

Tools for assessing and managing Community Forests



i-Tree Newsletter—August 2014

i-Tree marketing exchange

i-Tree users have come up with many creative ways to demonstrate the benefits and values of community trees – from digital billboards to presenting large checks to their city mayor. To help facilitate the exchange of materials and ideas, we have developed the “[Marketing i-Tree](#)” page.



The Wisconsin DNR's tree graphic template is available on the [i-Tree Marketing](#) page.

In addition to simple fact sheets, you'll also find new promotional i-Tree videos developed by Dave Bloniarz from the U.S. Forest Service. The popular Wisconsin DNR i-Tree Streets and Canopy graphic templates can also be downloaded and modified using Adobe Creative Suite software tools.

If you have a template or materials that you would like to share with other i-Tree users, please contact us at info@itreetools.org. We will be glad to post your promotional concepts and items to the Marketing i-Tree

i-Tree Hydro goes live with training in Georgia

Urban Forestry South and its partners facilitated a first-of-its-kind i-Tree Hydro v5.0 workshop. The workshop was hosted by the Center for GIS at Georgia Tech in Atlanta,

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A primer on i-Tree data collection options

There are now several i-Tree data collection options to consider when determining what will work best for your project. Start by evaluating your project objectives and then determine what can be accomplished with available resources, time, and technology – as well as the skills of your data collectors. Beyond these limitations, the project location may present challenges such as sketchy internet connectivity, long travel times, or safety concerns if using expensive devices in high crime areas. With these challenges in mind, here are a few thoughts on available i-Tree Streets and Eco data collection options to consider.

Mobile Data Collection System

Advances in web technology have enabled us to create a web-based data collection system that essentially allows anyone using a newer tablet, smartphone, or other mobile device to collect field data wherever there is an internet connection. The new Mobile Data Collection System (MDCS) relies on a device's browser and web forms for field data entry. The system is not an “app,” and it has both limitations and advantages.

On the plus side, a growing number of people have their own smartphone, iPad, or Android device that could be used for data collection. Field data are submitted directly from the device in the field to a “cloud” server and later retrieved into a project on a desktop. So crews can focus more time in the field and less time traveling to connect data collection devices directly to a single project computer.

Newer devices work best, as older ones do not always fully support the MDCS' HTML5 code. In addition, newer smartphones can cache data as long as the browser (webform) is still open after internet connectivity has been lost. Each device and browser behaves differently, so you should test this thoroughly to understand your device's capabilities and cache storage limitations. You can simulate lost connectivity by putting your phone in airplane mode and then see how long you can continue data collection. Of course, you will eventually need to regain connectivity to submit data.



Kutztown University students used iPad mini tablets with OtterBox protective cases for a recent i-Tree project.

One potentially significant limitation of the mobile system is that there is no way to back up data in the field. Users must be careful to avoid closing an active browser during data collection, which can cause data loss. To minimize that risk, field data can be submitted to the server throughout the day. Because device and browser behavior can vary, it's difficult to predict how a device will actually work in the field. The durability of mobile devices under field conditions may also be a factor, so consultants and others doing extensive data collection may opt to use the mobile system on “ruggedized” devices such as a Panasonic Toughbook or similar devices.

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and led by Dr. Ted Endreny, Tom Taggart, and Emily Stephan, a team of SUNY-ESF researchers involved in the model's ongoing development.



Participants – which included professionals from engineering, government, planning, research, landscape architecture, and urban forestry – learned the methods behind i-Tree Hydro before undertaking a number of example model applications, culminating in the creation of their own projects for their area of interest. Example i-Tree Hydro projects were completed at watershed, municipal, and parcel scales.

The workshop presenters also recommended using i-Tree Canopy as a tool for generating accurate tree cover, impervious cover, and cover under tree canopy estimates in order to input those values into i-Tree Hydro. Participants provided valuable feedback about the model interface, software fixes, and desired outputs which will be reflected in future updates of i-Tree Hydro.

Thanks to all participants and instructors for a successful workshop, and especially to Eric Kuehler of Urban Forestry South for organizing the sold-out event in just seven weeks with the help of cooperating partners and sponsors. Participants left primed to hit the ground running and apply i-Tree Hydro to their own projects. We look forward to hearing about their successes.

The Hydro workshop presentation slides (PDF) are available on the [i-Tree Presentations](#) webpage. Additional Hydro journal articles and resources discussed during the workshop can be found on the [Resources - Archives](#) webpage under the Hydro tab.

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PDA Utility

The i-Tree PDA Utility is an older data collection option and a “true application” that requires loading software on a compatible device. However, the PDA software is only compatible with older devices running the Windows Mobile 5.0 – 6.5 operating system (O/S). It's still possible to purchase used compatible PDA devices from places such as Amazon, but you would be investing in outdated technology. Alternatively, you may be able to borrow PDAs from others in your local network who have completed i-Tree projects. The PDA system also requires that field data collectors periodically connect or sync their device with the main desktop to transfer field data, so extra travel time may be needed to complete logistical tasks.

Nonetheless, there are still some advantages to the PDA system. Since it is an application that is loaded on a device, data can be backed up using an SD card. Also, PDA data collection is not subject to internet connectivity issues and the device behavior and data collection experience may be more consistent and predictable on different devices as long as they are running the required O/S.

The virtues of paper

As anyone who has lost data on a device or has lost a device in the field knows, there is still some value in considering paper for a project. Data collection on paper forms is certainly utilized in many i-Tree projects, especially when using volunteers or numerous data collectors. Devices are expensive and volunteers may not always want to use their own personal smartphones in the field. In addition, there is less technology training and management to worry about. However, because someone – typically the project manager – will have to manually enter data from paper forms into the desktop application, the redundant effort may lead to errors and require extra communication with collectors to clarify questionable data.

The integrated approach

After the mobile data collection system was introduced in 2013, some creative i-Tree users adapted the system with paper forms as another viable option with several advantages. Essentially, the field data collector first uses paper to collect i-Tree Streets or Eco data and then enters and submits the data remotely using the mobile data collection system. This hybrid approach brings flexibility and efficiency, as multiple people can enter data simultaneously and then take advantage of the inevitable rain storm, excessive heat day, or occasional break from field work at their favorite Wi-Fi coffee shop.

It may also be easier to use paper for data collection in some situations, such as collecting Eco plot data in a heavily wooded area. While the MDCS and PDA require all data to be collected for a single tree before moving to the next one, paper allows you to measure and record all tree heights and distance measurements before changing equipment to measure diameters. Paper forms also act as a backup for the mobile system.

Regardless of the data collection method you choose, it is essential to monitor data collectors, perform quality checks early, and correct issues. This will ensure the accuracy of the data being collected.

