

Critical Forest Land in the Georgia Piedmont

Category: Urban/Rural Interface Planning

Authors: Christine Jenkins, Pacific Meridian Resources, Atlanta, GA
Lee Carmen, Northeast GA Regional Development Council, Athens, GA
Dudley Hartel, Consulting Urban Forester, Commerce, GA
Kass Green, Pacific Meridian Resources, Emeryville, CA

The continued loss of forest resources and more important, tree canopy, from development associated with the region's population growth, has significant regional impact because of the range of benefits tree canopy provides, including improved air and water quality, energy conservation, and carbon sequestration. To protect forest resources that best mitigate the impact of human activity, local government needs a tool to identify and prioritize critical forest lands. The purpose of this study was to identify and measure tree canopy change in the four-county Athens area over a 16-year period, identify and prioritize remaining critical forest land based on an index of urban/rural benefits, and project expected losses of critical forest land based on future land use patterns.

Tree canopy change was identified using LandSat 30m satellite imagery from 1985, 1992 and 1999. Field training sites were taken in the 4 county area and a supervised vegetation classification was performed on the 1999 image. Classes included pine, mixed pine/hardwood, hardwood, pasture, urban, water and bare areas. Utilizing the field data in non-change sites and existing DOQQ's, a supervised classification was performed retroactively on the 1985 image. This data was then utilized with existing hydrology and transportation layers for development of the critical forestland index.

The final product of this study will be a MapObjects/Visual Basic interface, called a GeoBook, which provides the user with an easy-to-use interface for interactively viewing the information derived in this study. This includes GIS layers developed in the project, final text of the report and the final index parameters. This interface will be provide to elected officials, county government staff, and the public at large for use in planning and ordinance enforcement.

Contact: Christine Jenkins

Address Pacific Meridian Resources
4501 Circle 75 Parkway
Suite F-6320
Atlanta, GA 30339

Phone: (770) 953-4143

Fax: (770) 953-1165

Email: cjenkins@pacificmeridian.com