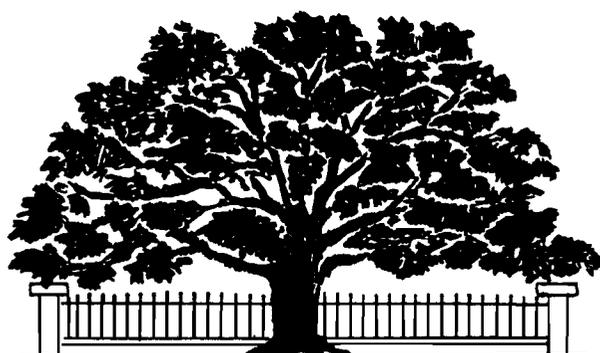


The State of the Trees II

**Savannah and Chatham County
Georgia**

September, 1994



**Written, published, and distributed by the
Savannah Tree Foundation**

The Savannah Tree Foundation promotes, through direct action and education, an awareness of trees, particularly the Live Oak, as vital natural resources and an important part of our heritage. The Foundation desires to preserve, nurture, and plant trees to enhance the quality of life for present and future generations.

The purpose of this report is to revise and update the original *State of the Trees*, published in February, 1992. In 1993, the Savannah Tree Foundation received through the Georgia Forestry Commission a \$10,000 federal grant. As a part of the grant, the Foundation contracted with Mr. Charles Watson, scientist and GIS specialist, to prepare a study on tree cover changes in this community. Recommendations contained within this report are based on this study and identify the changes needed within the community in order to preserve and enhance our urban forest.

The grant focused on:

- * conducting a 20 year study of tree cover changes in order to assess the rate and causes of canopy loss;
- * developing a slide presentation to educate the community about trees and the study results;
- * providing funding for an updated *State of the Trees*; and
- * providing assistance to the operations of the Savannah Tree foundation.

A Study of Tree Cover Changes in Chatham County, Georgia, From 1973 to 1992.

The objective of this study was to determine changes that occurred to the tree canopy of Chatham County over a period of twenty years.

The study of tree cover changes in Chatham County utilized data from the multi-spectral images of the LANDSAT satellite for the years 1973, 1978, 1984, 1986, and 1992, as well as support data from other satellites and aerial photography. Satellite

imagery has been used extensively for deforestation studies as well as in timber counts and aerial forest surveys. Applying these techniques to urban forestry is a new concept which has focused national attention on the study.

In the study, the satellite images of Chatham County were broken down into image pixels (30x30 meter areas). Because trees, grass and buildings all reflect light differently, the researcher was able to determine the percentage of each pixel covered by each terrain type and assign a value based upon the percentage of coverage. The results of the study do not quantify the absolute number of trees lost over the study period. Rather, the results highlight the net change to land covered by tree canopy, regardless of the type of tree which provided the cover.

A total of 51,088 acres, or 27 percent, of the acreage of Chatham County lost significant amounts of tree cover (defined as 20% or more coverage) from 1973 to 1992. Sixty percent of that loss was in unincorporated areas of the county and nearly 20% was in the City of Savannah. The data suggests that two distinct types of canopy loss occurred in Chatham County – “**catastrophic**”, a result of clear cutting, and “**slow thinning**”, a result of attrition without replacement. **Catastrophic** loss tended to be more spatially concentrated in urbanized areas, especially along major road corridors. The historic district and the mid-town area illustrate loss by **slow thinning**. Twenty-two percent of the total loss of canopy in the City of Savannah was concentrated in the historic/mid-town area. There were no significant increases in tree canopy in any of the study areas over the time period.

In addition to identifying the type of loss occurring in Chatham County, the study also addressed whether loss rates increased or decreased over the study period. For most of Chatham County, **tree cover was lost faster in the past eight years than in the previous eleven**. For example, on the south side of Savannah losses have increased from 1.7% a year for the period 1972-1984 to over 3% per year since 1984.

The study also examined the relationship between land use and tree canopy loss. **Nearly 60% of the loss in the county and 42% of the loss in the city of Savannah occurred in residential and mixed use areas.**

MPC Tree Advisory Committee

A Tree Advisory Committee was formed by the Savannah/Chatham County Metropolitan Planning Commission in the Fall, 1993. The Committee was formed following the 1992 *State of the Trees* and internal reviews of existing tree ordinances by MPC staff. In the fall of 1993, a 33 member committee, representative of a broad range of community interests, was established and a work plan was developed. Following extensive research, a public hearing, a facilitated workshop and a coordinated commitment from MPC, city and county staff, recommendations were sent in August to the MPC Tree Advisory Committee. The recommendations were approved by the committee in mid-September. At the time of this printing, the agenda for ordinance approval includes:

1. MPC staff ordinance drafting.
2. MPC approval.
3. Adoption by City Council and County Commission.
4. Implementation.

Progress and Commendations

The Savannah Tree Foundation included a number of recommendations in its first *State of the Trees*. In reviewing these recommendations, the Savannah Tree Foundation would like to commend our community leaders for the following significant changes:

- * The County for funding the first tree program in the unincorporated areas of the county.
- * The County for retaining 2 landscape architects to provide preliminary design review of all local county road projects to ensure tree preservation,

protection during construction and replanting opportunities.

- * The County Engineering Department for initiating a meeting with State DOT Commissioner Wayne Shackelford to seek tree protection criteria and replanting on state road projects within Chatham County. (Attending were Senator Tom Coleman, County Commission Chairman Joe Mahany, County Engineer George Lyons, County landscape architects and representatives of the County Tree Commission and the Savannah Tree Foundation.
- * The County for the planned tree planting and beautification of President Street Extension (\$900,000), Highway 17 live oak planting and sidewalks (\$95,000) and for the planting of Johnny Mercer Boulevard, a cooperative effort of the county, island citizens and businesses .
- * The County for resolving the difficult soccer complex site selection issue by locating a suitable site on Sallie Mood Drive and committing the resources necessary to develop a complex for this community without losing a valuable mixed hardwood, passive park resource in Bacon Park.
- * The Park and Tree Commission and the County for providing matching funds to the Savannah Tree Foundation's grant which funded the tree cover study.
- * The City for funding the position for a landscape architect to provide review of development plans and to ensure field enforcement of development criteria under tree ordinance.
- * The City for initiating a policy requiring tree protection and buffer zones to be marked on the ground prior to bulldozing or selective clearing.
- * The City for creation of the City of Savannah Urban Forest Task Force to address city tree management and policy, the master tree plan, tree ordinances, tree planting and alternatives for the future.

- * The City for creation of the Daffin Park Master Planning Task Force to create a master plan for Daffin Park which addresses the issues of facilities, trees, beautification, neighborhood compatibility, lighting and parking within the context of the recreational and historical character of this community park.
- * The Metropolitan Planning Commission for creation of the Tree Advisory Committee to study and make recommendations to strengthen and expand existing city and county tree ordinances.

- * Encourage all city and county projects to serve as a model for the community on proper methods of tree protection, planting, and maintenance.
- * Encourage coordinated planning among local and state governmental bodies to optimize tree planting and protection.
- * Encourage neighborhood partnerships to rejuvenate their streetscapes and create pride in their neighborhoods by planting and maintaining trees.
- * Enlarge the urban forest by participating in community tree plantings and planting large shade trees in appropriate spaces.
- * Monitor the state of trees in the community and report tree damage as a result of improper land clearing activity, road construction or repair to the City Landscape Architect at the MPC or the County Arborist.

Recommendations

In order to preserve existing tree canopy and to recover canopy lost to development and attrition in Savannah and Chatham County, the Savannah Tree Foundation makes the following recommendations.

To Citizens of Chatham County

- * Encourage City Council and County Commission to pass the revisions to the Tree Ordinance.
- * Encourage municipalities of Chatham County (Garden City, Port Wentworth, Pooler, Bloomingdale, Tybee Island, Thunderbolt, Vernonburg) to adopt and enforce tree ordinances for their communities.
- * Encourage all municipalities of Chatham County to plan and budget for tree plantings, tree maintenance and tree protection.
- * Encourage the city, county and Board of Education to develop public property in accordance with the same planning and review processes required of private property.

To the City of Savannah

- * Adopt strengthened revisions to the tree ordinance.
- * Evaluate personnel and resource needs to ensure strict enforcement of tree ordinance. Make recommendations in budget.
- * Continue to refine coordination between Inspections and Engineering Departments with Landscape Architect to enforce tree ordinance provisions.
- * Encourage immediate enforcement of tree ordinance by allowing Landscape Architect to issue stop work orders for violations.

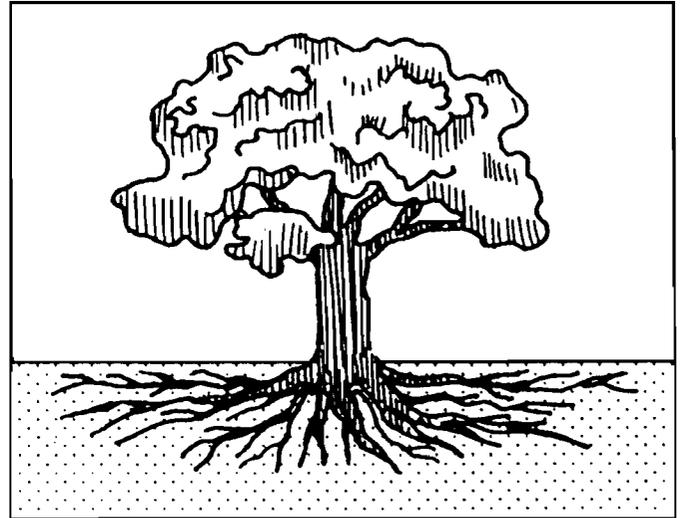
- * Involve the Landscape Architect in the staff review of applicable petitions before the Zoning Board of Appeals.
- * Develop master plans for city parks and open spaces and incorporate principles of tree preservation and passive land use.
- * Designate 2007 as the 100th birthday of John Nolen's landscape plan for Daffin Park.
- * Revitalize historic Daffin Park by developing a revised master park plan which merges the park's multiple recreational uses with pedestrian walk-ways and the significant and historic live oaks and other trees of the park. Implement by the 100th year celebration.
- * Recommit to a viable and productive Park and Tree Commission.
- * As recommended by the Urban Forest Task Force, provide resources for the Park and Tree Department to update and maintain the Master Street Tree Plan.
- * Revise Master Street Tree Plan with goal of maximizing shade by planting canopy trees in canopy tree spaces.
- * Analyze tree attrition in the downtown and midtown areas and establish goals and plans to reverse this trend.
- * Inventory and evaluate vacant city land, designate new parks on that land and encourage neighborhood partnerships and citizens to plant trees in those parks.
- * Coordinate design and implementation of plans for new streets and paving among appropriate city departments to maximize opportunities for tree preservation and planting.

To Chatham County

- * Adopt strengthened revisions to the tree ordinance.
- * Evaluate personnel and resources needs to ensure strict enforcement of tree ordinance. Make recommendations in budget.
- * Involve County Arborist in the staff review of applicable petitions before the Zoning Board of Appeals.
- * Continue to refine coordination between Inspections and Engineering Departments with County Arborist to enforce tree ordinance provisions.
- * Fund county tree program as a budgeted item in yearly budget.
- * Enlarge staff as necessary to manage tree program and carry out enforcement of ordinance.
- * Investigate the establishment of a staff position in the County Department of Parks and Recreation to handle tree planting, tree maintenance, turf management and landscape care.
- * Develop or update master plans for county parks and open spaces to incorporate principles of tree planting/maintenance/preservation and passive land use.
- * Due to a lack of trees and shade in Scott Stell Park, Charles Brooks Park and Lake Mayer, develop long term plans for tree planting, landscaping and tree maintenance in these parks.
- * Continue to work with State DOT for additional tree protection/replanting criteria for road building projects.

To The Metropolitan Planning Commission (MPC)

- * Review and approve strengthened revisions to the tree ordinance as expediently as possible.
- * Work with city and county to evaluate personnel and resources needed to ensure strict enforcement of tree ordinance.
- * Initiate reevaluation of buffer standards and functions. Restructure buffer requirements to include trees as an alternative means of accomplishing revised buffer standards.
- * Consistently enforce existing buffer requirements.
- * Introduce alternative design concepts/options which incorporate trees and allow for tree protection and planting in high density, single family residential development.



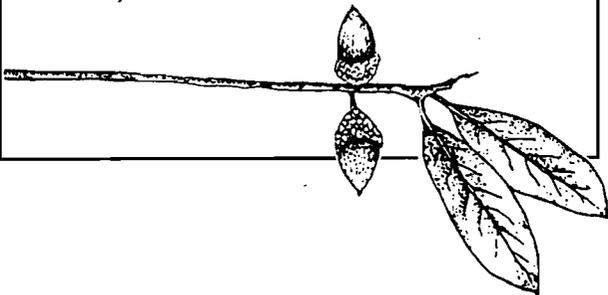
Conclusion

It is the hope of the Savannah Tree Foundation that the study and this publication will encourage the entire community to think of trees as part of our basic infrastructure, as fundamental to development as roads, power and sewage. Since the founding of the City of Savannah, parks, public spaces and trees have been a part of the original city plan and today provide the city with a viable green landscape which is visited annually by over 850,000 tourists. Many of the trees of the historic and midtown area are dying of old age and the city must recommit to replanting in these areas and find new areas for the planting of large canopy trees in order to preserve the historic character and greenscape of the downtown area.

We must also commit to responsible growth in Savannah and Chatham County. We can not ignore the many proven benefits from trees, both environmental and financial. We must designate areas along roadways and on public land in the city and county for tree planting so that we leave a legacy as enduring as those of our forefathers. In addition, the community must support adoption of strengthened tree ordinances to optimize tree preservation and protection on private land.

Concerning the Tree Cover Study, Sharon Dolliver of the Georgia Forestry Commission:

"This uniquely progressive project has positioned Savannah, once again, as a cutting edge leader in the national urban forestry arena."



The Savannah Tree Foundation

The Savannah Tree Foundation is a non-profit, 501-C3 organization managed by a volunteer board of directors. Originally funded by an anonymous benefactor, the Foundation operates from voluntary contributions and grants.

Advocacy, educational efforts, and tree plantings comprise the Foundations' efforts as it seeks to fulfill its mission to promote an awareness of trees as a vital natural resource and an important part of our heritage.

The Foundation's work in the community includes community service, advocacy, and tree planting. Recent community service work includes service on the MPC Tree Advisory Committee, the Daffin Park Master Planning Task Force, the Urban Forest Task Force, the Citizens Advisory Board of the Site Selection Committee and the Chatham Tree Coalition.

Recent work in advocacy has included the protection of an exceptional mixed hardwood forest at Bacon Park, the live oaks and other trees in Daffin Park; and the planned incorporation of trees as infrastructure in public parks, community developments and road building projects.

Our tree planting programs, in partnership with Union Camp Corporation, Savannah Electric and Power Company, Southside Fire Department, Chevrolet/Geo Environmental Program, Savannah Park and Tree Department, the Georgia Forestry Commission and many other local businesses and citizens, has included the planting of over 70 live oak trees in the median of White Bluff Road. The Foundation is poised to expand its operations through the hiring of Program Development Coordinator funded with local corporate donations and a federal grant. Staff will assist the board with administration and advocacy and implement a community based tree planting program which will plant over 250 trees in Chatham County in 1994.

Savannah Tree Foundation

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