

Centers for Urban and Interface Forestry
P.O. Box 110806
Bldg. 164, Mowry Rd.
Gainesville, FL 32611

Issue 12, July 2012

Upcoming Events			
Date	Description	Location	Contact
August 11–15, 2012	International Society of Arboriculture 88th Annual Conference	Portland, OR	www.isa-arbor.com/events/conference/index.aspx
August–November 2012	Changing Roles 2012 Webinar Series	Online	www.interfacesouth.org/products/changing-roles/webinar Nicole Wulff, 352-378-2451, nmwulff@fs.fed.us
November 12–13, 2012	2012 Society of Municipal Arborists Conference	Sacramento, California	www.urban-forestry.com/
November 14–16, 2012	Partners in Community Forestry	Sacramento, California	www.arborday.org/shopping/conferences/brochures/pcf/2012/

In Our Next Issue

We will describe how DeSoto County, an urbanizing county south of Memphis, TN, is using i-Tree software to better understand the environmental and monetary benefits they receive from their forests.



This issue and past issues can be found online at: www.interfacesouth.org/products/leaves

InterfaceSouth and Urban Forestry South are the science delivery centers associated with the USFS Southern Research Station work unit, SRS-4952: *Integrating Human and Natural Systems in Urban and Urbanizing Environments* (www.humanandnaturalsystems.org) and the USFS Southern Region. They are collectively called the Centers for Urban and Interface Forestry. InterfaceSouth focuses on interface forestry issues while Urban Forestry South focuses on urban forestry issues.



Leaves OF Change



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Contact

InterfaceSouth

Annie Hermansen-Báez,
IS Center Manager
PO Box 110806
Bldg 164, Mowry Rd.
Gainesville, FL 32611
352-376-3271
352-376-4536 fax
ahermansen@fs.fed.us
www.interfacesouth.org
www.twitter.com/interfacesouth
www.youtube.com/interfacesouth

Urban Forestry South

Dudley Hartel,
UFS Center Manager
320 Green Street
Athens, GA 30602
706-559-4236
706-559-4266 fax
dhartel@fs.fed.us
www.urbanforestrysouth.org



Guest contributor: Josh McDaniel,
Consultant to the US Forest Service

Research

The Tampa Bay Watershed: Building Understanding of a Rapidly Urbanizing Ecosystem

WHEN **Michael Andreu** took a faculty position with the University of Florida's Gulf Coast Research and Education Center in Plant City (Michael is now at the University of Florida's School of Forest Resources and Conservation in Gainesville, FL), he decided to focus on the management of forests in rapidly urbanizing areas. Andreu grew up in a small town in Florida and over time watched as his hometown was practically swallowed by the rapidly expanding city of Jacksonville. It is a familiar story being played out throughout the South—rural and interface landowners are faced with the combined pressure of limited access to markets or declining prices for timber and pulp, and increasing value of their land for development. In many cases, development pressure wins out and landowners are given little choice but to sell.

Andreu soon met **Rob Northrop**, a new extension agent in nearby Hillsborough County. They realized that they had a common interest in interface forest management. The two started listing questions that they felt needed to be answered regarding the forests in the greater Tampa Bay area: What is the current condition of the forests? How are forests changing? What are the drivers? "We thought that if we could define the forests and the problems, we could manage them better," said Andreu.

There was very little information available regarding the forests around Tampa Bay, and they quickly realized that two people working alone were never going to answer such complex questions sufficiently. So, they began looking for partners. In 2006, they held a few meetings and received good turnout from representatives from many of the counties and municipalities surrounding Tampa: the Florida Forest Service, the Southwest Florida Water Management District, the US Forest Service (InterfaceSouth), the US Environmental Protection Agency, the University of Florida, and the University of South Florida (USF).

A nonbinding and collaborative group that became known as the Tampa Bay Watershed Forest Working Group (TBFWFG) was formed. Its members began by defining the group's objectives and goals.

One of the group's first decisions was to organize its work at the watershed level, and to use the ecological boundaries of the watersheds to structure the work rather than political boundaries. The group settled on a mission statement that captured the



Rob Northrop, right, and Michael Andreu founded the Tampa Bay Watershed Forest Working Group. Northrop is an urban forestry extension agent in Hillsborough County, FL, and Andreu is a forestry associate professor at the University of Florida.

Photo courtesy of: Tyler Jones, UF IFAS

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The i-Tree Eco Model

THE I-TREE

Eco Model

allows managers and researchers to quantify urban forest structure and functions. The model quantifies species composition and diversity, tree density and health, leaf area and biomass, total carbon stored, and net carbon sequestered annually. It also estimates ecosystem services, such as the effects of trees on the energy use of buildings and the consequent effects on carbon dioxide emissions from power plants, as well as hourly pollution removal by the urban forest and the associated percentage improvement in air quality throughout a year—all information that is incredibly important to urban foresters, city planners, and others. However, the model requires a large commitment and investment in time and resources for data collection.



ecological focus of its work—“to create a scientific framework for the ecological assessment and sustainable management of the Tampa Bay watershed’s trees and forested ecosystems along the urban-wildland continuum.”

Rob Northrop says that the group worked on creating a set of shared objectives that would provide a framework for collaboration. “This was not like an agency with prioritized objectives. We started with the idea that if you built consensus around shared objectives, then collaboration would happen. And it worked.”

The group received significant buy-in from a number of municipalities in the greater Tampa Bay watershed, not the least of which was Tampa itself. The city had committed to conduct an analysis of the urban tree canopy, and it approached the TBFWFG to be a partner in the project. The TBFWFG saw the analysis as a potential opportunity to accomplish many of its objectives while also strengthening its unique partnerships. The TBFWFG decided to go beyond a straightforward canopy survey and do a more comprehensive ecological analysis using the i-Tree Eco Model (also known as the Urban Forest Effects Model (UFORE)). The group also decided to expand the scope of the study beyond the city limits to the watershed level.

The project began with 200 permanent plots established within Tampa itself and 300 more plots set up in watersheds adjacent to the city. According to Kathy Beck, the natural resources coordinator for Tampa, the initial study gave the city a complete picture of the structure, composition, and health of the urban ecosystem as well as quantification of the ecosystem values provided by the forests. “There are all sorts of benefits to this type of research. It allows us to use our money and resources in ways that get us where we want to be,” says Beck. “And as we move forward, and collect more data, we will be able to see what has changed.”

Tampa’s city government has committed to doing the analysis every

five years and is now in the process of remeasuring the plots for the first time since the analysis in 2006. The TBFWFG is helping to develop performance criteria for urban forest sustainability based on this analysis; these criteria will become a major part of Tampa’s comprehensive urban forest plan. “The analysis really captured their [the Tampa City Council’s] imagination,” says Andreu. “They told us, ‘Now you are talking to us in our language—numbers and dollars. We can take this information and communicate it to the public.’”

The success of the initial Tampa project caught the attention of other groups and municipalities in the area, validating the TBFWFG’s decision to focus on solid research and data collection as a basis for building partnerships and collaboration. A number of municipalities within the Tampa Bay watershed are now gearing up for their own analysis. Pinellas County, to the south of Tampa, has established another 250 plots within its jurisdiction and these are being included in the next round of overall data collection.

Melissa Friedman, a biological scientist and graduate student, who works with Andreu, and **Shawn Landry** of USF’s Florida Center for Community Design have also been instrumental in the group’s success.

Wayne Zipperer, a research forester with SRS-4952, has been helping the group analyze the project data. He says that one of the main contributions of the project is that it focuses on a landscape that is both urban and urbanizing. “Working on both types of landscapes helps in understanding how aspects of the broader region are changing. This will help in making forecasts regarding the potential outcomes from land-use decisions.”

Annie Hermansen-Báez, InterfaceSouth’s science delivery coordinator, will be working with Andreu, Northrop, Landry, and Zipperer to develop a series of fact sheets and how-to guides that will provide



An undergraduate student measures an i-Tree Eco plot within a residential area of Tampa.

Photo courtesy of: Carolyn Cheatham-Rhodes

information about various aspects of the project, including criteria analysis, forest spectrum analysis, canopy/GIS analysis, and much more. These products will be available in 2013.

The US Environmental Protection Agency (EPA) has also joined the TBWFWG and is in the process of linking its own project that looks at the value of ecosystem goods and services related to different land uses in the Tampa Bay area with the ongoing urban forestry analysis. The EPA is looking more at natural areas and rural lands—marshes, wetlands, and agricultural lands. The plots and data collection it has started in rural areas will be used to compliment the data from urban and urbanizing areas that began with the city of Tampa. Marc Russell, a research ecologist with the EPA, says that the ultimate goal is to develop user-friendly models that planners, land managers, and decision makers can use in their work.

Michael Andreu is still slightly amazed at how far the project has come in such a short time. “It just shows what can happen when you get beyond talk and actually do something,” he says. “It is really an organic effort. No one from outside is imposing structure on the project, and people are really seeing value in what it provides to them.”

Training and Outreach Activities

New Changing Roles Materials under Development

InterfaceSouth is in the process of developing a new module for the Changing Roles Professional Development Program, which will include new fact sheets, exercises, and case studies on topics such as climate change, ecosystem services, firewood movement, interface entrepreneurs, succession planning, environmental justice, social media, and partnerships. Additionally, a series of e-learning courses based on the five Changing Roles modules is under development and the fourth Changing Roles Webinar Series will take place this fall. For more information contact **Nicole Wulff**, nmwulff@fs.fed.us, 352-378-2451, or visit: www.interfacesouth.org/products/changing-roles.

Urban Forest Strike Team Training in Georgia

The Georgia Forestry Commission organized and hosted team leader and task specialist workshops for Urban Forest Strike Teams (UFST) in early May in Forsyth, Georgia, assisted by Urban Forestry South’s **Dudley Hartel** and **Eric Kuehler**. In addition to representatives from state forestry agencies across the South, the Forest Service Northeastern Area sent representatives to attend both the task specialist and team leader training in an effort to adopt and increase UFST capacity in the northeastern and midwestern states. Ten team leaders and thirty-four task specialists representing ten states were trained during the two-day workshops.

Storm Preparedness Workshop in Florida

Eric Kuehler worked with the University of Florida, the Central Alabama Regional Planning and Development Commission, and the Florida Forest Service to present a storm preparedness workshop in Pensacola, Florida in late May. The workshop addressed such topics as (1) planning for vegetative debris removal and storage, (2) communicating with the public and municipal departments after these events, (3) tools for identifying vulnerability and estimating debris volume, and (4) after-storm action needs and the role of the Urban Forest Strike Teams. Contact Eric Kuehler (ekuehler@fs.fed.us) or Francisco Escobedo (fescobed@ufl.edu) for more information.

Encouraging More Kids in the Woods

Annie Hermansen-Báez attended three events in the spring of 2012 to provide information about the benefits of getting kids outdoors and suggestions for where to go and what to do outdoors, as well as firewise landscaping: (1) the Kanapaha Spring Garden Festival in Gainesville, FL, March 24–25; (2) the Girl Scouts of West Central Florida Discover the World Event 2012 in Ocala, FL, April 19; and (3) the City of Gainesville’s Farm and Forest Festival, April 28. She also presented on the benefits of outdoor activity for children at the Georgia Urban Forest Council’s meeting in February 2012.

Recommended Resources

University of Florida IFAS Extension Publications

City of Tampa Urban Ecological Analysis (FOR203) provides a brief summary and link to the final report of the City of Tampa’s ecological assessment of the city’s urban forest resources, <http://edis.ifas.ufl.edu/fr265>.

Environmental Services Provided by Tampa’s Urban Forest (FOR204) focuses on services provided by Tampa’s urban forest, such as energy conservation, air pollution removal, carbon storage and sequestration, and others, <http://edis.ifas.ufl.edu/fr266>.

Unplug Handouts

InterfaceSouth has developed handouts and posters that incorporate the *Unplug* campaign of the US Forest Service and the Ad Council, which encourages children and their parents to unplug their televisions and other electronic devices and get outdoors. These handouts can be placed for distribution at parks, pediatricians’ offices, schools, and other places to help encourage outdoor activity in children and provide ideas about where to go and what to do outdoors. To view these handouts visit: www.interfacesouth.org/projects/kids-in-the-woods/unplug-handouts.

