current ordinance would continue to be overly complex, conflict with other sections of the City Code, allow loopholes and be inflexible.

ORDINANCE NO. 2011 – 831 TC 340  
TC-6-10

AN ORDINANCE TO REVISE THE REGULATIONS ASSOCIATED  
WITH THE CITY'S TREE CONSERVATION ORDINANCE

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF  
RALEIGH, NORTH CAROLINA that:

**Section 1.** Amend Raleigh City Code Section 10-2002(b) and 10-2082.2 to add the following new definitions in their proper alphabetical order:

***“Hazardous tree.*** A tree is *hazardous* when it meets all of the *following* as determined by a Certified Arborist:

- (1) It has a structural defect that predisposes the entire tree, or, at least one-fifth (1/5) or more of the tree's crown, to structural failure.
- (2) The *DBH* of the tree predisposed to structural failure is at least ten (10) inches, or, the diameter of the crown limb(s) predisposed to structural failure is at least eight (8) inches at the largest point.
- (3) The structural defect has a failure potential of “medium” or greater as described in the current edition of, A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas, published by the International Society of Arboriculture, and cannot be remedied by an accepted arboricultural practice.
- (4) A target exists beneath or adjacent to the tree that could be injured or damaged, including but not limited to: pedestrians, vehicles, *streets*, sidewalks, *buildings*, and other man-made structures.”

***“Heritage tree.*** A single-trunk *shade tree* that is twenty-four (24) inches *DBH* or larger, or, a single-trunk *understory tree* that is twelve (12) inches *DBH* or larger, that is not *unhealthy* and not a *hazardous tree*.”

**Section 2.** Amend Raleigh City Code Sections 10-2002 and 10-2082.2, **Definitions**, the definition of ***critical root zone***, to add a second sentence that shall read: “The minimum radius *shall* not be less than seven (7) feet.”

**Section 3.** Amend Raleigh City Code Section 10-2002, **Definitions**, subsection (3) of the definition of ***“Forestry, general”*** to delete the words “(1) inch caliper tree measured six (6) inches above the ground” and substitute in lieu thereof “bare-root seedling”. Said subsection is further amended to delete the words “two” and “200” and substitute in lieu thereof the words “one” and “100” accordingly.

**Section 4.** Amend Raleigh City Code Section 10-2002, **Definitions**, definition of **Minor tree removal activity**, first sentence, to insert a semicolon between the words “tree” and “other”, and to insert between the words “than” and “a” the following language: “trees on non-residential *lots* that are less than two (2) acres in size and are located within fifty (50) feet of a *thoroughfare*.”

Furthermore, amend the definition of **Minor tree removal activity** to add a new subsection (7) which shall read as follows: “(7) The tree to be removed is for a City Of Raleigh project to install or maintain public infrastructure and is unrelated to any site plan, subdivision, or building permit.”

**Section 5.** Amend Raleigh City Code Section 10-2002, **Definitions**, the definition of **Tree disturbing activity**, subsection 1, to insert between the word “tree” and the comma immediately thereafter, the words “or within any tree conservation area established pursuant to §10-2082.14”.

Said section is further amended, subsection 3, to insert between the word “zone” and the word “of”, the words and comma “or within any tree conservation area established pursuant to §10-2082.14,”.

**Section 6.** Amend Raleigh City Code Section 10-2030(d)(2) to add a new subsection c. which shall read as follows:

- “c. Prior to the approval of any subdivision plan or site plan on a site two acres or greater in size, whichever shall first occur, the *property owner shall* delineate a minimum of thirty percent (30%) of Conservation Management zoned land as primary tree conservation area. The remaining seventy percent (70%) of the CM-zoned *property* not in tree conservation area *may* either be developed pursuant to §10-2030(b), or, part or all of the remaining seventy percent (70%) *may* at the election of the *owner* be established as primary tree conservation area. All CM-zoned primary tree conservation areas *shall* have tree cover by either preserving existing trees with a *basal area* of at least thirty (30) square feet per acre as determined by increments of fifty (50) feet in length , or, if such trees are not present, *shall* be planted with *shade trees* in accordance with §10-5006(a)(11)f.1.”

**Section 7.** Amend Raleigh City Code Section 10-2053, **Metro-Park Protection Overlay District**, first paragraph, first sentence of subsection (d)(2)a., to delete the language “*protective yard*,” and substitute in lieu thereof the language “primary tree conservation area measuring a minimum of thirty-two (32) feet in width”, and said sentence is further amended to delete the language “meeting the requirements of §10-2082.9”. Said subsection, second sentence of the first paragraph, is amended to insert between the words “No” and “land” the language “*tree disturbing activity*,” and, to delete the language “twenty (20)” and substitute in lieu thereof the language “thirty-two

(32)", and said sentence is further amended to insert language "metro-" before the last word of the paragraph, "park".

Repeal Raleigh City Code 10-2053 subsection (d)(2)b., and in lieu thereof substitute the following:

"b. Watercourse buffer areas.

After the application of the Metro-Park Protection Overlay District, all watercourses which both drain into the metro-park and have a concentrated flow from a drainage area of at least five (5) acres *shall* contain primary tree conservation areas of a width of:

- Fifty (50) feet along each side of any watercourse draining twenty-five (25) or more acres.
- Twenty-five (25) feet along each side of any watercourse draining five(5) or more acres but less than twenty-five acres

The width of these primary tree conservation areas shall be measured perpendicularly to the flow of the watercourse and horizontally from the edge of the watercourse bank, except when no watercourse exists, in which case, the centerline of the watercourse shall be used.

The dimensions of the primary tree conservation area *shall* be delineated on recorded final *subdivision* plats or at the time of *development* of the *property* if these plats are not yet recorded.

The *City Council* *shall* reduce the width of the primary tree conservation areas whenever it determines that the extent of the primary tree conservation area will deprive the landowners of reasonable use of their property.

No use, encroachment, *tree-disturbing activity*, land-disturbing activity, placement of *impervious surface*, construction nor installation *shall* occur within the watercourse buffer except as allowed in §10-2082.14(f)(2)."

Within each fifty (50) linear feet of watercourse buffer of the Resource Metro-Park Overlay District that does not contain trees, a minimum of two (2) ten (10) gallon container size (at least 5' tall) *shade trees* free of circling roots *shall* be planted to enhance the riparian buffer prior to the issuance of a certificate of occupancy."

Amend the table insert in subsection (e)(4) to delete from the last column the number "5". and substitute in lieu thereof the language "10 inches".

Amend Subsection (e)(4)a., first sentence, of section 10-2053 to delete the language “fifteen and five-eighths (15 5/8)” and substitute in lieu thereof the language “thirty-one and one-fourth (31 1/4)”, and, to replace the word “five-inch” with the word “ten-inch”.

Subsection (e)(4)c., first paragraph, is amended to insert between the words “the” and “caliper”, the word “total”, and, to add an “s” to end of the word “tree” and, to insert a hyphen before the words “using” and “shall”. Said provision is further amended to delete the words “not less” and in lieu thereof insert the words “no replacement tree *shall* be less” and, to delete the word “not”, which appears between the word “and” and the word “more”.

**Section 8.** Amend Raleigh City Code Section 10-2057(f)(2) to reletter subsection r. as subsection s. and to add a new subsection r. which shall read as follows:

“r. A tree conservation plan prepared in accordance with §10-2082.14 showing locations and data for proposed tree conservation areas.”

**Section 9.** Amend Raleigh City Code Section 10-2072(b), **Tree disturbing activity except a minor tree removal activity**, subsection (2), first paragraph, first sentence, to insert the word “occur” between the words “*shall*” and “within”, and to add a new third sentence to the first paragraph which shall read as follows:

“Notwithstanding the foregoing, a maximum of five (5) trees between ten (10) inches and sixteen (16) inches *DBH* may be removed within the thirty-two (32) foot wide perimeter buffer or sixty-five (65) foot wide perimeter buffer, within a continuous five-year period, with a permit issued from the City Forestry Specialist, provided that such tree removal would not diminish future tree conservation areas that *may* be required under §10-2082.14, all as shown on a report submitted to the City Forestry Specialist

Amend Raleigh City Code Section Raleigh City Code Section 10-2072(b) **Tree disturbing activity except a minor tree removal activity** to insert a new last subsection, subsection (7) which shall read as follows:

“(7) That City Of Raleigh projects which install or maintain public infrastructure unrelated to any site plan, subdivision, or building permit *shall* not be subject to conditional use Section 10-2072 *tree disturbing activities except minor tree removal activity*.”

Amend the first sentence of the last paragraph of Raleigh City Code Section 10-2072(b) **Tree disturbing activity except a minor tree removal activity** to insert between the words “plus” and “thirty-five”, the language, “one hundred dollars (\$100.00) per diameter inch of any other tree ten (10) inches *dbh* and larger unlawfully subjected to any *tree disturbing activity*, or one thousand dollars (\$1,000.00) for the first tree plus”, Amend

yet again the last paragraph of Raleigh City Code Section 10-2072(b) **Tree disturbing activity except a minor tree removal activity** to insert a new second sentence which shall read as follows: "Where *dbh* cannot be determined, the top diameter of the existing stump *shall* be used to calculate the civil penalty in lieu of *dbh*."

Furthermore, amend existing third sentence of the last paragraph of the provisions of this conditional use to delete the language "three hundred (300)" and substitute in lieu thereof the language "two hundred (200)"; and, to insert between the word "buffer" and the semicolon, the language "or *critical root zone area* of a tree subjected to any unlawful *tree disturbing activity*".

Furthermore, amend the next to last sentence of this last paragraph to insert between the word "Deeds" and the sentence period, the language, "Office, however, such replacement areas *shall* not count toward the tree conservation percentage requirements of §10-2082.14(b)(2)".

**Section 10.** Amend Raleigh City Code Section 10-2082.3(d)(4), **Prohibited pruning**, to delete the sixth sentence in its entirety, and substitute in lieu thereof the following: "The minimum size of any replacement tree *shall* be two (2) inches diameter (six and one-quarter inches in circumference) measured at six (6) inches above grade, and the maximum size of any replacement tree *shall* be six (6) inches in diameter (eighteen and three-quarter inches in circumference) measured at six (6) inches above grade."

**Section 11.** Amend Raleigh City Code Section 10-2082.5(f), **Tree Preservation as a Credit Towards Tree Planting Requirements**, opening paragraph, to delete the language "fifteen and five-eighths (15 5/8) in circumference (five (5) inch caliper)" and substitute in lieu thereof the language "nine and two-fifths (9 2/5) inches in circumference (three (3) inches caliper)". Furthermore, amend Section 10-2082.5(f)(2) to delete in its entirety the diagram.

**Section 12.** Amend Raleigh City Code Section 10-2082.12(c)(1)f to insert before the period the following language: ", provided the removal area is not a tree conservation area established pursuant to §10-2082.14".

**Section 13.** Amend Raleigh City Code Section 10-2082.12(c)(3), first sentence, to insert at the beginning of the first sentence the following language: "In those portions of thoroughfare yards not designated a tree conservation area,"

**Section 14.** Amend Raleigh City Code Section 10-2082.14(a)(2)a to insert before the period the following language: ", provided that, delineation of tree conservation areas for parcels subject to either condemnation or the threat of condemnation *shall* be delayed until a site plan or further subdivision of the parcel first occurs."

**Section 15.** Amend Raleigh City Code section 10-2082.14(b)(1)c to delete the language “, excluding governmental and utility easements that prohibit trees and any area devoted or to devoted to crossing the buffer”.

**Section 16.** Amend Raleigh City Code Section 10-2082.14(b)(2)f. by inserting a new first sentence in the second paragraph; said new sentence shall read as follows: “As an alternate means of compliance with priorities (2)e. or (2)f., tree conservation areas of individual trees ten (10) inches or greater in *DBH* and their *critical root zones* are allowed anywhere on the site that is not otherwise a tree conservation area provided that the *critical root zone* area in the alternate locations is not less than the *critical root zone* area that would have been required for priorities in subsections (2)e and (2) (f) and that no alternate saved tree is less than ten (10) inches in *DBH*.” The former first sentence of second paragraph of section 10-2082.14((b))((2)f is amended to insert before the word “no” the following language “and their alternates”.

Furthermore, amend Section 10-2082.14(b)(2)f. by deleting subsection 2 in its entirety, and substituting in lieu thereof the following:

- “2. The tree is located within any slope easement, drainage easement, cross-access easement, future right-of-way reservation, sidewalk easement, or any easement or area that prohibits trees or authorizes *tree disturbing activities*.”

Said Section 10-2082.14(b)(2)f. is further amended to add a new last subsection, subsection 4, that shall reads as follows:

- “4. The tree is a *hazardous tree* according to all of the characteristics listed in §10-2002 subsections (1) through (4) for the defined term *hazardous*.”

**Section 17.** Amend Raleigh City Code Section 10-2082.14(c), **Existing Tree Cover Required**, by deleting this subsection in its entirety and substituting in lieu thereof the following:

**“(c) Tree Cover Required.**

Tree conservation areas proposed for thoroughfare areas of Thoroughfare Districts or Special Highway Overlay Districts 1 through 4 of priority areas (b)(1)a., and priority areas (b)(2)a. through (b)(2)d., including any allowed alternate tree conservation areas of *undisturbed areas*, *shall* contain a *basal area* of at least thirty (30) square feet per acre as determined in increments of fifty (50) feet in length. Any required thoroughfare *protective yard* for zoning districts TD and SHOD 1 through 4 that does not contain a *basal area* of least thirty (30) *shall* be planted in accordance with the landscaping standards for said zoning district, and such portions of the thoroughfare yard *shall* not be established as a tree conservation area. No tree, that is either *unhealthy* or a *hazardous tree* situated within the tree conservation area, or any tree ten (10) inches or greater *DBH* with

any of its *critical root zone* situated outside of the tree conservation area on the developing side of the property, *shall* count for computing *basal area*.

For those developments that fulfill any of their tree conservation area requirement in *protective yards* of Thoroughfare Districts or Special Highway Overlay Districts 1 through 4 or; secondary tree conservation areas, subsection (b)(2) above; each developer *shall* submit to the *City*:

- (1) Photo panoramic panels of the intended area to be conserved. The photo panel *shall* equal fifty (50) feet of the length of the priority area to be conserved;
- (2) A tree cover report prepared by a certified arborist, North Carolina licensed landscape architect or North Carolina registered forester describing for each fifty (50) foot length of proposed *tree conservation area* the composition of tree species, typical characteristic of the tree stand, the smallest caliper tree, but not less than three (3) inches *DBH* (nine and three-eighth (9 3/8) inches circumference measured four and one-half (4 1/2) feet above the ground) the largest *DBH* and the typical *DBH*, typical spacing between trees, the *basal area* and an indication of the general health and vigor of the tree stand. The report and the photo panels *shall* be interrelated;
- (3) The most recent aerial photograph of the subject tract.

An actual survey of trees and computation of *basal area* *may* be substituted in lieu of subsection (c)(1) and (3) above, provided that no tree that is dead, *unhealthy*, or is a *hazardous tree* is included in the survey.

An optional method to determine *basal area*; for thoroughfare areas of Thoroughfare Districts or Special Highway Overlay Districts 1 through 4 of priority areas (b)(1)a., and for secondary tree conservation areas (b)(2) a. through d.; is for a registered forester registered with the State of North Carolina to certify in writing to the City Forestry Specialist that the *basal area* is sixty (60) or greater for tree conservation areas (b)(2) a. through d. and for thoroughfare yards of Thoroughfare Districts or Special Highway Overlay Districts 1 through 4 provided all the following conditions are met:

- a. Tree conservation areas *shall* be at least eighty seven hundred (8,700) square feet in size, shall exclude easements, and *shall* consist of contiguous *undisturbed* wooded areas with a *basal area* of 60 or greater comprised of trees three (3) inches *dbh* and larger.
- b. All dimensions of tree conservation areas *shall* be at least sixty five (65) feet in all directions.



- c. Land area that does not contain trees *shall* be excluded unless it contains *critical root zones* of trees being preserved.
- d. Any area of *tree disturbing activity* within the proposed tree conservation area *shall* be disallowed as tree conservation area.
- e. A legible copy of the latest Wake County/City of Raleigh aerial photograph, or more recent if available, *shall* be included with the registered forester's certification.

Within each fifty (50) foot linear increment of Zone 2 of Neuse River Riparian Buffers required by (b)(1)c. and greenway tree conservation areas delineated pursuant to section 10-2082.14(d) that does not contain trees, a minimum of two *shade trees* to enhance the riparian buffer *shall* be planted prior to issuance of certificate of occupancy. Planted *shade trees shall* be at least ten (10) gallon container size (at least five feet tall) free of circling roots at time of planting. If said area without trees will be used as shown on the approved *site plan* for either a tree disturbing activity allowed by 10-2082.14(f) or a water-related activity located in, over, under, or adjacent a lake or natural watercourse, no planting of new trees *shall* be required.

Within each fifty (50) linear feet of watercourse buffer of the Resource Metro-Park Overlay District that does not contain trees, a minimum of two (2) ten (10) gallon container size (at least five feet tall) *shade trees* free of circling roots *shall* be planted to enhance the riparian buffer prior to the issuance of a certificate of occupancy.

Alternatively, areas that do not contain trees in Neuse Zone 2, greenways, or MPOD watercourse buffers may be established as permanently undisturbed primary tree conservation areas to allow natural regeneration of trees, provided such areas are not located on individual lots developed for *single-family dwellings*. Permanently undisturbed primary tree conservation areas *shall* not be cleared of any vegetation by any method whatsoever, nor subjected to any *tree disturbing activity*, and *shall* be delineated with signs as specified by the City. Said signs *shall* remain in place for a period of seven (7) years. Unlawful disturbance of any permanently undisturbed primary tree conservation areas *shall* subject the violator to a civil penalty of a minimum of one thousand dollars (\$1,000.00) plus thirty-five cents (\$0.35) for every square foot of disturbed area, and, unlawfully disturbed areas *shall* be planted with twice the number of ten (10) gallon container *shade trees* as described above. Unlawful removal of any required signs *shall* subject the violator to a civil penalty of one hundred dollars (\$100.00) for each removed sign and each removed sign *shall* be replaced. Said civil penalties *shall* be processed as set forth in §10-2152(5)."

**Section 18.** Amend Raleigh City Code Section 10-2082.14(d), **Delineation of Tree Conservation Areas**, by deleting this subsection in its entirety and substituting in lieu thereof the following:

**“(d) Delineation of Tree Conservation Areas.**

The area of primary tree conservation areas established pursuant to subsection (b)(1) above shall exclude the following: sight triangles, slope easements, drainage easements, cross access easements, governmental and utility easements that prohibit trees, any easement that authorizes *tree disturbing activities*, and any area devoted or to be devoted to streets, future right-of-way reservation, sidewalks, driveways, walkways; and, storm drainage facilities including without limitation, pipes, energy dissipaters, and stormwater control measures which require the removal of vegetation. Water-related activity areas located in, over, under or adjacent a lake or natural watercourse, shown on the *site plan* shall not be included as Zone 2 areas of Neuse River Riparian Buffers required by section 10-2082.14(b)(1)c.”

The area of secondary tree conservation areas established pursuant to subsection (b)(2) above which consist of groups of trees, excluding *unhealthy* or *hazardous trees* is measured by finding the area which fully encloses all the protected trees excluding: sight triangles, slope easements, drainage easements, cross access easements, governmental and utility easements that prohibit trees, any easement that authorizes *tree disturbing activities*, and any area devoted or to be devoted to streets, future right-of-way reservation, sidewalks, driveways, walkways, storm drainage facilities, including without limitation, pipes, energy dissipaters and stormwater control measures which require the removal of vegetation. Such tree conservation areas *shall* also contain the dimensional requirements of §10-2082(b)(2)a. through d. *City of Raleigh* greenways *may* at the option of the *owner* be included in the boundaries of tree conservation areas, provided that an area computed twenty-five (25) feet multiplied by the length of the greenway is excluded as tree conservation for trail construction. Tree conservation areas proposed for priority areas (2)a. through (2)d., including any allowed alternate internal *undisturbed areas* shall be at least twenty (20) feet in all directions excluding external boundaries.

Where either a slope or utility easement is required on the developing property adjacent to a thoroughfare, the width of secondary tree conservation areas required by section 10-2082.14(b)(2)a. and section 10-2082.14(b)(2)b. *may* be reduced by one half (1/2) foot for each one (1') foot of easement width, but overall site tree conservation required by section 10-2082.14(b)(2) shall not be reduced. Where both slope and utility easements are required and overlap, the overlapping width shall be counted once.

For each fifty (50) foot length of tree conservation area established pursuant to Section 10-2082.14(b), the boundaries of priority areas (2)a. through (2)d. may optionally be widened to provide additional area of protection for tree roots of trees included in the *basal area* computation provided that each fifty (50) foot section contains a *basal area* of at least thirty (30). The widened tree conservation areas

*shall* be accomplished by measuring perpendicular to the tree conservation boundary no more than ten (10) feet from the edge of the *critical root zone* of trees ten (10) inches *DBH* and larger, or, no more than ten (10) feet from the trunk of the tree that is at least three (3) inches *DBH* but less than ten (10) inches *DBH* and which is also furthest from the developing parcel boundary. Tree conservation areas *shall* not exceed one hundred (100) feet wide for priority areas (2)a. and (2)b.

The area of tree conservation areas for individual trees and for trees ten (10) inches or more in *DBH* that are not *unhealthy* or a *hazardous tree* that are situated within tree conservation areas in priorities (2)a., (2)b., allowed alternate *undisturbed areas* pursuant to (2)c. and d. and (2)e. and (2)f., *shall* in addition include the *critical root zone* within the developing side of the property measured from the base of trees. The *critical root zone* of a tree preserved pursuant to (2)e. and (2)f. *shall* be preserved in entirety even if it extends beyond sixty five (65) feet or thirty two (32) feet for sections (2)e. and (2)f. respectively. When a landscape easement is obtained from the adjoining land that prohibits all *tree disturbing* activity, off-site areas for protected *critical root zones* *may* be included as tree conservation areas provided that such *areas shall* not be double counted as tree conservation areas.

A *heritage tree* and its *undisturbed area* of *critical root zone* *may* be established as an optional tree conservation area after establishment of priorities§10-2082.14(b)(2)a. and (b)(2)b.. Except when it adjoins another tree conservation area, the *critical root zone* of ~~any~~ *heritage tree* *shall* be increased to a maximum of four thousand (4,000) square feet for *DBH* classes: twenty-four (24) through twenty-eight (28) inches. *Critical root zone* for larger *DBH Heritage Trees* *shall* be as defined in 10-2002. The area of *critical root zone* for a *heritage tree* conservation area *shall* be double credited toward the tree conservation requirement only when all of the following conditions are met:

- (1) The *critical root zone* *shall* be protected in entirety by, either being entirely on the developing property, or, the property owner *shall* obtain a landscape easement that prohibits all *tree disturbing activity* for the portion of the *critical root zone* on an adjacent property. The off-site area for protected *critical root zone* *may* be included as tree conservation area provided that such areas *shall* not under any circumstances be double counted as tree conservation areas.
- (2) Any portion of the *critical root zone* within another tree conservation area *shall* not be eligible for double credit.
- (3) The condition of the *heritage tree* *shall* be a rating of "Good" or higher as determined by a certified arborist certified by the International Society of Arboriculture using the Guide for Plant Appraisal, latest edition, published

by the International Society of Arboriculture, and verified by the City Forestry Specialist. A report of the tree condition *shall* be prepared on an evaluation form provided by the *City* and it *shall* be provided to the City Forestry Specialist.

- (4) An *active tree preservation plan* prepared by a certified arborist, certified by the International Society of Arboriculture must be approved by the City Forestry Specialist, and implemented by the developer under the supervision of the certified arborist."

**Section 19.** Amend Raleigh City Code Section 10-2082.14(e), Documentation of Tree Conservation Areas, by deleting the first two paragraphs from this subsection in their entirety and substituting in lieu thereof the following:

**"(e) Documentation of Tree Conservation Areas.**

After the tree conservation areas have been determined in accordance with the foregoing requirements, and prior to any *tree disturbing activity*, a map with metes and bounds descriptions of all tree conservation areas *shall* be given to the *City Forestry Specialist* in the Inspections Department and a tree conservation permit *shall* be obtained from the City, and protective fencing *shall* be in place in the field.

Metes and bounds descriptions of Neuse River Riparian Zone 2 required by §10-2082.14(b)(1)c *shall* include only the outer boundary of Zone 2 with a notation that the inner boundary is twenty (20) feet parallel to the outer boundary. The outer boundary of Zone 2 *may* optionally be surveyed as a series of tangents that *shall* be no more than five (5) feet from the actual Zone 2 boundary. When the tangent survey is used, metes and bounds descriptions of the tangent lines and the actual outer boundary of Neuse River Riparian Zone 2 (without metes and bounds) *shall* be shown on the recorded plat. *Tree disturbing activities* are prohibited and unlawful in the area between the tangent Zone 2 boundary and the actual Zone 2 boundary to the same extent as *tree disturbing activities* are within Zone 2 areas, but said areas *shall* not count toward the percentage tree conservation requirements of (b)(2), as demonstrated to the City Forestry Specialist.

Where §10-2082.14(b)(2) tree conservation areas a. – d. abut one another, metes and bounds descriptions *shall* not be required for the boundary line between said tree conservation areas. Previously recorded tree conservation areas and greenways *shall* be shown without metes and bounds provided that the correct Book of Maps is referenced, and greenways are re-recorded as Greenway Tree Conservation Areas.

After the tree conservation areas have been determined in accordance with the foregoing requirements and a tree conservation permit has been obtained from the *City Forestry Specialist*, and prior to or concurrent to any subdividing of the

*property* or issuance of *building* permit, which ever event first occurs, the landowners *shall* record with the local *County* Register of Deeds the *following*.”.

**Section 20.** Amend Raleigh City Code section 10-2082.14(f)(2) to insert after the language “Riparian Buffers” the following language: “and in watercourse buffers in Metro-Park Overlay Districts”. Said provision is further amended to indent subsections (a) and (b) and to remove the parenthesis from subsections a, b, and c and replace the final parenthesis bracket with a period.

**Section 21.** Amend Raleigh City Code Section 10-2082.14(f)(3), first sentence, to insert the language “primary tree conservation areas and” between the words “for” and “secondary”. Amend 10-2082.14(f)(3)b.2. to delete the language “one hundred (100)” and substitute in lieu thereof the language “two-hundred (200)”, and to insert the word “tree” before the word “disturbed”.

**Section 22.** Amend Raleigh City Code Section 10-2082.14(f)(3)b., introductory paragraph, by deleting the word “two” and substituting in lieu thereof the word “three”.

Furthermore, amend Section 10-2082.14(f)(3)b.2. to add a semicolon and the word “or” at the end of the provision; and to add a new subsection 3. which shall read as follows:

- “3. Whenever a tree of priority areas §10-2082.14 (b)(2)e. and (b)(2)f. is removed after being certified as a *hazardous tree*, *unhealthy*, or dead; it *shall* be replaced with ten (10) caliper inches of new *shade trees* measured at six (6) inches above grade. Any replacement tree *shall* be planted within the tree conservation area previously recorded for the removed tree. The minimum size of any replacement tree *shall* be two (2) inches diameter measured at six (6) inches above grade.”

Said subsection b. is further amended, last paragraph, by deleting the language “subsections 1. and 2.” and substituting in lieu thereof “subsections 1., 2. and 3.”.

**Section 23.** Amend Raleigh City Code Section 10-2082.14(g), Payments As Alternate Means of Compliance, by deleting the first paragraph of subsection (g) in its entirety and substituting in lieu thereof the following:

**“(g) Payments As An Alternate Means of Compliance.**

After thorough examination to determine feasibility of other alternate methods of compliance, §10-2082.4(a), the landowners *may* petition the City to satisfy the requirements of §10-2082.14 with the payment of money to the *City* of Raleigh. Alternate methods of compliance to preserve required tree conservation areas *shall* include, but not be limited to, the following: retaining walls, alternate methods of construction, accepted arboricultural practices performed under supervision of a certified arborist, certified by the International Society of Arboriculture, and

alternate site configurations. Payments *shall* be equal to the tax value of lands, not structures, relieved from the compliance, and shall be adjusted on an annual basis by the current “**All items**” percentage provided in “**Table 1A. Consumer Price Index for All Urban Consumers (CPI-U)**” prepared by the United States Bureau of Labor Statistics, and determined as a ratio from the overall per square foot tax value of the entire land area of the *property* similarly zoned.”

**Section 24.** Amend Raleigh City Code Section 10-2082.14(h), **Penalties**, by deleting subsection (h) in its entirety and substituting in lieu thereof the following:

**“(h) Penalties.**

A violation of this section §10-2082.14, where unlawful *tree disturbing activity* has occurred and trees and stumps are absent, *shall* subject the violator to a civil penalty of a minimum of one thousand dollars (\$1,000.00) for the first tree plus thirty-five cents (\$0.35) of every foot of unlawful *tree disturbing activity*. Where trees or stumps are present after unlawful *tree disturbing activity* has occurred, the civil penalty *shall* instead be calculated as one thousand dollars (\$1,000.00) for the first tree plus one hundred dollars (\$100.00) per diameter inch for any other tree or stump three (3) inches diameter and larger. Said civil penalty *shall* be processed as set forth in §10-2152(5).”.

**Section 25.** Amend Raleigh City Code Section 10-2165(b)(2), as amended by Ordinance No (2010) 742 TC 333 TC-2-10, by adding the following new paragraph at the end of this subsection which shall read as follows:

“No condition *may* be made part of the petition which specifies the establishment and protection of tree conservation areas or tree protection areas unless the condition ensures that one hundred percent (100%) of the *critical root zones* of trees proposed for protection and located on the subject rezoned *property shall* also be *undisturbed areas*.”

**Cross reference:** See definition of *critical root zone*, §10-2082.2.”

**Section 26.** Amend Raleigh City Code Section 10-5006(a)(11)f.1., Forestation of Lots Located Within Reservoir Watershed Protection Area Overlay Districts, to delete the last sentence in its entirety and substitute in lieu thereof the following:

“The minimum size and planting rate of new tree plantings used to fulfill this requirement shall be either one (1) bare-root seedling at least fourteen (14) inches tall planted per one hundred (100) square feet (10’ by 10’ centers), or, one (1) two (2) inch caliper tree (6.25 inches of circumference) measured at six (6) inches above grade planted per two-hundred (200) square feet.”.

**Section 27.** Amend Raleigh City Code Section 10-6032(l), **Tree conservation permit**, to insert between the words “*shall*” and “undertake”, the words “obtain a grading permit or record a plat of tree conservation areas, or”.

**Section 28.** Amend Raleigh City Code subsection 10-9040(b) to delete the language “natural resource buffer yard”, wherever it appears in said subsection, and in lieu thereof substitute the following language: primary tree conservation area. Raleigh City Code subsection 10-9040(b) is further amended to delete the language “natural resource buffer yards”, wherever it appears in said subsection, and in lieu thereof substitute the following language: “primary tree conservation areas”. Similarly, wherever the words “natural resource buffer” appear in subsection 10-9040(b) substitute in lieu thereof the words “primary tree conservation area”. The first sentence of the first paragraph of Raleigh City Code subsection 10-9040(b) is amended to insert between the words “established” and “along” the following language: “ pursuant to §10-2082.14”. The last word of the first line of the last paragraph of subsection 10-9040(b) – yards – is deleted and in lieu thereof insert the language, “primary tree conservation areas”.

**Section 29.** Amend Raleigh City Code section 10-9041, subsection (a) opening paragraph, to delete the following language: “a Metro-Park Protection Overlay District,”. Amend Raleigh City Code section 10-9041, subsection (b), to delete the following language: “or a Metro-Park Protection Area Overlay District,” Amend Raleigh City Code section 10-9041, subsection (c), to delete the following language: “a Metro-Park Protection Overlay District”.

**Section 30.** All laws and clauses of laws in conflict herewith are hereby repealed to the extent of said conflict.

**Section 31.** If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

**Section 32.** This ordinance has been adopted following a duly advertised joint public hearing of the Raleigh City Council and the City Planning Commission following a recommendation of the Planning Commission.

**Section 33.** This ordinance has been provided to the North Carolina Capital Commission as required by law.

**Section 34.** This ordinance shall be enforced by law as provided in N.C.G.S. 160A-175 or as provided in the Raleigh City Code. All criminal sanctions shall be the maximum allowed by law notwithstanding the fifty dollar limit in G.S. 14-4(a) or similar limitations.

**Section 35.** This ordinance shall become effective the first day of the month following its adoption.

**ADOPTED:** January 18, 2011

**EFFECTIVE:** February 1, 2011

**DISTRIBUTION:** Planning – Silver, Hallam, Gilliam, Brandon  
Parks and Recreation - Thigpen  
City Attorney – Hargrove  
Transcription Svcs – Taylor