

AMENDMENT TO PART II, CHAPTER 30, ARTICLE X
OF THE EFFINGHAM COUNTY CODE OF ORDINANCES

AN ORDINANCE TO AMEND PART II, CHAPTER 30, ARTICLE X OF THE EFFINGHAM COUNTY CODE OF ORDINANCE; AND TO REPEAL ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH.

BE IT ORDAINED by the Effingham County Board of Commissioners in regular meeting assembled and pursuant to lawful authority thereof:

TREE PROTECTION AND PRESERVATION ORDINANCE

PURPOSE AND INTENT

The intent of this Tree Protection and Preservation Ordinance is to establish standards for the protection, preservation, replacement, and enhancement of tree resources associated with Major Subdivisions consisting of ten (10) or more lots, in order to maintain and improve community tree canopy, environmental quality, and long-term canopy resilience. This Ordinance is intended to balance the preservation of existing tree resources with land development, while providing clear, predictable requirements for mitigation and replacement. **The provisions of this Ordinance shall apply exclusively to Major Subdivisions consisting of ten (10) or more lots**, as defined by this Code, and are **not intended** to regulate minor subdivisions, simple subdivisions, individual residential activities, commercial, or industrial except as expressly provided herein.

ARTICLE I – APPLICABILITY

This Article shall apply to all development intended for **Major** subdivisions, **except** the following activities which are exempt:

- Removal of diseased or infested trees, after verification by a Georgia Forestry Commission Forester, a Georgia Registered Landscape Architect, or Registered Arborist shall be exempt; provided, however, that if the tree is a Champion, Landmark, or Specimen Tree, prior notification to the County Manager or their designee shall be required.
- Trees located in public rights-of-way.
- Agricultural Operations.
- Forestry Operations

ARTICLE II – DEFINITIONS

For the purpose of this Ordinance, the following words, terms, and phrases shall have the meanings respectively ascribed to them.

Arborist. A professional certified by the International Society of Arboriculture (ISA) or otherwise recognized by the County as qualified to evaluate, preserve, and manage trees.

Branch. A secondary woody stem growing from the trunk or another branch of a tree.

Caliper. The diameter of a tree trunk measured at six (6) inches above ground level for trees up to four (4) inches in diameter, and at twelve (12) inches above ground level for larger trees.

Canopy Tree. A tree that contributes significantly to the overhead cover of leaves and branches, providing shade, habitat, and other ecological benefits.

Champion Tree. A tree recognized by the Georgia Forestry Commission, Effingham County, or other recognized registry as the largest known of its species by trunk circumference, height, and crown spread.

Conservable Tree. A tree determined by the County Manager or their designee to be suitable for preservation based on health, structure, species, and location.

Conserved Tree Canopy Cover. The total percentage of Conservable Tree Canopy that is preserved on a site and protected throughout development. Conserved Tree Canopy Cover **shall not** include canopy located within wetlands, nor canopy from Hazard Trees, Unhealthy Trees, invasive species, or trees situated within areas where preservation is not feasible due to necessary infrastructure, grading, stormwater facilities, or public safety requirements.

Critical Root Zone (CRZ). The area surrounding a tree's trunk within which roots are considered essential to the tree's health, stability, and structural integrity. The Critical Root Zone shall extend horizontally from the center of the tree trunk at a radius of one and three-tenths (1.3) feet for every one (1) inch of diameter at breast height (DBH), and shall extend vertically below existing grade to a depth determined by the DBH of the tree as follows:

- Thirty (30) inches for trees with a DBH of nine (9) inches or less;
- Thirty-six (36) inches for trees with a DBH of ten (10) to fourteen (14) inches;
- Forty-two (42) inches for trees with a DBH of fifteen (15) to nineteen (19) inches; and
- Forty-eight (48) inches for trees with a DBH of twenty (20) inches or greater.

Crown. The upper part of a tree, consisting of the branches, stems, and leaves that form the canopy.

Decay. The process of decomposition in wood tissue caused by fungi or other organisms, resulting in structural weakness.

Diameter at Breast Height (DBH). The diameter of a tree trunk measured at four and one-half (4.5) feet above the ground on the uphill side of the tree.

Dripline. The imaginary vertical line on the ground corresponding to the outermost edge of a tree's crown.

Establishment Period. The period, typically two (2) years after planting, during which a tree requires intensive care to ensure survival and healthy growth.

Future Tree Canopy Cover. The projected percentage of tree canopy expected on a site at maturity of newly planted trees, combined with conserved canopy.

Hazard Tree. A tree with structural defects, diseases, or other conditions that present an imminent risk of failure and potential harm to persons or property, as determined by the County Manager or their designee.

Healthy Tree. A tree that is free from significant disease, pests, decay, or structural defects and exhibits normal vigor and growth.

International Society of Arboriculture (ISA). A professional organization that certifies arborists and establishes recognized standards of tree care and management.

Landmark Tree. A tree with a diameter at breast height (DBH) of **twenty-four inches (24") or greater** that also exhibits form relative to its species; species rarity; cultural significance; or historical importance as determined by the County Manager or their designee.

Large Canopy Tree. A tree species that typically attains a mature height of forty (40) feet or greater.

Lateral. A smaller branch or root growing horizontally or obliquely from a larger branch, trunk, or root.

Limb. A large primary branch growing directly from the trunk of a tree.

Live Crown Ratio. The proportion of the total tree height occupied by live branches, expressed as a percentage.

Medium Canopy Tree. A tree species that typically attains a mature height between twenty-five (25) and forty (40) feet.

Native Tree. A tree species that occurs naturally and is indigenous to Effingham County, Georgia.

Parent Branch or Stem. The larger branch or trunk from which a smaller branch or stem originates.

Plot Plan. A scaled drawing submitted to the County that shows property boundaries, structures, utilities, existing trees, proposed tree removals, and required plantings.

Pre-Clearing. The removal of vegetation, trees, stumps, understory, or the disturbance of soil, prior to the issuance of any required land-disturbance, building, or development permit, and prior to County authorization of site work. Pre-Clearing includes, but is not limited to, grubbing, root removal, mass vegetation removal, or the cutting of trees for the purpose of preparing a site for development or altering existing site conditions before County review or approval.

Protected Trees. Trees designated under this Ordinance as requiring a permit for removal or alteration, including, but not limited to:

- (1) Any Landmark, Specimen, or Champion Tree; or
- (2) Any tree identified within the Tiered Protected Species List below that meets or exceeds the applicable minimum diameter at breast height (DBH) threshold:

Tier 1 Protected Trees

(Minimum sixteen (16) inches DBH)

<u>Common Name</u>	<u>Genus</u>	<u>Species</u>
Black Cherry	<i>Prunus</i>	<i>serotina</i>
Live Oak	<i>Quercus</i>	<i>virginiana</i>
Longleaf Pine	<i>Pinus</i>	<i>palustris</i>
Southern Magnolia	<i>Magnolia</i>	<i>grandiflora</i>

Tier 2 Protected Trees

(Minimum twenty-four (24) inches DBH)

<u>Common Name</u>	<u>Genus</u>	<u>Species</u>
American Holly	<i>Ilex</i>	<i>opaca</i>
Beech (American Beech)	<i>Fagus</i>	<i>grandifolia</i>
Black Walnut	<i>Juglans</i>	<i>nigra</i>
Blackgum	<i>Nyssa</i>	<i>sylvatica</i>
Bluff Oak	<i>Quercus</i>	<i>austrina</i>
Buckeye (Yellow Buckeye)*	<i>Aesculus</i>	<i>flava</i>
Eastern Red Cedar	<i>Juniperus</i>	<i>virginiana</i>
Flowering Dogwood	<i>Cornus</i>	<i>florida</i>
Fringetree	<i>Chionanthus</i>	<i>virginicus</i>
Musclewood / Hornbeam (American Hornbeam)	<i>Carpinus</i>	<i>caroliniana</i>
Post Oak	<i>Quercus</i>	<i>stellata</i>
Red Maple	<i>Acer</i>	<i>rubrum</i>
River Birch	<i>Betula</i>	<i>nigra</i>
Southern Red Oak	<i>Quercus</i>	<i>falcata</i>
Sycamore (American Sycamore)	<i>Platanus</i>	<i>occidentalis</i>
Tulip Poplar	<i>Liriodendron</i>	<i>tulipifera</i>
White Oak	<i>Quercus</i>	<i>alba</i>

Pruning. The selective removal of branches, stems, or roots for the purpose of improving tree health, structure, safety, or aesthetics, in accordance with ISA standards.

Regulated Trees. Any tree designated under this Ordinance as subject to protection, permitting, mitigation, or replacement requirements, including:

1. Any Protected Tree as defined herein; and
2. Any Landmark, Specimen, or Champion Tree.

The term “Regulated Tree” includes any such tree for which removal, disturbance, damage, or alteration is governed by the provisions of this Ordinance.

Root Barrier. A physical or chemical barrier designed to direct root growth away from structures, utilities, or other sensitive areas.

Roots. The underground structures of a tree that provide stability, water, and nutrient absorption.

Scaffold Limbs. The primary structural branches that form the main framework of a tree’s crown.

Small Canopy Tree. A tree species that typically attains a mature height between fifteen (15) and twenty-five (25) feet.

Species Diversity. The requirement to include a mix of different tree species in planting plans to promote ecological health and reduce risks from pests or disease.

Specimen Tree. A tree with a diameter at breast height (DBH) of **twenty-four inches (24”) or greater** that also exhibits notable form, structure, health, or aesthetic quality relative to its species and growing conditions, and is considered an outstanding example of its species within the community, as determined by the County Manager or their designee as particularly valuable for conservation.

Street Tree. A tree planted or maintained within the public right-of-way, typically along streets, roads, or sidewalks, and intended to provide environmental, aesthetic, and functional benefits to the public streetscape.

Structural Root Plate (SRP). The critical area at the base of a tree trunk that includes the main structural roots and root flare, essential for anchoring and stability. The Structural Root Plate shall be defined as a minimum radius of 3 times the DBH (diameter at breast height), or as otherwise determined by the County Manager or their designee.

Tree. Any perennial, woody plant that has at least one (1) self-supporting trunk, a diameter of two (2) inches or greater at DBH, and generally reaches a mature height of fifteen (15) feet or more.

Tree Canopy Cover. The layer of leaves, branches, and stems of trees that cover the ground when viewed from above, expressed as a percentage of land area.

Tree Conservation. The protection, preservation, and maintenance of existing trees to maintain or enhance ecological, aesthetic, and community benefits.

Tree Easement. A recorded legal restriction on a property that designates land for the protection, planting, or maintenance of trees, preventing uses inconsistent with canopy preservation.

Tree Establishment. The successful survival and growth of a newly planted tree through the establishment period.

Tree Fund. A dedicated County account into which required payments in lieu of tree planting or penalties for unauthorized removal are deposited, to be used for tree planting, preservation, and canopy enhancement.

Tree Lawn/Verge. The area located between the street curb and sidewalk, or between the street pavement and private property line, in which street trees may be planted.

Tree Protection Plan. A plan submitted to the County for review and approval that details measures for protecting existing trees during construction or development, including but not limited to fencing, barriers, stormwater management and mitigation measures.

Tree Topping. The indiscriminate cutting back of tree branches to stubs or to lateral branches that are not large enough to assume the terminal role. Topping includes practices such as heading, tipping, or rounding over, and typically results in the removal of a substantial portion of the tree's crown. Topping is hereby recognized as harmful to tree health and structure, leading to decay, weakly attached sprouts, and increased risk of failure.

Tree Well. A constructed planting area designed to provide adequate growing space, soil volume, and protection for trees in hardscape or urban environments. Tree wells must be a minimum of four (4) feet by four (4) feet in surface dimension, contain uncompacted soil to a depth of at least thirty-six (36) inches, and be designed to allow water infiltration and root aeration.

Tree Protection Assessment (TPA). A professional assessment of a minimum of five percent (5%) of the existing tree resources on a site, that provides an **estimated characterization of tree density and composition**, including **trees per acre**, species mix, and average diameter at breast height (DBH), in lieu of a tree-by-tree inventory.

Tree Protection Zone (TPZ). A clearly defined area surrounding a tree that is required to remain undisturbed during construction or land-disturbing activities in order to protect the tree's root system, trunk, and canopy, as established in accordance with International Society of Arboriculture (ISA) and ANSI A300 standards.

Trunk. The main vertical stem of a tree that supports the branches and crown.

Trunk Formula Method (TFM). A standardized method for determining the monetary value of a tree based on the cross-sectional area of the trunk, measured at diameter at breast height (DBH), and adjusted by species rating, condition, and location factors, as established by the **International Society of Arboriculture (ISA)** or its successor methodology. The Trunk Formula Method is typically applied to large or high-value trees that cannot be reasonably replaced with nursery stock of equivalent size.

Understory Trees. Trees that attain a mature height significantly less than dominant canopy trees, often remaining below the primary canopy throughout their life cycle, even under optimal growing conditions.

Unhealthy Tree. A tree exhibiting disease, pest infestation, decay, or structural defects that substantially impair its health or stability.

Vegetation Management. The control, removal, or maintenance of trees, shrubs, and other plant materials to maintain safety, visibility, or utility function, in accordance with County and ISA standards.

Very Small Canopy Tree. A tree species that typically attains a mature height of less than fifteen (15) feet.

ARTICLE III – ADMINISTRATION AUTHORITY

Section 3.01 – County Manager

(a) The County Manager shall be responsible for the interpretation, administration, and enforcement of this Ordinance.

(b) The County Manager may delegate duties to County staff or retained consultants; however, ultimate authority and responsibility for administration and enforcement of this Ordinance shall remain with the County Manager.

ARTICLE IV – TREE PROTECTION & CONSERVATION STANDARDS

Section 4.01 – General Requirement

All development, construction, and land disturbance activities shall comply with the tree protection and conservation standards contained in this Article.

Section 4.02 – Minimum Tree Canopy Cover

(a) Minimum Canopy Retention Requirement.

All development shall retain a minimum of twenty-five percent (25%) of existing Conservable Tree Canopy on the site. Conserved Tree Canopy shall be shown on all submitted plans and shall be protected in accordance with Section 4.03.

(b) Mitigation When Minimum Canopy Retention Is Not Feasible.

Where retention of at least twenty-five percent (25%) of existing Conservable Tree Canopy is demonstrated to be infeasible due to site constraints, public infrastructure requirements, or necessary grading, mitigation shall be required in accordance with **Article VI – Tree Mitigation and Replacement**.

(c) Restriction on Commencement of Development Activity.

No development, land-disturbance, or tree-removal activity shall commence until canopy retention compliance or approved mitigation has been verified in writing by the County Manager or their designee. Commencing development activity without such approval shall constitute a violation of this Ordinance and shall be subject to enforcement under Article VII.

(d) Violation for Failure to Retain Minimum Canopy.

Any development or land-disturbance activity resulting in the retention of less than twenty-five percent (25%) of required Conserved Tree Canopy, without approved mitigation under Article VI, shall constitute a violation of this Ordinance and shall be enforced pursuant to Article VII.

Section 4.03 – Protection of Trees During Construction

(a) Establishment of the Tree Protection Zone (TPZ)

The Tree Protection Zone (TPZ) shall consist of the greater of the following areas:

1. The Critical Root Zone (CRZ);
2. The Structural Root Plate (SRP); or
3. An area otherwise designated by the County Manager or their designee based on tree species, size, or site conditions.

(b) Protective Fencing and Signage Requirements.

Tree protection fencing shall:

1. Be installed at or beyond the TPZ boundary;
2. Be erected prior to any land-disturbance activity;
3. Remain in place until issuance of final inspection or Certificate of Occupancy; and
4. Meet the permitted fencing standards specified in subsection (f).

(c) Prohibited Activities Within the TPZ.

Unless expressly authorized by the County Manager or their designee, the following activities are prohibited within the TPZ:

1. Grading, trenching, excavation, or soil disturbance;
2. Parking, equipment staging, or material storage;
3. Chemical washing, fuel storage, or concrete washout;
4. Compaction of soil by vehicles, construction equipment, or repeated foot traffic;
5. Installation of utilities unless installed by boring or tunneling beneath roots.

(d) Soil and Root Protection.

Compaction, filling, cuts, and grade changes within the TPZ are prohibited.

Where utility or drainage conflicts are unavoidable, root-sensitive methods such as pneumatic excavation, hand digging, or directional boring are required.

(e) Signage.

Warning signs bearing the legend: “TREE PROTECTION AREA – NO ENTRY, NO STORAGE, NO GRADING” shall be posted on all tree protection fencing. A minimum of two (2) signs shall be provided per fenced tree group, and at least one (1) sign per one hundred (100) linear feet of fencing. Signs shall be mounted at a height between four (4) and six (6) feet above grade and shall be clearly visible from all active work areas.

(f) Permitted Fencing Types.

Heavy-duty, high visibility orange polyethylene safety fencing, supported by posts (example: t-posts) spaced no greater than six feet (6') on center, shall be installed and maintained in good condition and shall remain in place until final inspection has been completed and approved by the County Manager or their designee. If alternative fencing is deemed necessary, such alternative fencing shall be subject to the review and approval of the County Manager or their designee.

(g) Performance Standards.

Protective fencing shall be maintained plumb and intact throughout the duration of construction. Damaged or displaced fencing shall be repaired or replaced immediately to maintain continuous protection.

Section 4.03A – Species Diversity Requirements

(a) To promote a healthy and resilient tree canopy, all planting plans shall comply with the following species diversity requirements:

1. Projects requiring fewer than 10 trees: No more than fifty percent (50%) of the trees may be of the same species.
2. Projects requiring ten (10) to ninety-nine (99) trees: No more than twenty-five (25%) of the trees may be of the same species; no more than forty percent (40%) may be from the same genus; no more than sixty percent (60%) may be from the same family.

3. Projects requiring one hundred (100) or more trees: No more than ten percent (10%) of the trees may be of the same species; no more than twenty percent (20%) may be from the same genus; no more than thirty percent (30%) may be from the same family.
4. County Manager or their designee discretion: The County Manager or their designee may approve alternative ratios where unique ecological, nursery stock availability constraints, or site conditions warrant deviation, provided that overall canopy resilience is not compromised.

Section 4.04 – Tree Conservation Standards

- (a) Conservable Trees shall be preserved where feasible.
- (b) Removal of Specimen, Landmark, or Champion Trees is prohibited except when certified as Hazard Trees or no feasible alternative exists as determined by the County Manager or their designee.
- (c) Tree Easements shall be established where necessary for canopy preservation.

Section 4.05 – Tree Planting Standards

- (a) All required planting should occur during the designated Tree-Planting Season.
- (b) Minimum sizes: Canopy Trees two-inch (2”) caliper; Understory Trees one and a half-inch (1.5”) caliper.
- (c) Native, non-invasive species shall be prioritized.
- (d) Street Trees shall be planted at intervals not exceeding fifty (50) feet, unless otherwise approved.
- (e) At least seventy-five percent (75%) of replacement trees planted shall be native species to the Effingham County region of Georgia. Non-native species may be used to meet species diversity requirements only when approved by the County Manager or their designee.

Section 4.06 – Design Requirements

- (a) Landscape and site designs shall integrate existing Conservable Trees into layouts where feasible.
- (b) Trees shall be placed to optimize canopy, shade, and stormwater benefits while avoiding conflicts with infrastructure.
- (c) Parking lots with ten (10) or more spaces must provide tree islands or perimeter trees to achieve a minimum of thirty percent (30%) canopy coverage of paved areas at tree maturity.
- (d) All design plans shall clearly identify Tree Easements, fencing, and preservation measures.

Section 4.07 – Establishment and Maintenance

- (a) Newly planted trees shall be maintained during a two-year establishment period.
- (b) Dead or failed trees shall be replaced at the owner’s expense.
- (c) All pruning shall conform to ISA standards.

(d) The practice of topping or indiscriminate cutting back of tree branches to stubs or lateral branches not large enough to assume the terminal role is prohibited.

Section 4.08 – Mitigation for Tree Removal

(a) Basis for Mitigation.

Mitigation for tree removal shall be based on the diameter at breast height (DBH) of the removed tree, as determined by the County Manager or their designee. Mitigation shall be calculated using the mitigation ratios established in this Section and may be satisfied through approved replacement planting or payment into the Tree Fund.

(b) Required Mitigation Methods.

Removal of regulated trees shall require mitigation through one or more of the following methods, subject to approval by the County Manager or their designee:

1. Replanting of replacement trees on-site;
2. Off-site planting at a location approved by the County; or
3. Payment into the Tree Fund in lieu of planting.

(c) Replacement Ratios.

Mitigation shall be provided based on the classification of the removed tree as follows:

- **Protected Trees:** Mitigation shall be provided at a ratio of one (1) inch removed to one and one-half (1.5) inches replaced (1:1.5), based on DBH.
- **Specimen, Landmark, or Champion Trees:** Mitigation shall be provided at a ratio of one (1) inch removed to three (3) inches replaced (1:3), based on DBH.

The total required mitigation inches shall equal the DBH of the removed tree multiplied by the applicable ratio.

(d) Application to Specimen, Landmark, and Champion Trees.

Removal of Specimen, Landmark, or Champion Trees shall require mitigation at the 1:3 ratio set forth above. Nothing herein shall prohibit the County Manager or their designee from requiring additional protective measures consistent with the intent of this Ordinance.

(e) Tiered Replacement Standards and Mitigation Credit.

Replacement trees used to satisfy mitigation requirements shall meet the minimum size and canopy credit standards set forth below. Mitigation credit shall be awarded based on the classification, minimum caliper, and associated canopy coverage of each replacement tree.

Table 4.08-1. Tiered Mitigation Credit for Replacement Trees

Plant Type	Minimum Size	Canopy Credit
Canopy Trees – Medium	Minimum two (2) inch caliper	550 square feet per tree planted

Plant Type	Minimum Size	Canopy Credit
Canopy Trees – Large	Minimum three (3) inch caliper	1,500 square feet per tree planted

(f) Application of Mitigation Credit.

Mitigation requirements resulting from tree removal shall be satisfied by planting replacement trees in quantities sufficient to meet or exceed the total required mitigation inches as calculated pursuant to this Section. Larger-caliper trees with greater canopy coverage shall receive proportionally greater mitigation credit in accordance with Table 4.08-1.

(g) Administrative Authority.

The County Manager or their designee shall have the authority to determine appropriate mitigation calculations, tree classifications, credit application, and compliance with the intent of this Ordinance.

Section 4.09 – Stormwater & Vegetation Management Solutions

(a) Stormwater management facilities, including but not limited to detention basins, retention ponds, infiltration systems, rain gardens, bioretention cells, vegetated swales, constructed wetlands, or permeable pavement systems, shall be clearly shown and labeled on the Tree Protection Plan.

(b) Stormwater management facilities shall be located outside the Critical Root Zone (CRZ), Structural Root Plate (SRP), and Tree Protection Zone (TPZ) of any Protected Tree. No stormwater feature shall be placed in a manner that would compromise root health or stability of trees to be preserved.

(c) The County Manager or their designee may require modifications to stormwater facility placement or design if tree protection standards are not adequately met.

(d) Utility easements shall be managed per ISA standards to avoid unnecessary damage.

(e) The County Manager or their designee may authorize pruning or removal for traffic safety or utility protection.

Section 4.10 – Pre-Clearing Restrictions and Mitigation Requirements

(a) Definition and Applicability.

For the purpose of this section, a **Development Site** shall mean any parcel or contiguous group of parcels under common ownership or control that is the subject of a current or anticipated rezoning, subdivision, site plan, or land-disturbance permit application, or that is being prepared, marketed, or altered for potential construction or sale for development purposes. A development site includes all areas where grading, clearing, or infrastructure installation is proposed or likely to occur in connection with a change of land use or density.

No person, timber operator, or property owner shall engage in the removal, clear-cutting, or stripping of trees on any development site prior to approval of the applicable rezoning, land-disturbance, or development permits. Any clearing, grading, or tree removal conducted prior to issuance of required approvals shall constitute a violation of this Ordinance. Any pre-clearing activity meeting the definition of clear-cutting in Section 4.11 shall be enforced as clear-cutting.

(b) Stop-Work Order and Permit Suspension.

If pre-clearing or unauthorized tree removal occurs prior to zoning or site approval, the County Manager or their designee shall issue a **Stop-Work Order** halting all land-disturbing activity on the site. All active permits associated with the parcel shall be suspended until corrective mitigation is completed to the satisfaction of the County.

(c) Compensatory Planting and Payment Required.

Where trees are removed, clear-cut, or otherwise disturbed in violation of this Section prior to required County approvals, the property owner shall be required to provide compensatory mitigation as a condition of permit reinstatement or future development approval.

Compensatory mitigation for unlawful removal shall be calculated by first applying the mitigation ratios established in Section 4.08 based on the classification of the tree removed. The total required mitigation inches determined under Section 4.08 shall then be multiplied by three (3).

The total mitigation inches required under this subsection may be satisfied through on-site planting, approved off-site planting, or payment into the Tree Fund. Where payment into the Tree Fund is utilized, the monetary value of required mitigation shall be calculated in accordance with Section 6.06 using the **Trunk Formula Method (TFM)**, with valuation based on a healthy Live Oak (*Quercus virginiana*) of equivalent caliper.

If the diameter at breast height (DBH) of removed trees cannot be reasonably determined, the County Manager or their designee shall determine DBH based on available evidence, including stump measurement, photographs, surveys, or comparable tree analysis. If DBH cannot be reasonably established, each removed tree shall be presumed, for purposes of mitigation calculation, to be a Live Oak (*Quercus virginiana*) with a DBH of six (6) inches. The applicable mitigation ratios and any multiplier required under this Ordinance shall then be applied to that presumed six-inch (6") Live Oak.

Mitigation required under this subsection shall be cumulative of, and not in lieu of, administrative fines, penalties, stop-work orders, permit suspension, bond forfeiture, or judicial enforcement actions authorized under this Ordinance.

(d) Development Activity Definition.

Removal of trees, vegetation, or topsoil for the purpose of marketing land for development, or logging not tied to an approved and active **Forest Management Plan** recognized by the Georgia Forestry Commission, shall be deemed a **Development Activity** subject to all County Tree Protection and Mitigation requirements.

Section 4.11 – Clear-Cutting Regulations

(a) Purpose.

The purpose of this section is to regulate large-scale removal of trees, known as clear-cutting, to prevent erosion, protect water quality, maintain tree canopy, and ensure equitable mitigation of canopy loss.

(b) Definition.

For the purpose of this Ordinance, **Clear-Cutting** shall mean the removal of seventy-five percent (75%) or more of existing tree canopy from any parcel within a two-year period, excluding approved forestry management practices conducted under a valid Forest Management Plan recognized by the Georgia Forestry Commission. The residual twenty-five percent (25%) of tree canopy required to be retained after any clearing activity shall consist

of upland canopy. For purposes of this calculation, canopy located within wetlands, canopy from Hazard Trees, Unhealthy Trees, invasive species, illegally disturbed or removed buffers, or trees situated in areas where preservation is not feasible due to necessary infrastructure, grading, stormwater facilities, or public safety requirements, shall be disregarded and shall not be used to satisfy the twenty-five percent (25%) retention requirement.

(c) Clear-Cutting Prohibition Prior to Development Approval.

No person shall conduct clear-cutting on land proposed for rezoning, subdivision, or site development prior to approval of a land disturbance or development permit. Any such activity shall constitute a violation of this Ordinance and trigger penalties and enforcement under Section 7.03.

(d) Authorized Clear-Cutting.

Clear-cutting may be authorized only under the following conditions:

1. A **Tree Removal Permit** and **Tree Protection Plan** have been reviewed and approved by the County Manager or their designee;
2. The applicant demonstrates that clear-cutting is necessary for construction of infrastructure, stormwater facilities, or approved grading plans; and
3. Compensatory planting and/or payments are provided in accordance with Section 6.06(d).

(e) Clear-Cutting for Forestry Operations.

Clear-cutting performed as part of an approved and ongoing **Forest Management Plan** filed with the Georgia Forestry Commission shall be exempt from subsection (c) of this Section, provided the property remains designated for bona fide forestry use.

In the event a change in land use, including rezoning for non-forestry or other use, such property shall be subject to all applicable Developmental Regulations and Permitting Requirements contained within the Zoning Ordinances of Effingham County.

Forestry operations shall comply with all Georgia Forestry Commission Best Management Practices. Failure to comply shall void any exemption.

The County Manager or their designee may require submission of documentation sufficient to demonstrate compliance with applicable Georgia Forestry Commission requirements, including proof of a valid timber harvest notification or permit where required by law, as a condition of recognizing or granting any exemption under this subsection. Failure to provide such documentation upon request shall result in denial or revocation of the claimed exemption.

(f) Mass Grading and Subdivision Clear-Cutting Restrictions.

Mass grading or clear-cutting in residential subdivisions is prohibited unless a master grading and drainage plan is approved by the County. Only those areas necessary for roads, utilities, amenities, lots, and approved open space may be cleared.

Failure to comply with any provision of this Article shall constitute a violation enforceable under Article VII.

ARTICLE V – TREE REMOVAL PERMITS & PROCEDURES

Section 5.01 – Tree Service Licensing

All contractors or persons engaged in commercial tree removal, pruning, or planting activities within Effingham County shall obtain and maintain a Tree Service License issued by the County, in addition to any state or local business licenses required. Proof of ISA Certification or equivalent credentials shall be required.

Section 5.02 – Tree Permit Required.

A permit is required for:

1. Removal of any Protected, Specimen, Landmark, or Champion Tree;
2. Removal associated with development activity under **Article IV, Section 4.10(d)** or land disturbance.

Section 5.03 – Permit Application Requirements

Applications shall include:

1. Completed form by property owner or designated agent.
2. Owner name, address, contact.
3. Tree Protection Plan depicting property boundaries, existing and proposed structures, utilities, and tree locations. The plan shall identify all trees at issue by species, DBH, and condition, and shall include the quantity and location of Protected Trees. In lieu of a tree-by-tree inventory, an estimated Tree Protection Assessment (TPA), including a trees-per-acre estimate, may be submitted to reflect the general character of trees on site, subject to County acceptance. The Tree Protection Plan or TPA shall be prepared by an ISA- or ASCA-certified arborist or a licensed landscape architect in good standing with the County as a registered tree professional.
4. Tree Protection Plan Submission Timeline. For all development regulated under this Ordinance, the Tree Protection Plan may be submitted prior to or in conjunction with a preliminary plat. In all cases, the Tree Protection Plan shall be submitted no later than the time of submission of the Land Disturbance Activity (LDA) application.
5. Proposed mitigation measures if required;
6. Any additional supporting documents required by the County Manager or their designee.

Section 5.04 – Exemptions

Permits are not required for Hazard Trees, storm damage, or routine utility vegetation management.

Section 5.05 – Review and Approval

The County Manager or their designee shall review permit applications within thirty (30) days. Decisions shall be based on tree health, size, species, site conditions, and compliance with canopy standards.

ARTICLE VI – TREE MITIGATION & REPLACEMENT

Section 6.01 – General Requirement

Mitigation shall be required for removal of Protected Trees, unless exempt.

Section 6.02 – Tree Replacement and Mitigation

(a) Tree Replacement; Canopy Equivalency

Replacement for the removal of any Regulated Tree shall be provided in accordance with the mitigation ratios established in Section 4.08 of this Ordinance.

Mitigation shall be satisfied through canopy equivalency such that the total caliper inches of all replacement trees equals or exceeds the total mitigation inches required pursuant to Section 4.08 and, where applicable, Section 4.10.

Undisturbed buffers and street trees may be credited toward the required twenty-five percent (25%) minimum tree canopy coverage, provided such trees are protected in accordance with Section 4.03. Street trees shall be maintained in accordance with Appendix C, Article V, Section 5.9.8(d), Street Trees and Landscaping Requirements (Maintenance).

(b) Replacement Tree Standards.

All replacement trees shall be canopy tree species and shall have a minimum caliper of two (2) inches at the time of planting.

(c) In-Lieu Fee.

Where on-site replacement is not feasible, an in-lieu fee shall be paid into the Tree Fund in accordance with Section 6.06.

Section 6.03 – Enhanced Mitigation

Removal of Specimen, Landmark, or Champion Trees shall require mitigation at the ratio established in Section 4.08.

Unlawful removal, pre-clearing, or unauthorized damage to any regulated tree shall require compensatory mitigation calculated in accordance with Section 4.10(c), in addition to any administrative fines, civil penalties, or other enforcement remedies authorized under this Ordinance.

Section 6.04 – On-Site Replanting

Developers shall prioritize on-site replanting. Replacement trees must meet diversity standards.

Section 6.05 – Off-Site Planting and Payment in Lieu

Where on-site planting is not feasible, the County Manager or their designee may allow off-site planting or payment into the Tree Fund.

Section 6.06 – Tree Fund and Financial Assurances

(a) Establishment Bond, Letter of Credit or Escrow.

1. As a condition of development approval, applicants shall provide a bond, letter of credit, or escrow deposit in an amount equal to one hundred percent (100%) of the total landscape installation cost.
2. Projects that include permanent in-ground irrigation shall receive a reduction of twenty percent (20%) in the required bond, letter of credit, or escrow deposit.
3. The bond, letter of credit, or escrow deposit shall serve as security to ensure the survival of all required trees during the two (2) year establishment period.

(b) Inspections.

1. The County Manager or their designee shall conduct inspections at twelve (12) months and twenty-four (24) months following planting.
2. Trees that fail to meet required health and survival standards shall be replaced by the applicant at their own expense. Failure to replace such trees may result in the forfeiture of any applicable bond, letter of credit, or escrow deposit.

(c) Perpetual Compliance and Bond Release

1. Bond release shall be contingent upon inspection and approval of the County Manager or their designee
2. Failure to maintain canopy requirements constitutes a violation of this Ordinance subject to enforcement under Article VII.
3. Upon the release of the establishment bond, letter of credit, or escrow deposit, property owners remain responsible for perpetual maintenance of required trees.

(d) Valuation of Required Trees.

Where required tree planting obligations are not satisfied through on-site or approved off-site planting, the unmet planting requirement shall be converted to total mitigation inches as calculated pursuant to Section 4.08 and, where applicable, Section 4.10.

The monetary value of required mitigation shall be calculated using the **Trunk Formula Method (TFM)** as recognized by the International Society of Arboriculture (ISA), with valuation based on a healthy Live Oak (*Quercus virginiana*) of equivalent caliper.

The total mitigation inches required under the applicable ratio shall be multiplied by the calculated per-inch value to determine the total payment due to the Tree Fund.

If the diameter at breast height (DBH) of a removed tree cannot be reasonably determined, each removed tree shall be presumed to be a Live Oak (*Quercus virginiana*) with a DBH of six (6) inches for purposes of mitigation calculation, and the applicable mitigation ratios and multipliers shall be applied accordingly.

The County shall periodically update valuation data by resolution of the Board of Commissioners to reflect prevailing nursery, installation, and arboricultural cost standards.

Section 6.07 – Ongoing Maintenance

Mitigation trees must be maintained through the establishment period. Any dead, diseased, or damaged trees shall be replaced.

Section 6.08 – Contributions to the Tree Fund

Contributions to the Tree Fund may occur through a number of means, including but not limited to: monies collected for recompense pursuant to this article; payment of civil penalties or remedies resulting from public tree enforcement actions; and voluntary contributions.

Section 6.09 – Tree Fund Management

(a) Purpose.

The Tree Fund shall serve as a dedicated, restricted account administered by the County for the purpose of supporting tree planting, canopy preservation, and long-term conservation efforts within Effingham County. The Fund shall be used to restore, maintain, and expand the County's urban and rural tree canopy through direct planting, habitat preservation, and conservation land acquisition.

(b) Revenue Sources.

Revenues deposited into the Tree Fund shall include, but not be limited to, the following categories:

1. Licenses & Permits
2. Charges for Services
3. Fines & Forfeitures
4. Private Contributions and Donations; and
5. Conservation Land Restitution and Contributions – including payments, in-lieu fees, or negotiated settlements made to acquire, restore, or maintain land permanently designated for tree conservation, reforestation, or ecological restoration in lieu of on-site mitigation.

(c) Authorized Uses.

Monies from the Tree Fund may be expended for the following purposes:

1. Planting and maintaining trees on County-owned, public, or designated conservation property;
2. Implementing reforestation, habitat restoration, and canopy enhancement projects;
3. Acquisition, improvement, or perpetual management of Conservation Land or Conservation Easements to preserve existing canopy or restore degraded forest land;
4. Development of community forestry, education, or public outreach programs;
5. Administrative and enforcement costs directly associated with Tree Fund management; and
6. Restitution-based Conservation Mitigation, wherein violator payments or development mitigation funds are applied to the purchase or enhancement of designated conservation lands to offset canopy loss.

(d) Administration and Oversight.

The County Manager or their designee shall maintain detailed financial records of all Tree Fund deposits and expenditures.

An annual report shall be presented to the Board of Commissioners summarizing:

- Total receipts and disbursements by category,
- Conservation Land acquired or improved through Tree Fund expenditures,
- Measurable gains in County-wide canopy coverage, and

- Any ongoing obligations related to conservation easements or maintenance.

All Tree Fund allocations shall be made in accordance with Board-approved priorities and documented through public record.

ARTICLE VII – APPEALS, VARIANCES, PENALTIES AND ENFORCEMENT ACTIONS

Section 7.01 – Appeals

(a) Appeals of any decision of the County Manager or their designee under this Ordinance, including permit decisions, enforcement actions, mitigation requirements, or administrative determinations, may be filed with the Board of Commissioners within thirty (30) days of the decision.

(b) Upon receipt of a timely appeal, the Board shall schedule a public hearing and may affirm, modify, or overturn the decision appealed.

(c) The Board’s decision constitutes the County’s final administrative action.

(d) Filing an appeal does not stay enforcement actions unless expressly stayed in writing by the Board.

Section 7.02 – Variances

Variances may be granted by the Board where strict enforcement creates hardship and intent is preserved. Conditions may include replanting, payments, or easements.

Variances shall not be granted for Specimen, Landmark, or Champion Trees unless certified as a Hazard Tree.

Section 7.03 – Penalties and Enforcement

(a) Authority of the County Manager or Their Designee.

The County Manager or their designee shall have the following powers and duties:

1. To review and approve, approve with conditions, or deny applications for tree removal permits, tree protection plans, and landscape plans;
2. To inspect property, with reasonable notice, for compliance with this Ordinance;
3. To require submission of Plot Plans, Tree Protection Plans, mitigation measures, and any supporting documentation deemed necessary;
4. To assess administrative penalties, issue Stop-Work Orders, and require corrective actions as authorized by this Ordinance;
5. To maintain records of payments and expenditures from the Tree Fund; and
6. To enter upon any property subject to this Ordinance for purposes of inspection, verification, and enforcement.

(b) Stop-Work Orders and Permit Suspension.

All Stop-Work Orders shall be issued in writing and posted on the project site.

1. Stop-Work Orders.

A Stop-Work Order may be issued for any violation of this Ordinance. All development, land-disturbing, and construction activities shall remain suspended until the County determines that full compliance has been achieved.

2. **Permit Suspension.**

The County may suspend any active land-disturbance, building, or development permit upon discovery of violations, including but not limited to unauthorized tree removal, clear-cutting, or failure to install or maintain required tree protection measures.

3. **Permit Issuance Restrictions.**

No new development approvals, including rezoning, subdivision, or building permits, shall be issued until the site is brought into full compliance and all mitigation, restitution, and financial obligations have been satisfied.

(c) Administrative Penalties.

1. Failure to Install or Maintain Tree Protection Fencing.

A fine of not less than five hundred dollars (\$500.00) per day, per violation, shall be imposed.

2. Pre-Clearing Violations.

A fine of not less than one thousand dollars (\$1,000.00) per day shall be imposed, continuing until full compliance and restoration are achieved.

3. Clear-Cutting Violations.

A fine of not less than one thousand dollars (\$1,000.00) per day shall be imposed, and each day the violation remains uncorrected shall constitute a separate offense.

4. General Violations Involving Protected Trees:

(a) Unauthorized removal of a Protected Tree shall result in a minimum fine of five hundred dollars (\$500.00) per tree;

(b) Continuing violations shall result in a fine of one thousand dollars (\$1,000.00) per day;

(c) Removal of three or more Protected Trees shall be subject to enhanced penalties, as determined by the County.

5. Accrual of Penalties.

All administrative penalties shall accrue until corrective actions are completed and verified by the County.

(d) Tree Valuation Penalties.

In addition to administrative fines, any person who unlawfully removes, damages, or destroys a tree shall be required to pay restitution equal to the appraised value of the tree or trees, calculated in accordance with Section 6.06. Restitution shall also include reimbursement for County inspection, evaluation, maintenance, removal, stump grinding, and replanting costs.

(e) Restitution, Mitigation, and Site Restoration.

Violators shall complete all restorative actions required by the County, including but not limited to:

1. Tree replanting or canopy restoration in accordance with Article VI;
2. Soil stabilization, grading correction, or root-zone remediation where damage has occurred;
3. Payments into the County Tree Fund, where planting is not feasible as determined appropriate by the County, calculated in accordance with Section 6.06;
4. Compensatory mitigation for unlawfully removed or damaged trees calculated in accordance with Section 4.10(c), which incorporates the mitigation ratios established in Section 4.08 and the multiplier applicable to unauthorized removal;
5. For clear-cutting or large-scale unauthorized removal, restoration of canopy to at least fifty percent (50%) of the minimum required under Section 4.02, or an equivalent payment into the County Tree Fund where on-site restoration is not feasible, as determined by the County Manager or their designee.

Restitution obligations under this subsection shall be cumulative of, and not in lieu of, any administrative fines, civil penalties, stop-work orders, permit suspension, bond forfeiture, or judicial remedies authorized under this Ordinance.

(f) Bond Forfeiture.

Where a performance bond, letter of credit, or escrow deposit has been posted pursuant to Article VI, the County may declare such security forfeited, in whole or in part, for:

1. Failure to install or maintain required tree protection fencing;
2. Damage occurring within the Tree Protection Zone (TPZ);
3. Unauthorized tree removal, pre-clearing, or clear-cutting activities; or
4. Failure to replace required trees that fail to meet applicable health and survival standards.

(g) Public Tree Violations.

Unauthorized pruning, injury, removal, or destruction of any tree located on County property, within a public right-of-way, or within a designated tree easement constitutes a violation of this Ordinance. Violators shall be subject to:

1. Restitution equal to the appraised value of the affected tree or trees;
2. Administrative fines of not less than five hundred dollars (\$500.00) per tree;
3. Daily penalties of up to one thousand dollars (\$1,000.00) per day for continuing violations;
4. Payment of all County costs, including inspection, corrective maintenance, removal, stump grinding, and replanting.

All penalties and restitution collected under this subsection shall be deposited into the County Tree Fund.

(h) Judicial Enforcement.

The County Attorney may initiate judicial proceedings to:

1. Enforce compliance with this Ordinance;
2. Recover civil penalties, restitution, and damages;
3. Obtain temporary, preliminary, or permanent injunctive relief to prevent continuing or future violations.

(i) Cumulative Remedies.

The remedies provided in this section are cumulative and not exclusive. The County may pursue any combination of administrative, civil, or judicial remedies necessary to enforce this Ordinance.

(j) Compliance Follow-Up Period.

Where corrective actions are ordered, violators shall have **seven (7) business days** from the date of the Notice of Violation to cure the violation and achieve compliance. The County Manager or their designee may grant extensions where special circumstances justify additional time.

ARTICLE VIII – MISCELLANEOUS PROVISIONS

Section 8.01 – Conflict of Laws

All ordinances or parts of ordinances in conflict herewith are repealed to the extent of such conflict.

Section 8.02 – Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance is held invalid, such decision shall not affect the validity of the remaining portions.

Section 8.03 – Effective Date

This Ordinance shall take effect immediately upon adoption by the Effingham County Board of Commissioners.

ARTICLE IX – FLOOD-PRONE AREA TREE AND PLANTING STANDARDS

Section 9.01 – Purpose.

The purpose of this Article is to promote the establishment and preservation of flood-tolerant native vegetation within floodplains, riparian buffers, stormwater conveyances, and other flood-prone areas of Effingham County, in order to reduce erosion, improve water quality, enhance flood resilience, and conserve native habitat.

Section 9.02 – Designated Native Species for Flood-Prone Areas.

The following species are designated as preferred for planting within flood-prone areas of Effingham County, based upon their adaptability to periodic inundation, soil saturation, and hydrologic conditions:

Appendix A – Recommended Native Trees and Plants for Flood-Prone Areas

Common Name	Scientific Name	Type	Where It Does Best / Notes
Bald Cypress	Taxodium distichum	Large Tree	Thrives in saturated, seasonally inundated soils; tolerates standing water
Pond Cypress	Taxodium distichum var. nutans	Tree	Tolerant of shallow water; suited to pond margins and wetland edges
Water Tupelo	Nyssa aquatica	Large Tree	Deep swamps and floodplains; tolerates periodic flooding
Swamp Tupelo	Nyssa biflora	Tree	Bottomlands; tolerates saturated soils, heavy clay, and organics
Ogeechee Tupelo	Nyssa ogeche	Tree	Prefers very wet soils, pond and lake margins
Black Gum / Black Tupelo	Nyssa sylvatica	Tree	Moist soils, stream bottoms; tolerates periodic flooding
Swamp Chestnut Oak	Quercus michauxii	Large Tree	Floodplain oak; tolerates periodic flooding and moist soils
River Birch	Betula nigra	Tree	Along rivers, moist to wet soils; tolerates flooding, fast growth

Sweetbay Magnolia	<i>Magnolia virginiana</i>	Small–Medium Tree	Wet, acidic soils; suitable for pond edges; semi-evergreen locally
Green Ash	<i>Fraxinus pennsylvanica</i>	Tree	Floodplains and riparian zones; tolerates wet soils
Buttonbush	<i>Cephalanthus occidentalis</i>	Shrub/Small Tree	Wet soils, standing water, riparian buffers
Virginia Sweetspire	<i>Itea virginica</i>	Shrub	Moist to wet soils; suitable for buffer edges and understory
Summersweet Clethra	<i>Clethra alnifolia</i>	Shrub	Moist to wet soils; fragrant blossoms; good understory shrub
Blue-Flag Iris	<i>Iris virginica</i>	Perennial/Herbaceous	Wet soils, pond margins, rain gardens; good for erosion control
River Oats	<i>Chasmanthium latifolium</i>	Grass/Groundcover	Moist streambanks and shaded floodplains; stabilizes soil, prevents erosion

The County Manager or their designee may approve additional native species for use in flood-prone areas provided such species are demonstrably tolerant of periodic flooding and do not conflict with County invasive species policies.

Section 9.03 – Planting Standards.

(a) Site Assessment.

Prior to planting, applicants shall evaluate hydrologic conditions including depth, duration, and frequency of flooding, soil type, and sun exposure, and shall submit this assessment as part of the Tree Protection Plan or landscape plan.

(b) Planting Season.

To enhance the likelihood of tree survival, planting should generally occur during the dormant season, typically between late fall and early spring.

(c) Installation Requirements.

1. Planting holes shall be a minimum of two to three (2–3) times the width of the root ball, but no deeper than the height of the root ball.
2. Roots shall be loosened to prevent circling.
3. Backfill shall consist of native soil; amendments may be permitted where soils are severely compacted or deficient.
4. Mulch shall be applied to a depth of two to three (2–3) inches, and kept away from the trunk or stem.
5. In areas subject to prolonged inundation, tree root collars shall be planted slightly above grade or on

constructed mounds to reduce risk of root suffocation.

(d) Maintenance.

1. Planted material shall be maintained during a two-year establishment period.
2. Dead, damaged, diseased, or failed plantings shall be replaced by the owner or permit holder at their expense.
3. Mulch shall be refreshed as necessary to maintain soil moisture and prevent erosion.
4. Invasive species encroachment shall be controlled within planting areas.
5. Staking of trees, if required, shall be removed within one (1) year.

Section 9.04 – Prohibited Practices.

- (a) The use of non-native, invasive, or ornamental species in flood-prone planting areas is prohibited unless specifically approved by the County Manager or their designee.
- (b) The planting of turf grass, shallow-rooted ornamentals, or other vegetation not adapted to periodic flooding shall not be credited toward compliance with this Article.

Section 9.05 – Compliance and Enforcement.

- (a) Failure to comply with this Article shall be grounds for denial of final inspection or certificate of occupancy.
- (b) Violations shall be subject to enforcement and penalties as provided in Article VII.
- (c) Where mitigation is required, replacement trees and shrubs shall be selected from the approved list in Section 9.02 and planted in accordance with Section 9.03.

All ordinances or parts of ordinances in conflict herewith are hereby repealed.

This ____ day of _____ 20__.

BOARD OF COMMISSIONERS,
EFFINGHAM COUNTY, GEORGIA

FIRST READING: _____

BY: _____
DAMON RAHN, CHAIRMAN

SECOND READING: _____

ATTEST:

STEPHANIE JOHNSON
EFFINGHAM COUNTY CLERK