

# Tools for assessing and managing Community Forests



**i-Tree Newsletter—December 2008**

## **i-Tree Team wins 2008 Forest Chief's Honor Award**

On November 7, 2008, the Chief of the U.S. Forest Service, Abigail R. Kimball, announced the recipients of the [Chief's Honor Awards for 2008](#). The Chief's Honor Awards are the highest Forest Service awards, recognizing exemplary achievements in Forest Service Programs that contribute to the Service's strategic goals.

This year's Chief's Honor Award for "Engaging Urban America" went to the i-Tree Development and Implementation Team of Dave Nowak, Keith Cline, Greg McPherson, and Dave Bloniarz, U. S. Forest Service; Greg Ina and Scott Maco, Davey Tree; Dan Lambe, Arbor Day Foundation; Jerri LaHaie, Society of Municipal Arborists; and Jim Skiera, International Society of Arboriculture.

As the Chief's Honor Award nomination stated: *"The i-Tree Development and Implementation Team is a unique public-private and cross Forest Service Deputy Area partnership, that has successfully provided cities and communities, not just nationwide but worldwide, with a suite of software tools, i-Tree, developed by U. S. Forest Service researchers, that are being used to improve the management of urban and community trees and forests to provide a wide range of public benefits. This Team's efforts have significantly contributed to broader access of urban Americans to the environmental, social and economic benefits of healthier, more sustainable trees and forests."*

## **i-Tree Version 3.0 Under Construction**

The i-Tree development team is working on i-Tree version 3.0 scheduled to be released in the spring of 2009. Many modification will be made to increase functionality and

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## **Casper, Wyoming: Making the Case for Community Trees with UFORE in the Cowboy State**

One misconception about utilizing i-Tree to perform a community forest assessment is that you already need to have an advanced urban forestry program in place. The truth is that communities all over are utilizing i-Tree for the specific purpose of justifying program funding and establishing a program based on an understanding of their resource.

### **Recognizing a Need**

Like many communities, tree care in Casper, WY was largely reactive and just one of many duties performed by the Public Services Department staff. Year after year of seeing trees removed without a plan for replacement worried the city staff members who performed tree work. No one, however, had any basis for articulating an argument that Casper's prized legacy—their canopy—was poised for imminent decline. The last large scale tree planting initiative in Casper was at the end of World War II and their urban forest, full of Siberian elms, did not appear to be ageing gracefully. For a few staff members, finding a way to make a compelling argument to care for community trees that was cost effective, accessible and credible became their personal charge.

In 2006, Jolene Martinez, Administrative Analyst and Keep Casper Beautiful Director, first learned about the i-Tree tools while browsing the US Forest Service's website. Jolene recalls, "with the support and encouragement of our U&CF State Coordinator, Mark Hughes, I brought the idea of i-Tree to the City."

"It was fortuitous timing that a workshop was being offered in the West, so we decided to send one of our parks staff, Jim Gerhart," says Martinez.

"After considering our options, we felt that UFORE would not only give us a comprehensive picture of our urban forest, but also tell us what it was doing for the community," said Gerhart. "We needed to make a case for funding an urban forestry program and a person to run that program...we wanted to have information that would help that person hit the ground running!"

### **Implementation**

Less than a month after the training, Gerhart had a \$3000 Community Forestry Grant from the State Forestry Division to assist with project expenses. Labor for project management and field team leaders came from city staff, while volunteer Natrona County Master Gardeners were recruited to assist with data collection. With the training behind him and the i-Tree manual under his arm, Jim trained staff and volunteers for the project. In all, 243 tenth-acre plots located throughout the city were inventoried in this highly visible effort.

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Streets of Casper, Wyoming courtesy of Bill Scott

A cooperative  
initiative between:



**The National  
Arbor Day Foundation®**



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improve performance under a uniform platform.

## **i-Tree Streets**

STRATUM and MCTI will be merged to become i-Tree Streets. Functionality of both applications will remain and be enhanced under this single-tool platform. Redundancy between the two applications will be eliminated and no longer will users need to make the sometimes difficult decision of whether to go the MCTI or STRATUM route.

As part of the improved data collection options, a newly-developed pest detection module will be offered. Based on a uniform, standardized protocol, this module will allow i-Tree Street users to systematically collect information on tree pest signs & symptoms and report on their presence.

## **i-Tree Eco**

The Urban Forest Effects Model (UFORE) upgrade will be called i-Tree Eco in v3.0. Improved functionality will include the complete inventory option and enhanced user interface for accessing reports and menu items.

## **i-Tree Hydro**

This new application is designed to simulate the effects of changes in tree and impervious cover characteristics within a watershed on stream flow and water quality. It was designed specifically for resource managers and planners who need to quantify the impacts of changes in tree and impervious cover on local hydrology to aid in management and planning decisions.

## **i-Tree Storm**

The current Storm Damage Assessment Protocol will become known as i-Tree Storm. Noticeable improvements to the application will be Microsoft Vista compatibility, seamless data transfer from PDA, and a new Hurricane Adaptation developed by Dr. Escobedo, School of Forest Resources and Conservation, University of Florida and his cooperators.

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"In retrospect," says William Scott, who was an arborist for the Natrona County School District working on a cooperative inventory project in 2006, "treating on private property and across the city afforded field crews a great opportunity to connect with city residents." Many residents not only allowed access to staff and volunteers to collect data, but also were eager to share the history of their landscape trees. "The field crews learned a lot about local attitudes towards trees," said Scott.

## **Making the Case**

The [Casper UFORE report](#) provided the results that were so desperately needed, a scientifically credible snapshot of Casper's entire urban forest: street trees, park trees, and those on private lands. The results not only confirmed the vulnerability of an aging and homogenous urban forest, but also put economic values on the City's "green" capital and the benefits it provides. Using the data, city staff were able to illustrate, with certainty, that Casper's trees were not only a valuable asset, but a fragile one too.

More startling than the hundreds of thousands of dollars in energy and air quality benefits the forest produces yearly, is the investment the City found it would need to replace this component of the infrastructure if all was lost: \$243 million dollars! With no current municipal investment in urban forestry management, the future was bleak. The high number of elms were poised to decline rapidly over the next 5-20 years, and the benefits that the trees provide would go with them. The time for action was now!

The Public Services Department staff did not have to sell the idea to the City Manager as the harsh reality of the results were self evident. After seeing the i-Tree results, the city committed \$450,000 to launch and administer a pilot urban forestry program over three years with required benchmarks to monitor program effectiveness. William Scott was hired as the first City Forester of Casper.

Two years into the pilot program, all benchmarks have already been met and the UFORE data is still being used as the foundation for strategic decision making. Scott emphasized, "Everyday we use the baseline i-Tree data to determine what trees we plant and where the priorities are. It really has enabled us to not only diversify the City's tree resource, but the emerging resource that cares for the trees: the newly founded Urban Forestry Section. Our i-Tree project has allowed us to build external and internal relationships with other departments such as engineering, planning and community development that didn't exist two years ago."

Showing only signs of success, Scott is confident that the urban forestry program will be written into the City's General Plan in 2009.

*The i-Tree Team thanks William Scott, Jim Gerhart and Jolene Martinez.*

## **Casper, WY Quick Facts**

### **Structural Values**

Number of trees	123,000
Compensatory value	\$243 million
Carbon storage	\$689,000
Tree cover	8.9%

### **Annual Functional Values**

Carbon sequestration	\$22,000
Pollution removal	\$249,000
Energy savings	\$26,700

### **Siberian elms are:**

- 33% of all city trees
- 70% of street & park trees alone

A cooperative  
initiative between:

