



ATHENS-CLARKE COUNTY COMMUNITY TREE COUNCIL COMMUNITY FOREST INFORMATION SYSTEM

HIGHLIGHTS AND DISCUSSION

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- A Community Forest Information System (CFIS) has been designed and successfully implemented for Government and citizens of Athens-Clarke County Georgia.
- A twelve person CFIS Working Group (CFISWG) was put in place to help design the CFIS and to guide its development in the future
- Reports state that over a 60 year period (1938 – 1998), tree canopy cover in Athens-Clarke County (A-C) increased some 40%
- In the 20-year period 1980 – 2000, the canopy cover in A-C showed a decrease of 5%.
- An update and maintenance procedure for the period June 1, 2000 to April 23 2003 yielded a new forest cover map showing an additional 2 % decrease in crown cover for that period.
- Thirty percent of the significant crown cover was associated with the rural agricultural areas of the county.
- Although large oak trees represented only a small fraction of trees in urban Athens, their collective crowns contributed almost the total canopy cover.
- An application demonstration was completed establishing the land cover map on the Athens-Clarke County computer server and network and made available to all those served by the network and the general “walk-in” public.
- Systems and software transfer was accomplished from Bob Barker & Associates to the CTC computer facility which included mapping, image processing and geographic information systems (GIS) capabilities compatible with A-C GIS.
- CTC visibility was enhanced through a Public Relations and Awareness campaign, a joint project between the CTC and the Grady College of Journalism and Mass Communication, University of Georgia.
- A CTC Website was refurbished and established as www.athenstrees.com

DISCUSSION

The successful completion of the Athens-Clarke County (A-C) Community Forest Information System (CFIS) was the culmination of a three-year progressive project initiated by the A-C Community Tree Council (CTC) and funded each year by the Urban and Community Forest Grant Assistance Program (U&CF) established by the U.S. Department of Agriculture, Forest Service and administered by the Georgia Forestry Commission. Each phase was titled and followed sequentially building on the one before. Critical to the success of the CFIS was the early establishment of a CFIS Working Group to assist in its content and design. Full documentation and procedures regarding the CFIS development are on record in the CTC office, 350 Pound St. Athens-GA 30601.

The first phase of the CFIS (September 1, 2000 – August 31, 2001) was the “Community Forest Cover and Change Analysis (CFCCA). This was successfully completed and described the community forest in terms of distribution (where is it?), composition (what is it?) and condition (how is it?). The second phase of the CFIS (September 1, 2001 – August 31, 2002) was the Mapping and Information Management Program (MIMP). This phase addressed the attachment of attributes to describe the land cover types. The final phase put together the CFIS from the combined results from the CFCCA and the MIMP. The CFIS is current and accessible to all those in need of, or interested in the communities forest and vegetative cover. A summary of the implications and significance of the CFIS are discussed below.

Although it has been suggested that there was a dramatic 40 percent increase in tree cover over the 60 years between 1938 and 1998, no direct comparison can be made to the current data because of the different criteria and assumptions made. None-the-less, we think it safe to say, that there is little doubt of a considerable increase in tree cover over the past 60 years due to abandoned farmland. More important was the determination of periodic trends (if any) appearing over the past 10 and 20 years. A cover and community forest change analysis study from data collected on June 1, 2000, and completed in August 2001 indicated a 5% decrease in tree cover over the 20-year period between 1980 and 2000. During this period, the area of significant tree cover (areas with 30% or greater crown closure) dropped from 61% to 56%. This 0.25% negative annual trend was substantiated by the results of an update and maintenance procedure conducted for the period June 1, 2000 to April 23, 2003 where an additional 2% loss to 54% was shown.

The vectors for change (the Federal, State and local road networks) were in place during this period, and growth (sprawl?) has predictably followed. In terms of vegetative cover, agricultural lands (and dense pine planted on abandoned farmland) were found primarily in the eastern half of the county, while the western half was dominated by largely hardwood forests. Superimposed on this vegetative landscape is the network of riparian wetlands dominated by hardwood tree species.

In addition to the major U.S. and state highways, significant local transportation corridors were in place and have served the same growth function. The radial pattern of roads is more apparent in the northern and western quadrants of the county. Several crossroads

intersect these roads. Add to this two major rivers (North Oconee and Middle Oconee) trending north and northwestward through the county (with associated tributaries) and a network of road and river corridors emerge conducive to multi-levels of development. Development did follow and is continuing with the greatest increase in the residential development occurring in those areas containing the highest tree densities. This does not always mean quality tree cover. Many of the forested stands (especially in the uplands) consisted of residual trees from former farm and forested lands (part of that 40% increase). Development was often done legally but irresponsibly. The results were reduced (or eliminated) tree cover and severely fragmented lands upon and around which the development occurred. Growth in this part of the county seems to be progressing between the major transportation corridors and along the river (Middle Oconee primarily) and stream corridors where more affluent subdivisions have flourished. While some of this development has been well designed, much of it has not, showing little respect for reasonable buffer criteria, and protection of the incipient wetlands.

The east and southeastern quadrants of Athens-Clarke County are growing as well, but the nature of growth to date has been along the major corridors and is at the stage where the west and northwestern quadrants were 10-15 years ago. With the expansion of many collectors to four lane arteries and the widening of many of the cross connectors, the basic infrastructure of water, electricity and sewer are reaching into the northern and eastern extremities of the county. The eastern part of the county is positioning itself for rapid growth in the future and it is already beginning. Fortunately not all development decisions or criteria have been set for this part of the county. There is real opportunity to avoid some of the pitfalls and mistakes made during the western expansion. A timely interactive image-based information system such as the CFIS offers a decision support resource critical in choosing sound alternatives and setting priorities during the development stages, and surveillance and feedback during the implementation stages of long-range planning and future development. Currently the CFIS is installed on the A-C computer server and is available through the A-C network (all county departments) and to the general public through facilities at the A-C Planning Department.

Athens-Clarke County is not unique, nor does it stand-alone in a vacuum. The county is influenced directly by development in surrounding counties. As they develop transportation and infrastructure corridors associated with development, a pull on A-C resources and development will be created. This is currently apparent in Oconee County with the completion of State Road 316 (a multi-lane expressway to north Interstate 85) and the commercial build-up where it intersects with Epps Bridge Parkway. As State Highway 72 is expanded to four lanes northeast into Madison County and on to the South Carolina border, a like pull in that direction can be reasonably expected as development unfolds. Timely resource information is essential in properly planning for and responding to these changes in growth patterns.

For more information, visit the CTC web site: www.athenstrees.com or contact us by e-mail: www.information@athenstrees.com.