

June 13, 2006



**FOR IMMEDIATE RELEASE**

## **New Study Indicates Dramatic Loss of Forested Land in Greenville County since 1985**

A study of land cover change in Greenville County from 1985 to 2000, conducted by the Strom Thurmond Institute's South Carolina Water Resources Center at Clemson University, was released last week. Part of an on-going research effort coordinated by the Saluda-Reedy Watershed Consortium, the study reveals that forested land decreased from almost 372,000 acres in 1985 to just under 295,000 acres in 2000, indicating a loss of more than 77,000 acres (21% decrease) in 15 years. The study also documented changes in developed lands, farmlands and water/wetlands throughout the county. [Note that "Forested Land" is the combined total for Deciduous, Evergreen, and Mixed Forest types.]

Brad Wyche, Executive Director of Upstate Forever, which manages the Saluda-Reedy Watershed Consortium program, said, "The numbers are staggering. In just 15 years, we have lost over 77,000 acres of our forests, and the loss continues at a breathtaking rate of 14 acres per day. If this study is not a wake-up call for Greenville County to get serious about tree protection, land-use planning and conservation, I don't know what is."

Forests provide multiple benefits to society, including reduced runoff, absorption of pollutants, improved air quality, wildlife habitat and higher property values. "There is a clear and compelling public interest in protecting the county's tree cover," Wyche said.

### **PROJECT METHODOLOGY**

With rapid changes in land use/land cover occurring across the U.S., remote sensing technology has become an essential tool in monitoring urban development and environmental conditions. Using satellite imagery for land cover change detection is possible because changes in light and energy reflectance values that are measurable by the satellite sensors can be translated to changes in land cover categories. The analysis goal is to characterize those areas of important change (e.g. forest clearing or urban land development) between two or more image dates.

This project used a satellite multispectral imagery program called Landsat Thematic Mapper to conduct an unsupervised classification analysis. In this process, the computer groups similar reflectance values into numerous classes and the scientist uses samples of aerial photography and other geographic data to define the final classes that are used (e.g. developed land, forest land, farm land). For purposes of our study, the imagery was used to derive three classes of forest (deciduous, evergreen and mixed) and then determine the different amounts of those categories in imagery from 1985 and 2000.

Numerous research groups at universities, federal and state agencies use this type of satellite image analysis methodology to produce land cover maps. In the 1990's, the U.S. Fish and Wildlife Service contracted with numerous states to produce land cover maps as part of a nation-wide habitat study. Recently, the U.S. Geological Survey and the U.S. Environmental Protection Agency teamed with other federal agencies to produce the Multi-Resolution Land Cover (MRLC) data set for the entire

U.S. The Clemson researchers, led by Dr. Jeff Allen with the Storm Thurmond Institute, followed that same methodology to produce the land-cover data set for Greenville County and seven other Upstate counties including Abbeville, Anderson, Greenwood, Laurens, Newberry, Pickens and Spartanburg. The findings for those counties will be released shortly.

## **SALUDA-REEDY WATERSHED CONSORTIUM**

The Saluda-Reedy Watershed Consortium is a collaborative effort of organizations and individuals concerned about the impacts of changing land use on the quality and abundance of water in the Saluda-Reedy basin: the entire land area that drains to Lake Greenwood. It encompasses over 1100 square miles, includes nearly 1500 miles of streams and is over 80 miles long. The Consortium includes a wide variety of partners from the public, private and nonprofit sectors that are working together to provide assistance, support and science-based information to state and local agencies and the public in addressing the immense challenges that confront the watershed.

The work of the Consortium is made possible by the generous financial support of the V. Kann Rasmussen Foundation and Fuji Photo Film Inc. The V. Kann Rasmussen Foundation is a charitable foundation that supports causes in Greenwood and throughout South Carolina. Fuji Photo Film Inc., whose principal U.S. manufacturing facility is in Greenwood, also supports this project and others in the Greenwood community and throughout South Carolina.

For more information about the results of the newly-released land-cover study or the Saluda-Reedy Watershed project in general, please contact:

Brad Wyche Executive Director, Upstate Forever

P.O. Box 2308 Greenville, SC 29602

(864) 250-0500 ext 24

(864) 270-3739 (cell)

[bwych@upstateforever.org](mailto:bwych@upstateforever.org)

<http://www.upstateforever.org/>

Dr. Jeff Allen

Director, South Carolina Water Resources Center

The Strom Thurmond Institute, Clemson University

Clemson, SC 29634-0125

(864) 656-0228

[jeff@strom.clemson.edu](mailto:jeff@strom.clemson.edu)

[http://www.strom.clemson.edu/teams/water\\_resources/](http://www.strom.clemson.edu/teams/water_resources/)

Jennifer S. Rennicks

Project Manager, Saluda-Reedy Watershed Consortium

Upstate Forever, P.O. Box 2308 Greenville, SC 29602

864-250-0500 ext 34

[jrennicks@upstateforever.org](mailto:jrennicks@upstateforever.org)

<http://www.saludareedy.org/>

#####