

The *Survey of Community Tree Regulation in Georgia*<sup>1</sup> was conducted by the Georgia Urban Forest Council to learn more about tree ordinances and associated regulations in Georgia. This *Georgia's Tree Ordinances* report summarizes the results of this survey.

A total number of 686 communities is used as the basis for calculating percentages in the data summaries in this report.

The population of Georgia, and most of its counties and municipalities, has been increasing steadily over the last 43 years, with the rate slowing only slightly during the period from 1980 to 1990.<sup>2</sup>

From 1960 to 2000, the population in Georgia and in 54 (34 percent) of its 159 counties has more than doubled.

In 1990, Georgia's population was 6,478,149. In 2000, it was 8,186,453. The increase from 1990 to 2000 was 26.4 percent.

From April 1, 2000 to July 1, 2003, the population of Georgia increased from 8,186,453 to 8,684,715 (5.7 percent)<sup>3</sup>.

Tree canopy cover is decreasing in many communities in Georgia. In no community where tree canopy cover has been measured is tree canopy cover increasing. Counties and municipalities in Georgia are authorized to adopt and enforce ordinances by their charters, their police powers, the Constitution of the State of Georgia, and by the Official Code of Georgia Annotated (OCGA).

The study showed that the Atlanta metro region is losing 54 acres of tree canopy and building more than 28 acres of hard surfaces every day.

Population growth, the loss of tree canopy cover, and the desire to be recognized as a Tree City drives many communities to develop and adopt their first tree ordinance.

There are many local, statewide, regional, national and international resources available to individuals and groups wishing to develop or revise their tree ordinances, including the Georgia Urban Forest Council, the Georgia Forestry Commission, the University of Georgia Warnell School of Forestry and Natural Resources and the UGA Cooperative Extension Service, the USDA Forest Service, the International Society of Arboriculture, and the National Arbor Day Foundation, among others.

Surveys were sent in April of 2005, and surveys and tree ordinances were returned through the fall of 2005. Communities returned 121 post cards and 85 surveys, and 85 tree ordinances. There were a total of 206 responses from the 686 communities contacted, resulting in a 30 percent participation rate.

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<sup>1</sup> This project was originally named *The Survey of Municipal Tree Regulation in Georgia*, but the term municipal was changed between the survey mailing and the writing of this report because the project includes tree ordinances from counties as well as municipalities.

<sup>2</sup> U.S. Census Bureau, 3/27/2001.

<sup>3</sup> *Annual Estimates of the Population for Counties of Georgia: April 1, 2000 to July 1, 2003* (CO-EST2003-01-13), Population Division, U.S. Census Bureau, April 9, 2004.

Based upon the titles of the survey respondents, as shown in Table H, the majority of tree ordinance administrators in Georgia are planning and zoning staff, arborists, foresters, city clerks, office managers, city managers and county administrators.

Of the 121 communities returning a post card confirming they did not have a tree ordinance, 32 (26 percent) are interested in developing one. These 32 communities include seven (7) counties and 25 municipalities.

There are two (2) ordinances adopted prior to 1970, and five (5) adopted in the 1970s. Another 10 ordinances were first adopted in the 1980s. In the 1990s, another 32 ordinances were adopted. And in the first half of this decade, 19 communities adopted their first tree ordinance. This shows a steadily increasing rate of tree ordinance adoption since 1970.

There are 49 (58 percent) of the communities that have revised their tree ordinance at least once and some have made two (2), three (3), or four (4) revisions.

When asked if they felt their tree ordinance is effective, 48 (57 percent) of the communities answered *yes*, 30 (35 percent) of the communities answered *somewhat* and five (5) (6 percent) of the communities answered *no*.

As shown, most often it is the planning, zoning, development, building, inspections, engineering, and public works departments that are responsible for tree ordinance administration. The table shows that most people responsible for tree ordinance administration have education, training, or credentials as a planner, an ISA Certified Arborist, and/or landscape architect. It is common for foresters, landscape architects, and planners to also be ISA Certified Arborists.

Again, the department most frequently responsible for enforcing tree ordinances is the planning department, although engineering, public works, community development, and code enforcement departments are also frequently responsible. City or county administrators or officials might also be responsible. Enforcement is not commonly the responsibility of landscape, tree, park, or recreation departments, or tree boards.

Even though this is the case in some communities, the department and person *administering* the tree ordinance are the same as those *enforcing* the tree ordinance in 51 (66 percent) of the 77 communities that answered both questions.

The information provided shows that 19 (22 percent) of the people responsible for enforcement have limited training in a tree-related field and 11 (13 percent) have on-the-job training only; people with limited training enforce tree ordinances more often than those with tree-related training.

When asked to list the part of the tree ordinance that is most difficult to enforce, communities commonly cited the regulations addressing *tree removal*, *tree preservation*, *tree protection* and *growing space*.

Penalties are not frequently assessed for violations of the tree ordinance in most communities, although violations frequently occur.

The violations commonly cited that result in a penalty cover three (3) main areas: *unauthorized tree removal* (30 occurrences), *lack of tree protection* (eight (8)

occurrences), and *inadequate planting or replacement of trees that do not survive* (three (3) occurrences).

Of the 85 responding communities, 28 (33 percent) responded that they have a tree care manager.

There are 46 (54 percent) of the communities that responded that they have a tree board.

Of the 85 communities that returned a survey, 21 (25 percent) said they have a tree inventory.

There are 29 (34 percent) of the communities that say they have a line item in their municipal or county budget for tree care, and another five (5) (6 percent) that say they have no budget line item, but show expenditures for 2004 or 2005.

Collectively the answers show that 59 (69 percent) of the communities would be interested in sending at least 162 and as many as 175 people to statewide training on tree ordinances.

There are 61 (72 percent) of the respondents who also said they are interested in attending a regional tree ordinance roundtable where they could discuss their ordinances with other tree ordinance administrators in their region.

Tree ordinance *enforcement, penalties, and related legal issues* were listed by 19 (22 percent) of the communities; *tree removal and preservation* were listed by 14 (16 percent) of the communities; and, *gaining support and involvement* for the tree ordinance was listed by five (5) (6 percent) of the communities.

The status of tree regulation in 386 of 686 (56 percent) of Georgia communities is now known.

Of the 686 communities in Georgia, at least 181 (26 percent) have tree ordinances, including 35 counties (22 percent) and 146 municipalities (28 percent).

Of the 686 communities in Georgia, at least 205 (30 percent) do not have tree ordinances, including 71 (45 percent) of the counties and 134 (25 percent) of the municipalities.<sup>4</sup>

Information on the status of tree regulation in 300 (44 percent) of Georgia's communities is unknown, including 53 (33 percent) of the counties and 247 (47 percent) of the municipalities.

Of the 181 communities in Georgia that are known to have a tree ordinance, 109 (60 percent) are located in one of Georgia's 15 metropolitan statistical areas (MSAs); 72 (40 percent) are not. The greatest concentration of communities with tree ordinances is in the Atlanta MSA, with 74 of the 109 tree ordinance communities located there.

Even with the high concentration of tree ordinances in the Atlanta MSA, tree ordinances were found to exist in communities throughout all sections of the State as shown in Figure B.

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<sup>4</sup> The 113 accurate post card responses (121 total post cards returned minus 8 inaccurate) were added to the other 51 municipalities and 41 counties known to not have tree regulations, resulting in the total of 205 communities without tree ordinances.

Of Georgia's 159 counties, 98 (62 percent) include at least one (1) community with a tree ordinance.

There are 61 (38 percent) of the counties in Georgia that do not include within their boundaries a single community with a tree ordinance.

There are 35 (22 percent of all) of the counties known to have a tree ordinance. Tree ordinances were found to exist in 181 communities whose populations range from 217 in the Town of Buckhead to 818,322 in Fulton County.

All counties with populations over 200,000 have a tree ordinance.

There are 146 (28 percent of all) of the municipalities known to have a tree ordinance. All municipalities with populations over 30,000 have a tree ordinance.

Other key findings related to population include:

- The approximate number of people living in Georgia in a *municipality* with a tree ordinance is 2.1 million
- The approximate number of people living in Georgia in counties *and* municipalities with a tree ordinance is 5.5 million
- Approximately 64 percent of Georgia's population lives in a community with a tree ordinance or other tree-related regulations

Five (5) main tree ordinance categories were defined based on the type of tree, property, or activity the tree ordinance addresses – *public*, *tree board*, *private*, *buffer*, and *landscape*.

Of the 143 tree ordinances reviewed, the vast majority – 84 percent – include regulation of trees on *private* property. Over half – 53 percent – address trees on *public* property. The *landscape* is regulated in 47 percent of the ordinances. The establishment of a *tree board* is included in 40 percent. *Buffer* regulations are included in 37 percent of the ordinances.

The results also show that it is common for a tree ordinance to belong to more than one (1) category.

Even so, as Table II shows, it is most common for tree ordinances and tree-related regulations to be located in a community's zoning, land development, planning or vegetation code sections.

The length and quality of the tree ordinances reviewed vary as much as where they are placed in a community's code; all combinations of length and quality exist. Length varies from 1.5 pages to more than 50 pages.

As revealed in the survey results in **Error! Reference source not found.**, and as will be shown in the tree ordinance component summaries in **Error! Reference source not found.**, it is common for communities to begin developing or revising their tree ordinance by looking at ordinances from other communities. Fulton County's tree ordinance has been used widely throughout Georgia as a model for other communities.

In this chapter, 46 individual components commonly found in Georgia's tree ordinances are summarized and discussed.

The intent expressed in many tree ordinances is to protect the health, safety, and welfare of the citizens of the community. After reviewing the tree ordinances it is clear that virtually all communities, or at least the authors of the ordinances, know that trees have value and provide the community with many environmental, economic, social, and aesthetic benefits.

No statements were found in any of the tree ordinances to indicate that communities are interested in stopping or slowing development. In fact, the opposite is true. Several communities state that the tree ordinance is not intended to be a burden or cause hardship.

And most significantly, the definitions of some of the same terms vary from one tree ordinance to another – widely in some cases.

Out of the 143 tree ordinances reviewed, 65 (45 percent) include the definition of a tree. The definition of a tree varies substantially between communities.

Only a few communities describe the position of a municipal or county arborist or forester in their tree ordinances.

The majority of the tree ordinances include an Applicability section, but the properties and trees covered by the tree ordinances vary widely from one community to the next.

It was found in the review that many communities that address private property development connect their tree ordinances to development or sedimentation and erosion control ordinances.

The ordinances that address private property generally affect only those properties proposed for development. There are, however, a small number of Georgia communities that regulate tree removal on existing, owner-occupied, single-family residential lots by requiring a permit for tree removal

While a few ordinances do not describe any exemptions, most ordinances applicable to private property provide a more or less standard list of exemptions., which include

- Residential Exemption. Agricultural Exemption. Forest Management Exemption. Commercial Tree Operations Exemption. Imminent Hazards Exemption. Insects or Disease Exemption. Emergency Exemption. Utility Exemption. Telecommunications Towers. Detention Ponds or Drainage Easement Exemptions. Grandfathered Projects..

It is common for communities, both large and small, to reference administrative guidelines or standards to be followed in complying with the tree ordinance.

It is clear from the review that many tree boards are established as part of a community's effort to become a Tree City. Other communities with more comprehensive community tree management programs also include a tree board as part of the management structure.

It was found that it is more common for tree boards to be established in a tree ordinance that addresses *public property* than it is for them to be established in a tree ordinance that addresses *private property* only.

A number of tree boards are required to prepare either an annual plan or short and long range plans for public tree management, and to present this plan annually to elected officials or staff.

It is very common for the local tree board to have the responsibility of developing and updating the community's tree species list.

Only three (3) communities specify in their tree ordinances a required budget for tree care or the tree board.

Only three (3) tree ordinances were found to require the routine inventory of trees by their tree ordinance.

Many ordinances include, usually in a separate section, a prohibition on the topping of public trees; in some cases this prohibition extends to trees on private property that receive tree density credit during development.

While conflicts between trees and utilities are widespread, 72 (50 percent) of the 143 ordinances do not address trees and utilities in any manner.

Of the 71 that do address this topic, at least 30 (21 percent) expressly state a complete or conditional exemption for utility companies, easements, construction, installation, or maintenance.

The review found that a tree species list containing recommended or permitted trees for planting, and in some communities prohibited trees as well, is included in a majority of the ordinances, and in all types of tree ordinances – public, private, tree board, buffer, and landscape. The contents and lengths of the lists vary substantially from one community to the next.

The tree ordinance review found that 75 (52 percent) of the 143 ordinances specifically address timber harvesting. In 38 (27 percent of all) of these an exemption for timber harvesting is included.

Requirements adopted by communities to discourage removal of all the trees from a site prior to development include the following:

- Requirement for a timber harvesting permit or notice to provide a record of when timber harvesting is taking place
- Establishment of a required waiting period of 2, 3, or 5 years after timber harvesting is complete before a property is eligible for rezoning or any development related permits
- Requirement for an undisturbed buffer around the perimeter of a property that will be clearcut
- Requirement for a tree removal or replacement plan indicating the locations of required buffers and TDUs

It is important to note that the review found a few communities that specifically state in their tree ordinance their desire to support ongoing forest management activities.

The review found that five (5) communities require notification of commercial timber harvesting prior to any tree removal, regardless of the zoning.

A performance bond or other form of surety to be provided by the contractor harvesting the timber from a site is required in five (5) communities. The bond amount required ranges from \$1,000 to \$5,000.

Of the 143 ordinances reviewed, 106 (74 percent) require some type of permit before the removal or disturbance of trees on private property. Of the 106 communities requiring private tree removal permits, 80 (75 percent) *do not* require a permit for existing single-family (two-family is also usually included) residential properties. There are 26 (18 percent of all) communities that *do* require a permit or approval for tree removal on single-family residential properties in some situations. Four (4) of these are counties and the remaining 22 are municipalities.

As either part of or separate from the tree ordinance, many communities provide forms, worksheets, and checklists to facilitate the administration and implementation of their ordinances.

Of the 120 communities that regulate trees on private property, 104 (87 percent) have specific tree density requirements. A requirement that a percentage of the site must be maintained in greenspace is included in 24 (23 percent) of the 104 communities with tree density requirements.

In some communities the minimum amount of the tree density requirement that has to come from existing trees is also specified.

Table QQ shows that the requirements vary by zoning district, parcel size, and location on the site, whether they are in the form of minimum TDUs, tree quality points, number of trees, DBH inches, or tree canopy cover.

**The tree density required in most of the communities is the same regardless of zoning district, but in 21 (21 percent) of the communities the requirement is specific to the zoning district.**

**Several ordinances state that tree density requirements apply to a site whether or not there are trees existing on that site prior to development. A few communities include a decrease in the tree density required if the site is pastureland or devoid of trees prior to development.**

**Table QQ shows that minimum tree density requirements found in the tree ordinances consist of four (4) basic types:**

- **Number of trees per acre or linear feet of frontage or yard**
- **Cumulative inches of DBH per acre**
- **Number of TDUs or tree quality points per acre**
- **Tree canopy cover, greenspace, or landscaped area measured in percent and square feet per acre**

**The most common type of density requirement by far is a minimum number of TDUs or tree quality points per acre.**

**The value of the unit used for measuring tree density is not consistent among communities, nor is and the number of units given to a specific tree of the same size.**

Most often, TDUs for existing trees are derived from the tree's basal area (see sidebar), but again substantial inconsistency exists among communities.

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Many communities define and utilize categories of trees to focus their regulation efforts on trees of high value to the community. These categories might be defined by mature height, position in the forest canopy, wood and leaf characteristics, condition, native range, or other physical characteristics.

Trees considered special or significant by the community due to their historic significance, landmark status, rare occurrence, or exceptional or specimen condition are also defined and designated.

The planting or preservation of conifers, and more specifically pine trees (*Pinus* spp.), is often limited because these trees are perceived to have a lower value than broad-leaved, deciduous trees, such as oaks (*Quercus* spp.) for example.

There are 84 (59 percent) of the communities that have special tree categories and 59 (41 percent) of the communities that do not.

Specimen
Exceptional
Significant
Historic
Landmark
Heritage
Official
Protected

Table XX shows that specimen tree is the most common special tree category established, found in 51 (36 percent) of the 143 tree ordinances reviewed.

The general definitions of specimen, exceptional, significant, and landmark trees, as seen in Table YY, are similar from community to community.

The most significant difference between communities in their special tree criteria is in the minimum DBH specified, and there are two (2) major ways in which this differs.

As Table YY shows, the preservation and protection of special trees are encouraged with incentives and damage or removal are discouraged with disincentives.

The review revealed that 40 (28 percent) of the 143 tree ordinances clearly state that tree preservation or conservation is required, but most also offer alternatives to tree preservation and conservation.

Very few of the communities were found to require tree preservation without offering at least one (1) of many alternative compliance methods common to the tree ordinances.

As discussed previously, the tree ordinance review also found that communities that require or encourage preservation often provide incentives for doing so. The primary form of incentive used is the assignment of extra TDUs or tree points to trees over a certain DBH or to trees in the special tree categories.

Communities also sometimes require developers to identify the efforts they have taken to design around trees and will only approve removal if certain conditions exist on the site.

**When tree preservation is encourage or required, the protection of the trees to be preserved is usually required using both active and passive methods.**

**Tree replacement is almost always required by the tree ordinance when trees must be removed from a site to accommodate development activities such as grading, building construction, and construction of other structures, hardscape, and impervious areas.**

**There are 71 (50 percent) of the communities – almost all of those with landscape and private property tree ordinances – that require the planting of trees in and around the perimeter of parking lots.**

**It was found in the review that communities use several ways to structure the requirements for parking lot trees. They might require one (1) or more of the following:**

- **A specific tree canopy cover percentage, current or future**
- **A specific landscaped area percentage**
- **One (1) tree for a specified amount of parking area in square feet**
- **One (1) tree for a specified number of parking spaces**
- **One (1) tree for a specified number of linear feet of landscape strip, perimeter or interior**
- **A maximum distance between a parking space and a tree**
- **One (1) or more trees in each landscape island**
- **A different density of trees around the perimeter than in the interior of the parking lot**

**In the 34 communities that require that one (1) tree be planted for each specified number of parking spaces, the number ranges from 5 to 30, as shown in Table AAA.**

**The requirement that one (1) tree must be planted per 10 parking spaces is the most common requirement, with 12, 8, 7 and 5 spaces also frequently specified.**

**There are 16 (11 percent) of the communities that require, in addition to the above requirement for maximum number of parking spaces per tree, that no space can be located more than a specified number of feet away from a tree. This maximum distance ranges from 50 to 165 feet.**

**Communities often require by ordinance street trees to be planted in new developments and new single-family residential subdivisions, as shown in the Tree Ordinances Summary table in Appendix E on the CD.**

**Several communities include in their tree ordinances a provision authorizing the local government to enter into an agreement with private property owners to acquire an easement for planting trees on private property.**

**It is apparent from reviewing the tree ordinances that species diversity is understood and important in most communities. Species diversity is very often required in tree ordinances that require tree replacement on private property.**

**Tree ordinances commonly require that the number of planted trees belonging to any one (1) genus (examples would be maples, oaks, elms) be limited to 33 percent or less; maximum limits of 25 percent and 40 percent are also common. Some communities however, limit a single species (examples would be red maple, willow oak, winged elm) to these same percentages.**

The review shows that 63 (44 percent) of the 143 communities have requirements for minimum rooting areas around newly planted trees. There are 24 (17 percent) of the communities that require a minimum area of permeable soil area around a newly planted tree. At least 39 (27 percent) of the communities require a minimum width for a tree-planting strip adjacent to a parking lot or street. And, 51 (36 percent) of the communities require a minimum size landscape island in a parking lot.

In the 23 communities that specify a pervious root zone for large trees, the requirements range from 50 to 800 square feet. Nine (9) require 200 square feet and six (6) require 400 square feet.

In the six (6) communities that specify a pervious root zone for medium trees, only two (2) commonly require 225 square feet, and the remaining vary from 48 to 360.

In the 29 communities that specify a pervious root zone for small trees, 10 require 100 square feet, and four (4) require 75 square feet. The remaining vary from 16 to 400.

Only three (3) communities specify a pervious root zone for very small trees: 25, 50, and 60 square feet.

Of the 39 communities that specify a minimum width for a landscape strip in a yard or parking lot landscape island, 15 require 8 feet, and nine (9) require 5 feet. The required widths range from 3 to 16 feet. Some communities require less width for interior strips and more for perimeter strips.

Finally, of the 51 communities that require a minimum number of square feet of pervious rooting zone for parking lot islands, 10 require 100 square feet. However, there is not a clearcut standard number for this requirement, which varies from 25 to 400 square feet.

Soil health is most often addressed around existing trees in protection standards that prohibit compaction in the CRZ. For planted trees, soil health is addressed in only a handful of communities.

Communities that require a minimum tree density, tree preservation, and the replanting of trees on private property usually also require that overall TDUs, tree canopy, and individual trees are maintained.

To insure this maintenance is done, some communities require a performance bond or other surety that is held for a period of up to 2 years.

Most communities offer alternative compliance methods to planting for sites on which the required TDUs do not fit and for preservation where site must be completely cleared and graded for building construction.

There are two (2) main alternative compliance methods used by communities. Off-site planting to public, or less often private, property might be allowed if trees cannot be conserved or planted on the development site. Or, monetary contributions to a tree fund

might be required for each tree or specimen tree that cannot be saved and is removed (called recompense in some ordinances), or for each tree that cannot be planted to meet TDU requirements. In many tree ordinances, both of these methods are included as alternatives.

The tree funds in communities across the State go by various names, including *tree fund*, *tree bank*, *tree replacement fund*, *tree preservation fund* and *landscaping and reforestation fund* among others.

**Most communities require an inventory of the trees on a development site prior to the development or submittal of a tree preservation and replacement plan or site plan.**

**Of the 143 ordinances reviewed, 103 (72 percent) include a requirement for some type of plan that includes information on trees existing on the site, those that will be conserved, and those that will be planted to satisfy tree density requirements.**

The tree plans most commonly required (in 43 percent of all communities) are tree protection and replacement plans or something similarly named as shown in Table HHH. The table also shows that tree preservation and planting information is also frequently required on landscape plans in 38 (27 percent) of the communities.

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