

# GEORGIA'S Urban and Community Forest



An Assessment and Five-Year Strategic Plan

# 2000-2004



GEORGIA'S URBAN AND COMMUNITY FOREST

1030

An Assessment and Five-Year Strategic Plan

2000-2004

## **Five-Year Plan for Georgia's Urban and Community Forest**

## TABLE OF CONTENTS

ASSESSMENT	
INTRODUCTION	
Purpose	
Vision	
Urban & Community Forestry: A Definition	
AN OVERVIEW OF GEORGIA'S URBAN & COMMUNITY FOREST RESOURCES	
Geography	
Storms	
Population	
History	
Facts and Figures	7
AN EVALUATION TOOL FOR URBAN AND COMMUNITY FORESTRY PROGRAMS IN GEORGIA'S COMMUNITIES	
Urban & Community Forestry Professionals	
URBAN & COMMUNITY FORESTRY PROGRAM IN GEORGIA	
State Agency Program	11
Federal Agency Program	
COOPERATIVE PROGRAMS IN GEORGIA	
Urban & Community Forestry Grant Assistance Program	
TREE CITY USA	
TREE BOARD DEVELOPMENT	
TRAIL OF TREES	
Atlanta Urban Resources Partnership Project Learning Tree	
Project Learning Tree Georgia Urban Forest Council	
GEURGIA URBAN I UREST CUUNCIL	





Regional Grow-Out Station	
THE UNIVERSITY OF GEORGIA DANIEL B. WARNELL SCHOOL OF FOREST RESOURCES	
Community Nonprofit Tree Organizations	
THE PRIVATE SECTOR	
SOCIAL BENEFITS	
RECENT CHALLENGES	
RESEARCH AND NEW TECHNOLOGY	
TREE CANOPY ANALYSIS: ATLANTA, SAVANNAH, MACON	
Conclusions	
SOLUTIONS TO SPRAWL AND LACK OF GREENSPACE	
FIVE-YEAR STRATEGIC PLAN	
Partnerships	
Planning Coordination	
PLAN IMPLEMENTATION AND MAINTENANCE	
URBAN FOREST ISSUES	
FIVE-YEAR STRATEGIC PLAN	
Issue 1. Tree Loss In Georgia	
Issue 2. Understanding the Resource Value of Trees	
Issue 3. Tree Maintenance Best Management Practices (BMPs)	
Issue 4. Local Ordinances and Policies that Regulate Land Development	
Issue 5. Professional Expertise to Promote Sustainable Community Forestry	
Issue 6. Design Hardscapes/Infrastructure with Trees in Mind	
RESOURCE INFORMATION	
PUBLICATIONS	
ACKNOWLEDGEMENTS	





January, 2000

Dear Forest Landowners:

Many of us have fond memories of our favorite tree. We remember the shade it provided on hot summer days, the majestic branches perfect for climbing, the shape of the leaves, fruits that attracted birds and wildlife, and the way the leaves and branches rustled in the wind. Trees are a treasured resource, and a valuable asset to every community in our state. Not only do they have environmental and social benefits such as reducing runoff, filtering pollutants, and providing beauty and peace of mind, but trees have economical importance. They increase property values and reduce cooling costs significantly in urban areas where the majority of our citizens live, work, and play.

Georgia's Urban & Community Forestry Program is an essential component of the daily lives of the citizens of Georgia, and most do not realize this. It is the hope of the Five-Year Strategic Planning Committee that all citizens in Georgia will value the environmental, social, and economic benefits of trees and that every community will conserve, manage, and enhance their community forests.

This Five-Year Plan for Georgia's Urban & Community Forests has been written by the Georgia Forestry Commission in partnership with the Georgia Urban Forest Council, the J. W. Fanning Institute of the University of Georgia and a host of other agencies and organizations to provide direction for Georgia's urban and community forestry program. Never before in Georgia have representatives from agencies and organizations with such a diversity of objectives and interests come together to write and implement a Five-Year Plan for Urban & Community Forestry. The representatives that formed the Strategic Planning Committee donated their time to help plan for the future of Georgia's urban forest resource and this dedication of time is appreciated.

To reach the goals stated in this Five-Year Plan, the agencies and organizations that joined together to write this plan must continue to work together, share thoughts and ideas, and partner with new agencies. The Georgia Forestry Commission and the Georgia Urban Forest Council intend for Georgia's Urban and Community Forestry program to improve each year as a result of the efforts to write and implement this Five-Year Plan and we hope you will be involved in this effort to ensure the sustainability of our urban and community forests.

Sincerely,

Sucharich aller

Fred Allen Director Georgia Forestry Commission

Frank Jenner President Georgia Urban Forest Council

## Introduction

## Purpose

The purpose of the Five-Year Strategic Plan is to provide direction for Georgia's urban and community forestry programs and policy development and to coordinate statewide efforts to conserve and enhance Georgia's community forests.

## Vision

It is the vision of the members of the Strategic Planning Committee for this Five-Year Plan that all communities throughout Georgia will value, conserve, manage, and enhance their community forests.



## **Urban & Community Forestry:** A Definition

The urban and/or community forest includes all trees, vegetation, watersheds and wildlife in urban areas, developed areas, or communities. State and local government highway right-of-ways, open green spaces, undeveloped forests, parks, and private and commercial lands are all part of the community forest. Community forestry is the management of these urban forest resources. Managing these resources improves the environmental, social, and economic well being of the community.





As we enter the 21<sup>st</sup> century, urban and community forestry continues to become an integral part of the economic and social environment in Georgia and across the country. As we reflect upon our past and move toward the future, we have come to understand that Georgia's urban and community forest resources are affected by unique geographical regions, a changing population in rural and urban areas, and a history rich in culture and tradition.

## Geography

Georgia, the largest state east of the Mississippi River, is bordered by the Atlantic Ocean, Savannah River, Chattahoochee River and Blue Ridge Mountains. With divergent soil types ranging from sand to clay, elevations ranging from sea level to almost 5000 feet, and more than 50 inches of rainfall a year, a wide range of ecotypes and growing conditions are present in communities, mountains and valleys, fields, forests, and coastal marches. To protect these valuable resources, we must continue to develop and practice growth management strategies, support local conservancies and environmental organizations, and educate the public about the benefits of a managed community forest

resource.

### **Storms**

Thousands of shade and street trees are lost every year to wind, ice and lightning. Estimates of property value loss in Georgia from this type of tree damage can exceed \$10 million annually. This value does not include future liability problems. Georgia has 50 to 70 thunderstorm days per year. Each storm can cause extensive damage to trees along its path. Historic, rare, and specimen trees,

especially when landscapes are designed around them, are valuable. These trees can become major aesthetic, financial and social losses in storms (Coder 1995)

### **Population**

The Atlanta metropolitan region is home for nearly half of Georgia's 7.6 million people. Sixty four percent of Georgia's population lives in urban areas. Twenty-five percent of Georgia's counties are considered urban (TreeViews 1997).



An Overview of Georgia's Urban & Community Forest Resources



Atlanta remains one of the fastest growing metropolitan areas in the world. In 1999, three counties (Fulton, Gwinnett, and Henry) in metropolitan Atlanta were named in the top ten list of the fastest growing counties in the United States.

Increased development, population growth, and insect and disease problems stress urban trees beyond limits that can be tolerated. The addition of impervious surfaces such as asphalt, concrete, and urban facades increase temperature and water runoff and change local water regimes. The introduction of urban infrastructure/ hardscapes and disturbance of soil structure create barriers to tree establishment and growth. These stresses not only limit young tree growth but also eliminate older, still viable trees within the urban forest.

While much of the work on this Five-Year Plan will be concentrated on addressing tree-related issues in the fast-growing urban areas of Georgia, this Five-Year Plan was written to help meet the increasing demand for management of our urban and community forests in every community, large or small. All 598 of Georgia's communities have significant amounts of valuable community forest resources that must be managed and maintained. These resources will be impacted as the population of Georgia is expected to increase.

Table 1 summarizes the top 10 states with the largest net population gains and shows the few states where most of the growth will occur for the nation over the 30 year period.

	1995 to 2000		1995 to 2025	
Rank	State	Population	State	Population
1	Texas	1,395	California	17,696
2	Florida	1,068	Texas	8,459
3	California	932	Florida	6,544
4	Georgia	674	Georgia	2,699
5	North Carolina	582	Washington	2,377
6	Arizona	580	Arizona	2,195
7	Washington	427	North Carolina	2,154
8	Colorado	422	Virginia	1,848
9	Tennessee	401	New York	1,694
10	Virginia	379	New Jersey	1,613

## Table 1 Top 10 States with the Largest Net Population Gains: 1995 to 2025

### History

Historic landscapes, buildings and structures, historic and archaeological sites, traditional cultural properties, and historic districts all provide a

link to the beginning of our nation and the study of urban forestry. By learning from the past, partnering with historic preservationists, and incorporating history in land use planning we can build a strong foundation for future generations.

#### **Facts and Figures**

■ Savannah, Georgia was America's first planned city, founded by General James Edward Oglethorpe in 1733. Twenty-four public squares served as social and market areas for the colonists.

■ National Arbor Day, an annual observance that celebrates the role of trees in our lives, was first observed as a formal holiday in Nebraska in 1872 by Julius Sterling Morton.

■ Arbor Day in Georgia is observed each year on the third Friday in February. In 1941 the Georgia General Assembly set this date as the day of our state Arbor Day.

■ In 1973, the City of Atlanta hired Georgia's first municipal forester.

■ The Georgia Planning Act of 1989 created the framework for local comprehensive planning in Georgia.

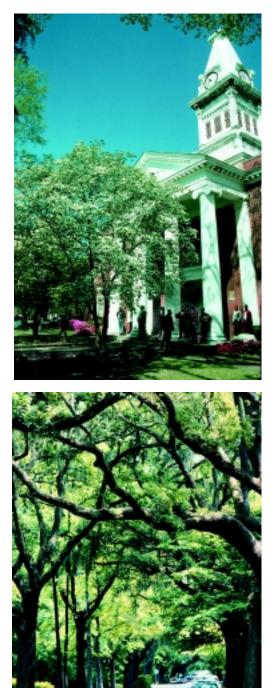
■ Sixty-four percent of Georgia (nearly 2/3 of the state) is forested. Nearly one half of Georgia's four million acres of urban forest is owned by individuals.

■ In 1990, the America The Beautiful Act was passed and the Secretary of Agriculture appointed a National Urban and Community Forestry Advisory Council (NUCFAC).

■ The USDA Forest Service partnered with the International Society of Arboriculture in October 1991 to expand research efforts in urban forestry.

■ Congress raised the appropriation for urban and community forestry in 1991 to \$21 million, helping to create an urban forestry coordinator position and a state urban forest council in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and the islands of the Pacific.

■ More than 12,000 trees were planted in downtown Atlanta before the 1996 Summer Olympic Games.



■ In 1997 the Georgia Urban Forest Council hired an Executive Director, established a 1-800 number and acquired Internet access.



■ In September 1997 the City of Atlanta was the site of the 8<sup>th</sup> National Urban Forest Conference sponsored by American Forests, the USDA Forest Service, and the National Association of State Foresters. The Georgia Urban Forest Council, the Georgia Forestry Commission, and other volunteers played a significant role in hosting this conference.

■ On the evening of April 8, 1998, tornadoes powerful as F5 on the Fujita Scale swept through the northern half of Mississippi, Alabama, and Georgia causing considerable loss of life, injuries, property loss, and damage to trees.



■ In 1998 a Grassroots Summit was held in Wintergreen, Virginia. The Grassroots Summit Leadership Team is dedicated to facilitating communications among state urban forest councils nationwide.





## An Evaluation Tool for Urban and Community Forestry Programs in Georgia's Communities

There are many opportunities for communities to reach the goal of this Five-Year Plan, that all communities in Georgia will value, conserve, manage, and enhance their urban and community forest resources. Georgia's communities differ in the levels of urban and community forestry programs they have implemented. Some are at a nonparticipatory level and some are sustained.

## What level is your community on the following scale?

**Non-Participatory** – My community needs to establish an urban and community forestry program.

**Project Level** – My community is involved with activities such as Arbor Day, a tree planting, a onetime community forestry grant, or any other onetime community forestry event or project.

**Formative Level** – My community has decided to start a community forestry program. We participate in activities listed in the above Project Level <u>and</u> network, have documented discussions, and coordinate with community leaders about beginning a program. We are establishing a tree board, getting volunteers involved, and conducting a preliminary or basic assessment about the general state of the community forest.

**Developmental Level** – My community is pursuing activities in addition to those in the Project Level and Formative Level to improve the overall health of the community forest. We are conducting a tree inventory, writing a community forestry management plan, or pursuing the adoption of new policy and regulations for tree planting, maintenance, and protection such as a tree ordinance.





**Sustained** – The urban and community forestry program in my community is organized and functional. The program has continuity, planning, awareness, support, and a budget. The tree board or tree department is operating on its own with ongoing funding and management for systematic tree planting, removal and replanting, and comprehensive tree maintenance.

A variety of resources and urban forestry professionals are available to help your community establish a new urban and community forestry program or build its current program to the next level. Technical, financial, and technology transfer assistance are provided across the state.

## **Urban & Community Forestry Professionals**

Professionals such as urban foresters and certified arborists apply principles of forestry and arboriculture to the management and cultivation of trees and associated resources. Citizen volunteers, homeowners, government officials, and community organizations also work in partnership to develop tree ordinances, conduct tree inventories, develop management plans and inspect, prune, and replant urban and community forests.

Since 1988, consulting urban foresters have provided professional services to communities throughout Georgia. These services include urban tree inventories, management plans, hazard tree evaluation, tree appraisal, tree care and planting, and tree ordinance development.

Certified arborists are trained in the art and science of planting and maintaining individual trees. Arborists are certified by the International Society of Arboriculture (ISA) when they have achieved a level of knowledge of tree care through at least three years experience, and have passed a comprehensive examination. Certified arborists stay up-to-date on the latest techniques and information. For a list of certified arborists in Georgia, visit the International Society of Arboriculture web site listed in the Resources section of this plan.

Many communities in Georgia have made investments in their urban forest by hiring a consulting urban forester or certified arborist to assist in planning for and managing their community trees. The following cities or counties in Georgia employ at least one arborist: Alpharetta, Athens, Albany, Atlanta, Augusta, Chatham County, Cobb County, Columbus, Covington, Decatur,

DeKalb County, Douglas, Griffin, Macon, Metter, Roswell, Savannah, Statesboro, Thomaston and Valdosta.

Several communities have also invested in their urban forest by inventorying their community trees. Several of the cities that have an inventory of their city trees are: Athens, Augusta, Columbus, Covington, Griffin, Metter, Savannah and Thomaston.

### **State Agency Program**

The first public urban forestry program in Georgia began in 1967 with the designation of five metropolitan Atlanta foresters within the Georgia Forestry Commission. Their primary responsibilities included providing technical assistance to homeowners, education programs for civic groups, schools, arborists and developers, and advice for absentee landowners.

Program emphasis has changed since that time. Today, all Georgia Forestry Commission Foresters are responsible for aiding public and private entities in communities with Urban & Community Forestry Program development activities such as establishing a tree board, developing a tree ordinance, providing technical expertise and training programs relating to urban forest management, and organizing community tree celebrations.

An Urban & Community Forestry Coordinator, Partnership Coordinator, and an Urban & Community Forestry Program Assistant are employed by the Georgia Forestry Commission. These individuals are responsible for managing the Urban & Community Forestry Grant Assistance

Program, coordinating efforts with the USDA Forest Service Southern Region to write and implement this plan, and working closely with the Georgia Urban Forest Council to promote urban & community forestry in Georgia. In addition, an Urban/Rural Interface Forester was designated in 1998 to focus primarily on the emerging issue of growth management in the urban fringe.

#### **Federal Agency Program**

The mission of the Urban & Community Forestry program of the USDA Forest Service is to promote conservation and management of forests and related natural resources in cities, with a focus on obtaining the highest social, environmental, psychological, and economic benefit. The U&CF program promotes increased public understanding

of urban forestry through educational, technical, and financial support in many different forms. As our cities grow larger and faster than ever before, urban forestry has become an integral part of building sustainable urban communities. "Vital Communities Through Healthy Ecosystems" is the Forest Service emphasis for managing urban and community forests.

The Southern Urban Forestry Technical Service Center (SUFTC) of the USDA Forest Service, Southern Region is located in Atlanta and Athens, Georgia. SUFTC functions as a bridge for the exchange of urban forestry information between and among researchers and practitioners within thirteen states in the Southern Region (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, and VA).



Urban & Community Forestry Program in Georgia

## Cooperative Programs in Georgia

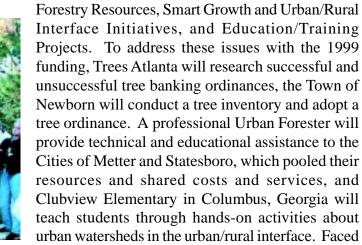
## Urban & Community Forestry Grant Assistance Program

In Georgia, the USDA Forest Service Urban & Community Forestry (U&CF) Grant Assistance Program, authorized by the 1990 Farm Bill and renewed in 1995, is administered by the Georgia Forestry Commission. This program has initiated new partnerships, strengthened nonprofit tree organizations, encouraged volunteer participation, and increased support for Georgia's urban & community forest.

Through this program, cost-share grants are available to nonprofit organizations, local governments, including counties, municipalities, cities, towns, and townships, educational institutions, and community groups for projects that stimulate and enhance urban and community forest resources within the state of Georgia. The number of cost-share dollars allocated to Georgia has increased every year.

Table 2. Grant Assistance Program Funds Designated to Georgia in the Last Five Years				
AmountNumber ofYearDesignated (\$)Grants Funded				
1995	196,000	47		
1996	264,154	40		
1997	201,000	36		
1998	212,061	37		
1999	344,370	31		

In 1999, the U&CF Grant Assistance Program provided funding for thirtyone community-based projects. Grant amounts awarded ranged between \$2,500 and \$27,000. The 1999 Program Focus was on Tree Ordinance Development and Strategic Planning, Sharing Small-town Community



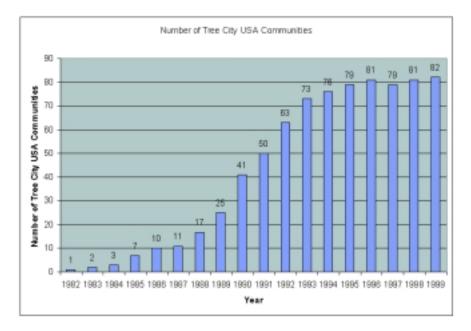


with the challenges of encroaching development in a rural area, Green South Fulton will develop a model program to encourage builders to conserve greenspace and farmland during development in the Urban/ Rural Interface.

The U&CF Grant Assistance Program helps many local communities realize the social, environmental, and economic benefits of having an urban forestry program.

## **Tree City USA**

Tree City USA is a community improvement project sponsored by National Arbor Day Foundation in cooperation with the National Association of State Foresters, USDA Forest Service, US Conference of Mayors, and National League of Cities. Cities can be named a Tree City USA by meeting four standards which include having a Tree Board, a tree ordinance, an annual budget of at least \$2 per capita for community forestry, and an Arbor Day observance and proclamation.



Recognition of the Tree City USA program has increased since the program began in 1976. Columbus, Georgia established Tree City USA status in 1978 and was the first and only Tree City USA in Georgia until 1983. Expanding and promoting the Tree City USA program over the next five years to address tree loss in urban areas is a goal of this Five-Year Plan.

## **Tree Board Development**

The GFC has created important linkages between Tree City USA Tree Boards in the state of Georgia. A **Tree Board Development Training Series** was offered for the first time in 1998. In 1999, members of eight Tree Boards across the state participated in technical workshops on proper tree planting and care, resources workshops on public relations and available funding sources, and strategic planning workshops. Neighboring Tree Boards were invited to the workshops. Requests for the Tree Board Development Training Series have increased and the series will continue to be offered in the next five years to cities in the Tree City USA program.



### **Trail of Trees**

Tim Womick is a spokesperson for the National Tree Trust in Washington, DC, which promotes tree planting, tree education, and local volunteer efforts nationwide. Every year in Georgia since 1993, Tim Womick has presented the Trail of Trees program to students, teachers, and other organizations in urban and rural areas across the state. The Trail of Trees occurs during a two-week time frame in February that ends on Georgia's Arbor Day. Through this interactive, high energy, environmental program, Tim shares his experiences and enthusiasm for trees in an effort to inspire others and motivate people of all ages to become involved in their communities and to make a difference by planting and caring for trees and the environment.

In 1999, Tim raised awareness and appreciation for trees for more than 6,000 students in Georgia at eighteen schools, one church, and Zoo Atlanta. Georgia is just one stop on the Trail of Trees tour across the United States.

### **Atlanta Urban Resources Partnership**

In April 1994, Atlanta was one of four cities (including New York, Chicago, and Seattle) selected to participate in a new federal initiative

known as the Urban Resources Partnership (URP). The concept of URP was to have federal, state, and other partners work in collaboration with local communities to address environmental problems and needs in their neighborhoods. In Atlanta, the local URP steering committee (AURP) targeted the 10-county area served by the Atlanta Regional Commission (ARC) as the focus of its efforts, and sought to offer technical assistance and matching grants to respondents within that region. By holding a series of workshops throughout the ARC region, AURP was able to educate the public about this new program, while simultaneously

partnering groups with common interests and goals. A subsequent "Request for Proposals" generated numerous applications for funding, and presented the AURP steering committee the formidable task of deciding which projects would receive matching grant money.

Since 1994, matching grant funds totaling almost \$2.4 million have been provided to over 100 projects in the ARC area. These projects vary widely in scope, and are indicative of the interest that local residents have in their immediate environment. Examples of funded projects include:

- transformation of vacant lots into local pocket parks
- training of volunteers for community park and natural resource service
- planting of trees along roadways and other public access areas
- development of nature trails, wildlife habitats, and outdoor learning centers
- protection and restoration of streams and other waterways

## **Project Learning Tree**

Project Learning Tree (PLT) is an international environmental education program for students in pre-kindergarten through twelfth grades. The program uses forests and trees, urban and rural, as a window into the natural world. PLT's hands-on, interdisciplinary activities teach students how to think rather than what to think about natural resources. The Georgia Forestry Association, Georgia Forestry Commission and Cooperative Extension Service are state co-sponsors. In the past five years more than 6,000 educators have been trained to facilitate PLT activities for students.

## **Georgia Urban Forest Council**

The mission of the Georgia Urban Forest Council (GUFC) is to foster urban forestry policies and programs that will improve the quality of life in Georgia cities and communities. The GUFC promotes the recognition and value of urban forests within the state and provides education, technical support, and leadership for urban forestry activities. The GUFC was formed in 1988 and currently has more than 125 members from nonprofit tree planting organizations, tree boards, educational institutions, business and industry, cities, and government.



In 1989, the first GUFC Conference and Awards

Program was held in Macon, Georgia. Since that time, annual conferences have been held in Savannah, Atlanta, Columbus, Gainesville, Augusta, Macon, Albany, Atlanta (National Urban Forestry Conference), Athens, and Griffin.



The GUFC Awards Program recognizes individuals, civic groups, business/corporations, and communities who have made significant efforts to promote urban forestry in Georgia. Outstanding work, whether public or private, is eligible for nomination. These awards are presented at GUFC's annual conference.

Some additional GUFC activities include participating on the Urban & Community Forestry Grant Assistance Program Application Review Committee, distributing a Membership Directory, administering a Landmark & Historic Trees Program and the Basic Tree Care Workshop Series, establishing scholarships, publishing the TreeTalks newsletter, and providing quarterly educational workshops and programs.

#### **Regional Grow-Out Station**

In 1996, Keep Sumter Beautiful entered into a partnership with the National Tree Trust and the City of Americus to establish a Regional Grow-Out Station (RGOS) in Americus, Georgia. This 12-acre site, located at the Keep Sumter Beautiful Learning Center on State Route 49, serves as an urban forestry and hands-on environmental learning center for the state of Georgia. The Americus RGOS is one of sixteen grow-out stations across the United States.

The purpose of the RGOS is to promote public awareness and a spirit of volunteerism in support of tree planting, maintenance, management, protection, and cultivation projects in rural areas, communities, and urban areas. Every year thousands of tree seedlings in a variety of species are sent to the RGOS from the NTT. Volunteers assist with containerizing the trees and later planting them on public land across the state. The Georgia Urban Forest Council and the Georgia Forestry Commission are also partners in this project.

## The University of Georgia Daniel B. Warnell School of Forest Resources

A Bachelor of Science in Forest Resources is offered at the University of Georgia. Forestry majors focus on the management and use of forestland to produce wood and wood fiber to satisfy the demands of society. Students study how forests grow and develop, and learn how to manage, regenerate and harvest this renewable resource.

There is an increasing demand for urban forestry professionals in Georgia. Citizens have become more aware of the value and benefits of trees in communities, and need urban foresters to manage our community forest resources. To help prepare students for careers in urban forestry, an urban tree management course is offered. The course focuses on establishment and maintenance of trees in urban environments, benefits of trees, planting and soil management, pruning, repair, and protection, stress management and the values of urban trees.

## **Community Nonprofit Tree Organizations**

Nonprofit tree advocacy organizations increase awareness of the benefits of the urban forest, coordinate the planting of thousands of trees, develop educational programs, and provide an essential conduit for volunteer action on the local level. Nonprofit organizations are vital to Georgia's urban and community forestry program.

## **Park Pride**

Park Pride was formed in 1986 as an advisory group of citizens concerned about the future of Atlanta's parks, trees, and green space. The nonprofit volunteer organization was incorporated in 1990 and works within the City of Atlanta and DeKalb County to preserve, enhance and promote parks and green spaces and to encourage acquisition and development of new parks and green spaces.

## Savannah Tree Foundation

Savannah Tree Foundation, established in 1982, promotes the nurturing, preserving and planting of canopy trees, especially the live oak, to enhance the quality of life for present and future generations. The Foundation educates and informs the public of the value of the urban forest and the importance of land use practices that incorporate the use of trees as a high priority component of planned community infrastructure.

## **Trees Atlanta**

Trees Atlanta is a non-profit citizens' group dedicated to protecting, improving and beautifying their urban environment by planting and conserving trees. They educate the public about the value of trees and are involved in tree issues in the entire metropolitan Atlanta area. More than 800 volunteers actively participate in the program.

Trees Atlanta has a heavy focus on planting trees along the sidewalks of the central business district and in spaces created in adjoining parking lots. Since 1985, they have planted more than 12,000 large shade trees downtown.

Major tree plantings have been done at the Georgia Dome, World Congress Center, MARTA stations, Martin Luther King Jr. Historic Site, Georgia Tech, Atlanta University Center and Georgia State University. Most of the downtown churches have also been landscaped.





### **The Private Sector**

The private sector provides professional expertise, additional funding, and volunteer support to accomplish specific urban forestry projects. Corporate partners that actively support urban forestry program development in Georgia include Georgia Power, Home Depot, the forest industry, commercial arborists, and commercial nurseries.

Since 1967, Georgia Power Company has employed foresters to oversee utility line tree maintenance in every Georgia Power Company serviced community. Georgia Power currently employs twenty-one utility foresters throughout the state. Utility foresters participate in and support efforts to develop and improve tree care skills.

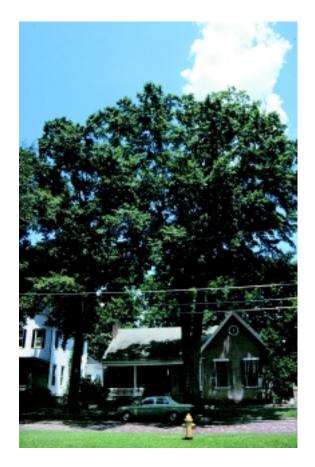
In 1990, the Georgia Arborist Association, a nonprofit organization, was founded to serve the needs of commercial arborists within the state. The Georgia Arborist Association develops tree care safety and training programs, tree care practice standards, and business management programs to assist arborist companies in successful management of their businesses.

Commercial nurseries offer a wide variety of products for communities. The Georgia Urban Forest Council partners with the Georgia Green Industry Association and the Southern Nurserymen's Association to promote the continued supply of quality planting stock for communities.

Residential and commercial developers are becoming aware of the need for better management and protection of trees on construction sites and leaders are emerging in this area. Through the implementation of this Five-Year Plan, partnering organizations will encourage developers to incorporate conservation-minded strategies into their developments and will strive to work more closely with the private sector. People and natural resources are highly dependent upon one another, as each determines the quality of the other's sustainability. A component of urban and community forestry is this interaction between people and natural resources.

There is strong evidence that urban trees and forests can make significant contributions to physical and mental health and speed recovery from surgery. In a study published by Urlich et al. in the Journal of Environmental Psychology, hospital patients with window views of trees recovered significantly faster and with fewer complications than comparable patients without such views. Previous studies by Urlich showed that trees help reduce the stress many people experience in urban settings and they create feelings of relaxation and well-being.

It has been demonstrated that urban forests help build stronger communities and in doing so, they contribute to lower levels of violence on the street and in the home. Urban and community forests can help satisfy important human philosophical and emotional needs. Active involvement in tree planting programs has been shown to enhance a community's sense of social identity, self-esteem, and territoriality, and it teaches residents that they can work together to choose and control the condition of their environment. (Forestry: A Community Tradition 1998)



## Social Benefits

## Recent Challenges

An article from the Atlanta Journal & Constitution on February 19, 1999 titled "Scalping of the land makes Atlantans hot," reported that from 1988 to 1998, a 13-county metropolitan Atlanta area lost about 190,000 acres of tree cover, and was currently losing 50 acres of tree cover per day. Some months later, this 13-county metropolitan area was declared a "serious" non-attainment area for ground level ozone by the Environmental Protection Division (EPD). The non-attainment area includes Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale counties as indicated by EPD's 1999 Report.

In June of 1999, the EPD revised their long-range plan for improving air quality. Some of the goals of the EPD plan include more stringent vehicle emissions testing, providing lower sulfur gasoline, tighter emissions controls on power plants and industries, and implementing the Partnership for a Smog-free Georgia program which reduces the number of single-occupancy trips made by state employees during the ozone alert season. These measures can reduce ground level ozone by limiting the precursors of ozone.

In addition to these measures, Governor Roy E. Barnes urged the Georgia General Assembly to create the Georgia Regional Transportation Authority (GRTA) in 1999. The Authority is charged with combating air pollution, traffic congestion and sprawl-like development in the metropolitan Atlanta area, which is currently out of compliance with the federal Clean Air Act. GRTA was formed to insure that economic growth in metropolitan Atlanta can be sustained, while the excellent quality of life that has made the area so attractive to businesses and workers can be maintained.

Urban and community forestry plays a large role in improving Georgia's air quality. If we plant and maintain more existing trees, which filter pollutants and contribute to cooling, we will increase the rate at which attainment is reached.

We have been introduced to new technology in the past ten years that allows us to better map, measure, and analyze entire urban ecosystems, rather than single street trees. Several studies that incorporate satellite images, aerial photography, and Geographic Information Systems technology have been done in metropolitan Atlanta to measure how land use has changed with increasing population and development.

In 1996, Project ATLANTA – (Atlanta Land-use Analysis: Temperature and Air-quality) was funded as a NASA investigation. This Urban Heat Island Study sought to observe, measure, model, and analyze how rapid growth in the Atlanta metropolitan area since the early 1970's impacted the region's climate and air quality (Quattrochi and Luvall 1996). The study has provided model output that can be used to modify or revise growth plans for the Atlanta metropolitan area. These changes will help mitigate or ameliorate the expansion of the urban heat island effect or the further deterioration in air quality.

## Tree Canopy Analysis: Atlanta, Savannah, Macon

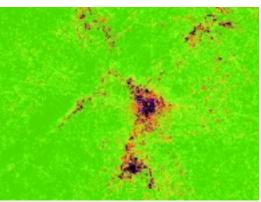
In 1997, American Forests, the nations oldest nonprofit conservation organization, unveiled the first satellite images of the effects of urban sprawl on metropolitan **Atlanta**. The Atlanta area is one of six regions across the United States studied by American Forests. Researchers used satellite data, Arc View Geographic Information Systems (GIS) and CityGreen Software to calculate how much of the region was covered with heavy tree canopy. From 1974 to 1996, the amount of land with heavy tree canopy went from 47% of the Atlanta region to 26%, and developed area from 44% to 71%. Heavy tree canopy was defined as trees covering 50% or more of the land when viewed from the air and developed land was defined as land with coverage less than 20%.

These startling and alarming images have spurred more studies that provide visual images, facts, and figures that show properly planned and managed urban forests can save cities billions of dollars in stormwater management, cooling, and air pollution protection. In this same study, American Forests concluded low canopy cover and tree loss in rapidly growing areas was equivalent to a \$2 billion increase in stormwater management costs alone.

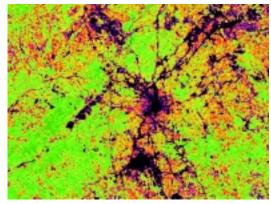
The value of the urban forest canopy is important to cities across Georgia that are experiencing rapid development. A study of tree cover changes was conducted in **Chatham County** Georgia in 1993 by the Savannah Tree Foundation. The study revealed a total of 51,088 acres or 27% of the acreage of Chatham County lost significant amounts (defined as 20% or more coverage) of canopy over the study period. Sixty percent of the loss occurred in the unincorporated

areas of the county and nearly 20% of the loss was in the City of Savannah.

## Research and New Technology



Vegetation loss in Atlanta region, 1974



Vegetation loss in Atlanta region, 1996

This study also examined the relationship between land use and tree canopy loss, with residential and related mixed use development accounting for the largest portion of the loss.



In a similar study, the City of Macon has completed three phases of a five-phase project that used CityGreen software to illustrate and quantify changes that have taken place in the Macon-Bibb County urban and rural forests during the past 12 years. Phase IV, currently in progress, is using the land cover data previously collected to estimate derived energy and stormwater benefits. Combined with losses in tree canopy, the study will illustrate the loss of benefits based on current management of the forest and public policy.

### Conclusions

To increase funding for urban and community forestry research and programs, we must continue to increase our knowledge and keep the public aware of the benefits of trees. Not only do we need to conduct



urban forestry research, we need to continue to work with other agencies and organizations to incorporate urban forestry into other disciplines. Some of these disciplines include air and water quality management, transportation and road construction, conservation of energy, watershed protection, land reclamation, corridor and greenspace management, preservation of scenic byways, preservation of historic places, wildlife management, forest recreation, infrastructure design, and land-use planning.

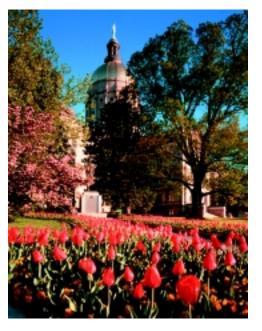
As we expand our partnerships, it will be important for all agencies to continue to inform policy and decision makers of the impacts of growth on the state of Georgia and ways that we can work together to plan for wise use of the land. Communities must incorporate urban forestry and **land-use planning** when faced with the challenges of sprawl. A study by Elmendorf and Luloff published in the Journal of Arboriculture in 1999 showed that land-use planning can provide a process for planning for and regulating how natural systems in urban, suburban, and or rural landscapes can be conserved when pressured by growth. Land-use planning can also be used to ensure planting and preservation of trees in parking lots, subdivisions, and other developments.

In Georgia, Governor Roy E. Barnes initiated a program to address greenspace conservation in Georgia. **Senate Bill 399**—Georgia Greenspace Program, introduced in February of 2000, establishes a framework within which developed and rapidly developing counties, and their municipalities, can preserve community greenspace. The bill promotes the adoption of policies and rules which will enable counties and cities to preserve at least 20 percent of their land as connected and open greenspace to be used for informal recreation and natural resource protection. State grants are available and eligible counties must establish a Community Greenspace Trust Fund, and develop a greenspace program.

In addition, community foresters and arborists can and must take action and support greenspace conservation by understanding and becoming involved in land-use planning and decision making by serving on planning commissions and environmental advisory committees, becoming familiar with existing and proposed comprehensive plans and development ordinances, attending and participating in public hearings, writing letters to the editor and helping organize concerned people, supporting local conservancies and environmental groups, while also continuing to work with cooperative extension to provide workshops and educational materials on tree health care and maintenance. (Elmendorf and Luloff 1999)

Raising awareness about trees and tree loss are two issues addressed by this Five-Year Plan for Georgia's Urban and Community Forests. The **Activities** described in the Five-Year Plan will provide guidance and solutions to addressing sprawl and greenspace issues.

## Solutions to Sprawl and Lack of Greenspace



## Five-Year Strategic Plan

### **Partnerships**

Partners from socially, politically, and professionally diverse backgrounds are a critical component of Georgia's urban & community forestry program.

Representatives have joined in a concerted effort to improve the urban & community forest in Georgia through writing and implementing this Five-Year Plan for Georgia's Urban & Community Forests. These partners range from state and federal agencies, local governments, nonprofit tree organizations, and private businesses to corporations, educational institutions, and others. Individually, each of these partners have established programs that plant trees, restore communities, improved the health of existing trees, and significantly increased citizen, political, and financial support for the urban & community forest resource.



#### **Planning Coordination**

The development of this plan has been a coordinated effort among the USDA Forest Service, Georgia Forestry Commission, Georgia Urban Forest Council, and the J.W. Fanning Institute of the University of Georgia.

This document will provide a vision for urban and community forestry during the next five years (2000-2004). A vision precedes and assists planning and understanding of urban forest values. All levels of government need a tool or guide that specifies their role in the stewardship of these natural resources.

It is a goal that all levels of government will commit to the management of their urban and community forests by implementing the Five-Year Plan to achieve the vision.

### **Plan Implementation and Maintenance**

This Five-Year Plan for Georgia's Urban & Community Forests will be a Program Focus of the U&CF Grant Assistance Program in 2000-2004. Grant applicants will be encouraged to partner with another organization to help carry out the six issues addressed by the plan.

The first organization listed as the Lead Organization will organize the effort to complete the designated Activity within the Timeframe specified. All of the other organization listed will partner on the project. For more information about one of the Issues and corresponding Activities, please call the Georgia Forestry Commission at 404-298-3935 for assistance in reaching the contact person for the Lead Organization. In addition, regular progress updates are planned for future meetings of the Georgia Urban Forest Council, which provides opportunities for statewide urban forestry communication and networking in the state of Georgia.

Six issues were identified by the strategic planning committee and will be addressed by this Five-Year Plan for Georgia's Urban and Community Forests. These issues are:

## Issue 1. Tree Loss in Georgia

An adequate amount of tree canopy and open greenspace is not being managed and protected in communities. Rapid land development is severely impacting community forest resources that are already weakened by aging, insects, diseases, storms, and humans. By implementing this Plan we seek to reduce the rate of tree loss in metro areas of Georgia by 25% by 2004 to help meet the Strategic Planning Committee's statewide goal of no net loss.

## Issue 2. Understanding the Resource Value of Trees

All residents of Georgia, elected officials and resource managers are not aware the value of the community forest resource and the common, shared benefits provided by the community forest. We seek to create public awareness of the value of trees.

## Issue 3. Tree Maintenance Best Management Practices (BMPs)

Health and longevity of the community forest is degraded when community forest managers do not have sufficient knowledge of current research, technology and proper tree care techniques. Best Management Practices (BMPs) for managing community forests are needed. We seek to implement BMPs for urban and community forestry.

## Issue 4. Local Ordinances and Policies that Regulate Land Development

Current regulations are preventing land development in which community forests are conserved and enhanced. Local authorities must change regulations to allow, modify, and promote development that conserves and enhances community forestry. We seek to encourage local authorities to change these regulations.



## Urban Forest Issues



## Issue 5. Professional Expertise to Promote Sustainable Community Forestry

Many communities do not utilize professional expertise for managing their community forest resources. Awareness of and access to sources of professional urban forestry and arboricultural expertise must be increased. We seek to increase awareness of and access to professionals.

## Issue 6. Design Hardscapes/Infrastructure with Trees in Mind

Poor design and increased use of hardscape contributes to the loss of tree growing space and community forest decline because designers are not trained and educated in tree biology. We seek to train and educate hardscape designers.







## **Five-Year Strategic Plan**

## **Issue 1. Tree Loss in Georgia**

### STATEMENT OF PROBLEM:

Trees are lost in the community forest due to land development, insects, diseases, storms, aging and human impact.

#### GOAL:

Reduce the rate of tree loss in metro areas of Georgia by 25% by 2004 to help meet our statewide goal of no net loss.

### **RESPONSE:**

Initiate programs of grassroots education and action to protect trees and monitor tree cover.

ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Build a grassroots network through neighborhood associations, schools and religious communities	January 1, 2000 - December 31, 2004 (ongoing)	Sierra Club, Chattowah Open Land Trust
• Begin in 13 county metro area	February 1, 2000 - May 31, 2000	Sierra Club, Chattowah Open Land Trust
Distribute tree promotion packages materials; secure funding to purchase materials	February 1, 2000 - December 31, 2004 (ongoing)	Georgia Forestry Commission (GFC), Georgia Urban Forest Council (GUFC)
Provide worksheets for prospective home buyers to evaluate tree benefits	June 1, 2000 - June 31, 2001	GFC (Urban/Rural Interface Forester), Atlanta Homebuilders Association, GA Power Company
Promote GUFC community forestry awards annually	January 1 - September 30, 2000 - 2004	GFC, GUFC
• Include neighborhoods category	January 1, 2000 - February 1, 2000	GUFC
<ul> <li>Publicize existing awards to neighborhood groups, open space groups – Quarterly Awards Reviews</li> </ul>	January 1, 2000 - January 31, 2000	GFC, GUFC
• Expand awards program related to tree loss issues	January 1, 2001 - January 31, 2001	GUFC
Develop a model program for neighborhood awards and recognition to local property owners	June 1, 2001 - June 31, 2001	GUFC, Sierra Club
✤ Implement NeighborWoods Program	June 1, 2001 - June 31, 2004	Keep Georgia Beautiful (KGB)
Improve, expand and promote Tree City USA Program	January 1, 2000 - December 31, 2004 (ongoing)	GFC
Establish a program to monitor tree canopy gains and loss in urban areas on statewide basis	January 1, 2000 - December 31, 2004	GFC

## **Issue 2. Understanding the Resource Value of Trees**

## STATEMENT OF PROBLEM:

Residents, elected officials and resource managers do not understand the value of the community forest resource.

#### GOAL:

Create public awareness of the value of trees to residents, elected officials and resource managers.

#### **RESPONSE:**

Create a marketing strategy to promote broad-based understanding of the value of trees for communities and the shared benefits of a common resource.

ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Develop a marketing plan to increase the understanding of the value of trees	March 1, 2000 - December 1, 2000	Georgia Power Company, GUFC, Fanning Institute, GFC
Implement the marketing plan which could include, but is not limited to the following:		
• Develop a list for potential funding sponsors	January 1, 2001 - December 31, 2004	GFC, GUFC
• Develop and distribute Public Service Announcements (PSAs)	January 1, 2001 - December 31, 2004	GFC, GUFC
• Develop and manage speakers bureau	January 1, 2001 - December 31, 2004 (ongoing)	GUFC
• Develop presentation materials for a speakers bureau	July 1, 2000 - December 1, 2000	GFC, GUFC, Chattowah Open Land Trust
• Develop appropriate materials designating the extent (spatial) of community forests	January 1, 2004 - January 31, 2004	GFC
• Develop a resource value section to the GUFC web page	January 1, 2000 - January 31, 2000	GUFC
• All partners have web page links to resources, materials information, and services related to the 5-year Strategic Plan	August 1, 2000 - December 1, 2004 (ongoing)	GUFC
• Disseminate the 5-year plan to communities and decision makers	March 1, 2000 - March 31, 2000	GFC
<ul> <li>Explore advertising opportunities</li> </ul>	January 1, 2002 - January 31, 2002	GFC, GUFC
to promote the value of community forests		
• Evaluate and promote the Critical Forest Land Study for statewide implementation	January 1, 2004 - January 31, 2004	GFC, Northeast Georgia Regional Development Center (NEGRDC)

## Issue 3. Tree Maintenance Best Management Practices (BMPs)

#### STATEMENT OF PROBLEM:

Health and longevity of the community forest is degraded when community forest managers do not have sufficient knowledge of current research, technology and proper tree care techniques.

#### GOAL:

Improve the health and longevity of community forests by implementing Best Management Practices (BMPs).

### **RESPONSE:**

Promote best management practices (BMPs) for managing community forests.

ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Utilize and promote training opportunities related to proper tree maintenance	January 1, 2000 - December 31, 2004 (ongoing)	GUFC, GFC, Warnell School of Forest Resources (WSFR), Interna- tional Society of Arboriculture (ISA)
Develop BMP resource list and publish on web page	January 1, 2001 - January 31, 2001	GFC
• Promote BMPs to appropriate associations at annual meetings and through targeted magazines	February 1, 2001 - February 31, 2003	GUFC, GFC
Encourage and assist local governments and state agencies to adopt standards for tree care and best management practices	January 1, 2001 - December 31, 2004 (ongoing)	GUFC, GFC, WSFR, ISA
✤ Identify, fund and implement urban tree care research to support BMPs	January 1, 2003 - January 31, 2004	WSFR, USDA Forest Service (USFS)
Compile funding sources and strategies communities can use to implement BMPs	January 1, 2001 - December 1, 2001	U&CF Partnership Coordinator

## Issue 4. Local Ordinances and Policies that Regulate Land Development

#### STATEMENT OF PROBLEM:

Current regulations are preventing development in which community forests are conserved and enhanced.

#### GOAL:

Encourage local authorities to change regulations to allow and promote development that conserves and enhances community forests.

#### **RESPONSE:**

Encourage and assist local governments to modify land development ordinances to conserve and enhance community forests.

ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Develop a list of funding sources available for updating local ordinances	January 1, 2001 - January 31, 2001	Georgia Department of Community Affairs (DCA)
• Pilot test updating ordinances in five communities	July 1, 2000 - July 1, 2001	DCA, Better Hometown Program (BHT)
• Expand ordinance updates statewide	July 1, 2001 - December 31, 2004 (ongoing)	DCA, BHT
Develop case studies to show case successful green development	January 1, 2003 - January 31, 2003	DCA
Encourage all communities in the Atlanta metropolitan area to adopt tree ordinances	January 1, 2001 - December 31, 2004 (ongoing)	GFC, DCA
• Update and improve GFC's <i>Tree</i> Ordinance Development Guide book	January 1, 2000 - December 31, 2004 (ongoing)	GFC



## Issue 5. Professional Expertise to Promote Sustainable Community Forestry

#### **STATEMENT OF PROBLEM:**

Many communities do not utilize professional expertise for managing their community forest resources.

## GOAL:

Increase awareness of and access to sources of professional urban forestry and arboricultural expertise.

#### **RESPONSE:**

Promote awareness and increase utilization of professional expertise.

	ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Ð	Develop and disseminate directories of professional expertise	January 1, 2000 – December 31, 2004 (ongoing)	ISA State Director, GFC, GUFC
Ŷ	Utilize the Georgia High School Community Forestry curriculum with new audiences	January 1, 2000 – December 31, 2004 (ongoing)	WSFR, GFC
Ð	Create Urban Forestry curriculum for Georgia Municipal Association (GMA), Association County Commissioners of Georgia (ACCG), Georgia Economic Developers Association (GEDA) and Georgia Association of Chamber of Commerce Executives (GACCE)	January 1, 2004 – January 31, 2004	GUFC
Ŷ	Increase access to professional design assistance and incorporation of urban forestry expertise	January 1, 2000 – November 1, 2000	GFC, GUFC, Partners
	<ul> <li>Survey Strategic Plan Partners, other agencies for assistance</li> <li>Organize teams to assist communities in land development design for promoting urban and community forestry</li> </ul>	December 1, 2003 – July 1, 2004	Partners

## Issue 6. Design Hardscapes/Infrastructure with Trees in Mind

## STATEMENT OF PROBLEM:

Poor design and increased use of hardscape contributes to the loss of tree growing space and community forest decline.

## GOAL:

Train and educate hardscape designers in tree biology.

#### **RESPONSE:**

Promote "biology first" design in the hardscape development process.

ACTIVITIES:	TIMEFRAME:	LEAD ORGANIZATIONS:
Educate architects, engineers, builders, landscape architects, and government decision makers about "biology first" design		WSFR, Georgia Department of Transportation (DOT)
<ul> <li>Design and package informa- tion and materials</li> </ul>	January 1, 2000 - July 31, 2000	GFC
• Develop and promote American Society of Landscape Architects	January 1, 2001 - December 31, 2001	DOT
<ul><li>(ASLA) design standards</li><li>Develop and implement tree literacy certification program</li></ul>	December 1, 2000 - December 31, 2003	GUFC

## **Resource Information**

### **National Organizations**

## American Nursery and Landscape Association

1250 I Street, Suite 550 Washington, DC 20005-3922 202-789-2900 www.anla.org

#### **American Farmland Trust**

1200 18<sup>th</sup> St. NW, Suite 800 Washington, DC 20036 202-331-7300 www.farmland.org

#### **American Forests**

PO Box 2000 Washington, DC 20013 (202) 955-4500 info@amfor.org www.americanforests.org

#### **American Horticultural Society**

7931 East Boulevard Drive Alexandria, VA 22308 703-768-5700 www.ahs.org

#### American Planning Association

122 South Michigan Ave., Suite 1600 Chicago, IL 60603 (312) 431-9100 www.planning.org/index.html

## American Society of Consulting Arborists

15245 Shady Grove Road, Suite 130 Rockville, MD 20850 301-947-0483 www.asca-consultants.org

## American Society of Landscape Architects

636 Eye Street, NW Washington, DC 20001-3736 202-898-2444 www.asla.org

#### Army Environmental Policy Institute 430 Tenth St. NW. Suite 206

Atlanta, GA 30318-5768 404-786-2445 aepi.atdc.gatech.edu

#### Entomological Society of America 9301 Annapolis Road Lanham, MD 20706-3115 301- 731-4535

www.entsoc.org

#### **Green Laws**

Highlighting legal standards and technical requirements for site development planning, tree preservation and landscape ordinance legislation. www.design.lsu.edu/greenlaws/

#### **International Society of Arboriculture** Post Office Box 3129

Champaign, IL 61826-3129 217-355-9411 www2.champaign.iso-arbor.com

#### Treelink

Includes an extensive links list, research, news, forums, and urban forestry educational materials. www.treelink.org

#### Land Trust Alliance 1319 F St. NW, Suite 501 Washington, DC 20004 202-638-4725 www.lta.org/org.html

## **National Arbor Day Foundation** 100 Arbor Ave.

Nebraska City, NE 68410 402-474-5655 www.arborday.org

#### National Arborist Association

Route 101, P.O. Box 1094 Amherst, NH 03031-1094 603-673-3311 www.natlarb.com

## National Association of State Foresters

Hall of the States 444 North Capitol Street, NW Suite 540 Washington, DC 2000# 202-624-5977 www.stateforesters.org

National Scenic Byways Resource Center 130 Paley Way Alpharetta, GA 30022 770-619-1822

#### **National Tree Trust**

1120 G Street, NW, Suite 770 Washington, DC 20005 800-846-8733 www.nationaltreetrust.org

## National Urban & Community

Forestry Advisory Council USDA Forest Service 20628 Diane Drive Sonora, CA 95370 209-536-9201 www.treelink.org/nucfac/index.htm

#### **Society of American Foresters**

5400 Grosvenor Lane Bethesda, Maryland 20814 301-897-8720 www.safnet.org

### Society of Municipal Arborists

7000 Olive Boulevard University City, MO 63130-2300 314-862-1711 www.urban-forestry.com

## **Organizations In Georgia**

#### **Americus Regional Grow-Out Station**

Keep Sumter Beautiful P.O. Box M Americus, GA 31709 912-928-2862 KSB@americus.net

## Association County Commissioners of Georgia

50 Hurt Plaza, Suite 1000 Atlanta, GA 30303 404-522-5022 www.accg.org/

#### **Council for Quality Growth**

1770 Indian Trail Road, Suite 160 Norcross, GA 30093 770-564-2606 gcqc@bellsouth.net

#### **Daniel B. Warnell School of Forest Resources** University of Georgia

www.forestry.uga.edu/warnell/index.html

#### **Dunwoody Nature Center**

P.O. Box 88834 Dunwoody, GA 30356 770-394-3322

#### **Environmental Fund for Georgia**

1447 Peachtree St. NE Suite 502, Atlanta, GA 30309 Phone 404-873-3173 Fax 404-873-1284 efg@efg.org www.efg.org/index.html

### The Garden Club of Georgia, Inc.

2450 Milledge Avenue Athens, Georgia 30602-5817 www.uga.edu/gardenclub/

#### Georgia Arborists Association

C/o Arborguard Tree Specialists P.O. Box 461 Avondale Estates, GA 30002 404-299-5555

#### Georgia Association of Chamber of Commerce Executives P.O. Box 796 Dallas, GA 30132 706-443-5658 GACCE@aol.com

#### The Georgia Conservancy

Main Office: 1776 Peachtree St. NW, Ste. 400 South Atlanta, GA 30309 404-876-2900 Coastal Office: 428 Bull Street, Savannah, GA 31401 Phone 912-447-5910 tgccoast@bellsouth.net www.gaconservancy.org/index.html

#### Georgia Department of Community Affairs 60 Executive Park South, N.E. Atlanta, GA 30329-2231

www.dca.state.ga.us/

#### **Georgia Department of Corrections**

2 Martin Luther King, Jr. Drive, S.E Suite 700, East Tower Atlanta, Georgia 30334-4900 (404) 656-4593 www.state.ga.us/corrections/ centoff.html

centon.num

## Georgia Department of Natural Resources

500 The Healy Building 57 Forsyth Street, NW Atlanta, GA 30303 404-656-2840 www.dnr.state.ga.us/

#### Georgia Department of Transportation

General Office No. 2 Capitol Square Room 270 Atlanta, GA 30334 www.dot.state.ga.us/

#### Georgia Economic Developers Association 285 Peachtree Center Avenue

P.O. Box 1776 Atlanta, GA 30301-1776 404-656-7790 clarson@georgial.org

Georgia Emergency Management Agency P.O. Box 18055 Atlanta, GA 30316-0055 404-635-7000 1-800-TRY-GEMA (In Georgia) www.doas.state.ga.us/GEMA/

Georgia Forestry Commission P.O. Box 819 Macon, GA 31202-0819 1-800-GA TREES www.gfc.state.ga.us

## Georgia Forestry Association

500 Pinnacle Ct., Suite 505 Norcross, GA 30309 770-416-7621 www.gfagrow.com/

## Georgia GIS Data Clearinghouse www.gis.state.ga.us/

Georgia Green Industry Association Post Office Box 369 Epworth, GA 30541 706-492-4664 www.growzone.com/associations/ggia/

**Georgia Municipal Association** 201 Pryor Street, SW Atlanta, GA 30303 404-688-0472 www.gmanet.com

Georgia State Parks and Historic Sites Department of Natural Resources www.gastateparks.org/

#### **Georgia Power Company**

www.southernco.com/site/gapower/ home.asp

## Georgia State Board of Registration for Foresters

Joint Secretary, Examining Boards Division Office of the Secretary of State 166 Pryor Street, S.W. Atlanta, GA 30303 http://www.state.ga.us/rules/ index.cgi?base=220

### Georgia Urban Forest Council, Inc.

P.O. Box 961 Macon, GA 31202 800-994-GUFC gufc@alltel.net www.gufc.org

#### Georgia Water Wise Council, Inc.

1033 Franklin Road, Suite 9-187 Marietta, GA 30067-8004 www.griffin.peachnet.edu/waterwise/ wwc.htm

#### **Greater Atlanta Homebuilders Association** P.O. Box 450749 Atlanta, GA 31145 770 028 0000

770-938-9900 www.atlantahomebuilders.com

#### **Georgia Wildlife Federation**

1930 Iris Drive Conyers, GA 30094 770-929-3350 www.gwf.org/default.htm

### Keep Georgia Beautiful

60 Executive Park South, NE Atlanta, GA 30329-2231 404-679-4910 www.dca.state.ga.us/waste/kgb/

#### **Oglethorpe Power Corporation**

2100 East Exchange Place P.O. Box 1349 Tucker, GA 30085-1349 800-241-5374 www.opc.com/

### Park Pride

675 Ponce de Leon Ave. Atlanta, GA 30308 404-817-6760 parkprideatl@mindspring.com www.parkpride.org

## Partnership for a Smog-Free Georgia

Environmental Protection Division Air Protection Branch Georgia Department of Natural Resources 4244 International Parkway, Suite 120 Atlanta, Georgia 30354 404-363-7032 www.doe.k12.ga.us/transportation/ psgcontact.html

## Project ATLANTA (Atlanta Land-use

Analysis: Temperature and Air-quality) A NASA investigation in 1996, seeks to observe, measure, model, and analyze how the rapid growth of the Atlanta, Georgia metropolitan area since the early 1970's has impacted the region's climate and air quality. http://wwwghcc.msfc.nasa.gov/ atlanta/

#### Phytosphere Research

Plant science consulting and research services related to plant health. http://phytosphere.com/index.htm

#### Savannah Tree Foundation

3025 Bull St. Savannah, GA 31405 Phone 912-233-TREE Savstf@aol.com

#### Sierra Club – Challenge to Sprawl Campaign 1447 Peachtree Street, Suite 305 Atlanta, GA 30309 www.sierraclub.org

#### The Southern Nursery Association, Inc. 1827 Powers Ferry Road, NW Bldg. 4, Suite 100 Atlanta, GA 30339 (770) 953-INFO mail@mail.sna.org

www.sna.org

### Southface Energy Institute

241 Pine St. Atlanta, GA 30308 404-872-3549 www.southface.org

#### State Botanical Garden of Georgia

2450 South Milledge Avenue Athens, GA 30605 706-542-6195 www.uga.edu/botgarden/

#### **Trees Atlanta**

96 Poplar Street, N.W. Atlanta, Georgia 30303 Phone 404-522-4097 Fax 404-522-6855 info@treesatlanta.org www.treesatlanta.org

### **Trust for Public Land**

Atlanta Field Offices 1447 Peachtree St., NE Suite 601 Atlanta, GA 30309 404-873-7306 www.tpl.org/nearu/sero/index.html

## University of Georgia Extension Forest Resources

www.forestry.uga.edu/efr/

#### **Urban Land Institute**

1700 Commerce Dr. Atlanta, GA 404-605-0690 www.uli.org/indexJS.htm

## USDA Natural Resources

Conservation Service Georgia State Office Federal Building, Mail Stop 208 355 East Hancock Avenue Athens, GA 30601-2769 www.ga.nrcs.usda.gov/georgia.html

## USDA Forest Service, Southern Region

Cooperative Forestry 1720 Peachtree St., NW Suite 811 N Atlanta, GA 30309 www.r8web.com/spf/urban.htm

### Zoo Atlanta

800 Cherokee Avenue, SE Atlanta, GA 30315-1440 www.zooatlanta.org

## **Publications**

## Value of the Urban Natural Resource

Akbari, Hashem, Davis, Susan, Dorsano, Sofia, Huang, Joe and Winnett, Steven. <u>Cooling Our Communities: A</u> <u>Guidebook on Tree Planting and Light-Colored Surfac-</u> <u>ing</u>. January 1992. U.S. Environmental Protection Agency, Office of Policy Analysis, Climate Change Division. U.S. Government Printing Office, Superintendent of Documents. Washington, DC 20402-9328. ISBN 0-16-036034-X.

American Forests. <u>The State of Our Urban Forest: Assessing Tree Cover and Developing Goals</u>. September 1997.

Fausold, Charles J. and Robert J. Lleholm. <u>The Economic</u> <u>Value of Open Space: A Review and Synthesis</u>. 1996. Lincoln Land Institute. www.lincolninst.edu/lincolninst/ worlpap/cfpap.html

Georgia Urban Forest Council. <u>Tools for Community</u> <u>Forest Resource Valuation</u>. October 1998.

Hartel, Dudley R., Lee Carmon and Kimberly E. Patton. Development Design and Stormwater Characteristics: A study of residential and commercial development sites in the Northeast Georgia RDC area to demonstrate the effects of development design and tree cover on stormwater characteristics. September 1997. Northeast Georgia Regional Development Center.

McPherson, E. Gregory, David J. Nowak and Rowan A. Rowntree. <u>Chicago's Urban Forest Ecosystem: Results of</u> <u>the Chicago Urban Forest Climate Project</u>. June 1994. U.S. Forest Service, Northeast Forest Experiment Station, General Technical Report NE-186.

Savannah Tree Foundation. <u>A Study of Tree Cover Changes</u> in Chatham County, Georgia, from 1973 to 1992. October 1993.

Tibbetts, John. <u>Open Space Conservation, Investing In Your</u> <u>Community's Economic Health</u>. 1998, Lincoln Institute of Land Policy, Cambridge, Massachusetts.

### **Practices, Regulations and Ordinances**

Abbey, B. <u>U.S. Landscape Ordinances</u>. 1998. New York: John Wiley & Sons. Green Laws. http://www.design.lsu.edu/greenlaws/

Arendt, Randall. <u>Conservation Design for Subdivisions:</u> <u>A Practical Guide to Creating Open Space Networks</u>. 1996. Natural Lands Trust, American Planning Association and American Society of Landscape Architects, Island Press. Arendt, Randall. <u>Rural By Design</u>. 1994. American Planning Association, Planners Press.

Austin, Gary. <u>Cool Islands: Guidelines for Parking Lot</u> <u>Design and Shading</u>. 1997. City of Lewiston, Idaho, Parks and Recreation Department.

Brown, Whitney and Thomas Schueler. <u>The Economics</u> of Stormwater <u>BMPs</u> in the Mid-Atlantic Region: Final <u>Report</u>. August 1997. Center for Watershed Protection for Chesapeake Research Consortium, Inc.

Bernhardt, Elizabeth A. and Tedmund J. Swiecki. <u>Guidelines</u> <u>for Developing and Evaluating Tree Ordinances</u>. April 1992. California Department of Forestry and Fire Protection. <u>http://ns2.communityonline.net/comm/phyto/ordintro</u>

Burgess, J. <u>Tree Ordinance Development Guidebook</u>. May 1999. Georgia Forestry Commission.

Campbell, Paul R. <u>Population Projections for States by Age</u>, <u>Sex, Race, and Hispanic Origin: 1995 to 2025</u>. 1996. U.S. Bureau of the Census, Population Division, PPL-47.

Center For Watershed Protection. <u>Consensus Agreement</u> <u>On Model Development Principals To Protect Our Streams,</u> <u>Lakes, And Wetlands</u>. August 1998.

Center For Watershed Protection. <u>Better Site Design: A</u> <u>Handbook for Changing Development Rules In Your</u> <u>Community</u>. August 1998.

Cobb County Soil and Water Conservation District, USDA Natural Resources Conservation District, and The Georgia Forestry Commission. <u>How to Protect Natural</u> <u>Resources on Construction Sites: The Builders Guide</u>. December 1998.

Delaware DNR and Environmental Control Conservation. Design for Stormwater Management: A Design Approach to Reduce Stormwater Impacts from Land Development and Achieve Multiple Objectives Related to Land Use. Draft 1996.

Duerkson, C. <u>Tree Conservation Ordinances</u>. 1993. PAS 446. Chicago, IL: American Planning Association.

Ewing, Reid. <u>Best Development Practices: Doing the Right</u> <u>Thing and Making Money at the Same Time</u>. 1996. Urban Land Institute and the Florida. Department of Community Affairs, Planners Press. Fodor, Eben. <u>Better Not Bigger, How to Take Control of</u> <u>Urban Growth and Improve Your Community</u>. 1999. New Society Publishers, Gabriola Island, BC, Canada.

Georgia Forestry Commission. <u>Georgia's Best Management</u> <u>Practices for Forestry</u>. January 1999.

Georgia Soil and Water Conservation Commission. <u>Guidelines for Streambank Restoration</u>. September 1994.

Pennsylvania Forestry Association. <u>A Guide for Municipal</u> <u>Tree Commissions</u>. 1996. Pennsylvania Forestry Association, 56 East Main Street; Mechanicsburg, PA 17055.

Home Builders Association of Alabama. <u>Controlling</u> <u>Erosion and Sediment in Home Building</u>.

Johnson, Gary R. <u>Tree Preservation During Construction:</u> <u>A Guide to Estimating Costs; Urban and Community</u> <u>Forestry</u>. 1997. University of Minnesota.

Keys, Ellen. <u>Blueprints for Successful Communities: A</u> <u>Guide for Shaping Livable Places</u>. 1997. The Georgia Conservancy.

Matheny, Nelda and James R. Clark. <u>Trees and Develop-</u> <u>ment, A Technical Guide to Preservation of Trees During</u> <u>Land Development</u>. 1998. International Society of Arboriculture.

School of Environmental Design. <u>Land Development Pro-</u> <u>visions to Protect Georgia Water Quality</u>. October 1997. The University of Georgia, prepared for the Georgia Department of Natural Resources Environmental Protection Division.

Sucher, David. <u>City Comforts: How to Build an Urban</u> <u>Village</u>. 1995. City Comforts Press.

### **Other Resources**

<u>American Standards for Nursery Stock</u>. 1986. American Association of Nurserymen, 1250 I Street NW, Suite 500, Washington, DC 20005.

Burban, Lisa L. and John W. Andresen. <u>Storms Over the</u> <u>Urban Forest</u>. 1994. USDA Forest Service, Northeastern Area.

Dirr, Michael. <u>Manual of Woody Landscape Plants, Their</u> <u>Identification, Ornamental Characteristics, Culture,</u> <u>Propogation, and Uses, Fifth Edition</u>. 1998. Stipes Publishing, Champaign, Illinois 61820. Georgia Forestry Commission. <u>Arbor Day in Georgia:</u> <u>Ideas, Materials, and Resources</u>. January 2000.

Georgia Forestry Commission. <u>Urban Forestry and</u> <u>Arboricultural Videos List</u>. 1999.

Gerhold, Henry D., Norman L. Lacasse, and Willet N. Wandell. <u>Street Tree Factsheets</u>. 1993. Pennsylvania State University.

Grey, Gene W. <u>A Handbook for Tree Board Members</u>. 1993. The National Arbor Day Foundation.

International Society of Arboriculture. <u>Quick Reference Guide</u> of Arboricultural Terms, English-Spanish, Spanish-English.

Miller, Robert. <u>Urban Forestry</u>. 1988. Prentice Hall, Inglewood Cliffs, NJ 07632.

Moll & Young. <u>Growing Greener Cities</u>. 1992. Living Planet Press, 508 Rose Ave., Venile, CA 90291.

National Arborist Association. <u>Standards for Pruning of</u> <u>Shade Trees, Guying of Shade Trees, Fertilizing Shade and</u> <u>Ornamental Trees, and Lightning Protection Installation</u> <u>for Shade Trees</u>. 1988.

Olig, Gene A. and Robert W. Miller. <u>A Guide to Street</u> <u>Tree Inventory Software</u>. 1999. USDA Forest Service Urban Forestry Center for the Midwestern States.

Pirone, P.P., J.R. Hartman, M.A. Sall. <u>Tree Maintenance</u>, <u>Sixth Edition</u>. 1988. Oxford University Press.

Shigo, Alex. <u>A New Tree Biology</u>, 1991. <u>Modern</u> <u>Arboriculture</u>, 1991. <u>100 Tree Myths</u>, 1993. <u>Tree Anatomy</u>, 1994. <u>Tree Pruning: Worldwide Photo Guide</u>. 1989. Shigo and Trees Associates, P.O. Box 769, Durham, NC 03824.

TreePeople with Andy and Katie Lipkis. <u>The Simple Act</u> of Planting a Tree, A Citizen Forester's Guide to Healing <u>Your Neighborhood</u>, <u>Your City</u>, and <u>Your World</u>. 1990. Jeremy P. Tarcher, Inc., Los Angeles.

USDA Forest Service. <u>Urban Forestry. A Manual for the</u> <u>State Forestry Agencies in the Southern Region</u>. http:// www.r8web.com/spf/pubs&resources/ufmanual/index.htm

USDA Forest Service, Southern Region. <u>Developing and</u> <u>Establishing Urban and Community Forestry Programs,</u> <u>An Introductory Guide</u>. October 1989. English-Spanish, Spanish-English.

#### **Conference Proceedings**

1995. <u>Proceedings of the 7<sup>th</sup> National Urban Forest</u> <u>Conference</u>, New York, New York. American Forests.

1997. <u>Proceedings of the 8<sup>th</sup> National Urban Forest</u> <u>Conference</u>, Atlanta, Georgia. American Forests.

1999. <u>Proceedings of the 9<sup>th</sup> National Urban Forest</u> <u>Conference</u>, Seattle, Washington. American Forests.

June 6-9, 1999. <u>Keep America Growing, Balancing</u> <u>Working Lands and Development</u>. American Farmland Trust. Omnipress CD ROM.

#### **Extension Forest Resources**

Publications on Community Forestry, the Environment, Tree Health Care and other topics are available On-line from the University of Georgia Extension Forest Resources Web site. All publications are authored by Dr. Kim D. Coder, UGA, Cooperative Extension Service. A list of the Community Forestry publications is provided below.

#### Community Forestry

- Assessing Construction Damage: Tree Damage Expo sure Values and Recovery Times.
- Assessing Extent and Severity of Mechanical Injuries in Trees.
- Assessing Pruning Wound Damage.
- Assessing Various Community Tree and Forest Values With Inventories.
- Community Forestry Series:
  - A New Sense of Community: Defining Social Changes.
  - Concepts of Change: Futuring Community Forestry.
- Defining Ecological Management Units.
- Construction Damage Assessments: Trees and Sites.
- Control of Shoot/Root Balance in Trees.
- Crown Pruning Effects on Roots.
- Ecological Renovation Series:
  - Basic Ecological Renovation Problems and Activities.
  - Ecological Renovation: Assessment Steps for Development Sites.
  - Ecological Renovation In Communities: Conceptual Underpinnings.
  - Ecoplex Form, Structure and Function: Ecological Renovation Targets.
  - Exotic Trees in the United States: Naturalized or Escaped from Cultivation.

- Flood Damage to Trees.
- Georgia's Tree Appraisal: Species Value List.
- Hurricanes, Trees & Forests: A Selected Bibliography.
- Identified Benefits of Community Trees and Forests.
- Native Tree Families and Species of Georgia.
- New Papers on Nitrogen Fertilization on Trees: A Selected Bibliography.
- Plant Trees Right!
- The Poetry of Color in Woods: Fall Tree Color Series
- Professional Arboriculture: Training Young Trees.
- Pruning Effects on Tree Growth: Growth Regulation Consequences.
- Relative Tolerance of Tree Species to Construction Damage.
- Selecting Wooded Home Sites.
- Storm Damaged Trees: Prevention and Treatments.
- Tree Growth Response Systems.
- Tree Planting Area Size: Futuring Resource Availability and Identifying Constraints.
- Tree Risk Management and Hazard.
- Tree Rings Series
- Tree Root Growth Control Series
  - Methods for Root Control.
  - Root Control Barriers.
  - Root Growth Requirements and Limitations.
  - Selected Literature: Root Control Methods.
  - Soil Constraints on Root Growth.
  - Tree Roots and Infrastructure Damage.
- Trees and Humankind: Cultural and Psychological Bindings.
- Tree Selection for Drought Resistance.
- Understanding Lightning and Associated Tree Damage and Protection.
- Urban Community Ecosystems: A National Action Plan.
- Winterizing Trees: Dormant Season Preparations.
- Watering Trees.
- Live Oak: State Tree of Georgia.

## Acknowledgements

The Georgia Forestry Commission and the Georgia Urban Forest Council would like to thank the members of the Strategic Planning Committee who contributed their time to the development of this plan.

Joe Burgess, Georgia Forestry Commission Lee Carmon, Northeast Georgia Regional Development Center Roger Cauthen, Athens Clarke County Dr. Kim Coder, University of Georgia Brian Darr, Southern Urban Forestry Associates Sharon Dolliver, Georgia Forestry Commission Katherine Eddins, Chattowah Open Land Trust Jimmy Etheridge, Georgia Power Brian Hager, Sierra Club Dudley Hartel, Consulting Urban Forester Cindy Haygood, Rolling Hills Resources, Conservation & Development Connie Head, Technical Forestry Services Abbe Hoctor, Department of Transportation Kris Irwin, University of Georgia, Warnell School of Forest Resources Frank Jenner, Valdosta Parks and Recreation Richard Laub, Historic Preservation, Department of Natural Resources Heather Leo, Keep Georgia Beautiful Melanie McDonald, Georgia Urban Forest Council Bernie Moore, The J.W. Fanning Institute Jose Pagan, Natural Resources Conservation Service Clayton Preston, Village Habitat Design, Inc. Martha Reiman, Department of Community Affairs Susan Reisch, Georgia Forestry Commission Bettie Sleeth. Atlanta Homebuilders Association Cindy Thilenius, Better Hometown Program Dennis Tourangeau, Arborguard John Wuichet, Army Environmental Policy Institute

Special appreciation goes to Ed Macie, Nancy Stremple, Iris Magaly Zayas, Ingrid Sather, and Terry Campbell of the USDA Forest Service Southern Region for their continued support and dedicated guidance.

A Planning Assistance Grant from the USDA Forest Service was received for facilitating two planning sessions and an overnight retreat to write the Five-Year Plan.

## **For Additional Information**

contact the office listed below:

Urban & Community Forestry Program Georgia Forestry Commission P.O. Box 819 Macon, Georgia 31202-0819 1-800-GA-TREES www.gfc.state.ga.us











