i-Tree

Tools for Assessing and Managing
Community Forests

About Us

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i-Tree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban and community forestry analysis and benefits assessment tools. The i-Tree tools help communities of all sizes to strengthen their urban forest management and advocacy efforts by quantifying the environmental services that trees provide and the structure of the urban forest.

i-Tree has been used by communities, non-profit organizations, consultants, volunteers, and students to report on the urban forest at all scales from individual trees, parcels, neighborhoods, cities, to entire states. By understanding the local, tangible ecosystem services that trees provide, i-Tree users can link urban forest management activities with environmental quality and community livability. Whether your interest is a single tree or an entire forest, i-Tree provides baseline data that you can use to demonstrate value and set priorities for more effective decision-making.

Developed by USDA Forest Service and numerous cooperators, i-Tree is in the public domain and available by request through the i-Tree website (www.itreetools.org[1]). The Forest Service[2], Davey Tree Expert Company[3], National Arbor Day Foundation[4], Society of Municipal Arborists[5], International Society of Arboriculture[6], and Casey Trees[7] have entered into a cooperative partnership to further develop, disseminate and provide technical support for the suite.

The i-Tree suite v4.0 includes the following urban forest analysis tools and utility programs.

Analysis Tools

i-Tree Eco[8] provides a broad picture of the entire urban forest. It is designed to use field data from complete inventories or randomly located plots throughout a community along with local hourly air pollution and meteorological data to quantify urban forest structure, environmental effects, and value to communities.

i-Tree Streets[9] focuses on the benefits provided by a municipality's street trees. It makes use of a sample or complete inventory to quantify and put a dollar value on the street trees' annual environmental and aesthetic benefits. Streets also describes urban forest structure and management needs to help managers plan for the future.

i-Tree Hydro[10] (beta) is a new application designed to simulate the effects of changes in tree and impervious cover characteristics within a watershed on stream flow and water quality.

i-Tree Vue[11] allows you to make use of freely available national land cover data maps to assess your community's land cover, including tree canopy, and some of the ecosystem services provided by your current urban forest. The effects of planting scenarios on future benefits can also be modeled.

i-Tree Design[12] (beta) is a simple online tool that provides a platform for assessments of individual trees at the parcel level. This tool links to Google Maps and allows you to see how tree selection, tree

size, and placement around your home effects energy use and other benefits. This beta tool is the first stage in development of more sophisticated options that will be available in future versions.

i-Tree Canopy[13] offers a quick and easy way to produce a statistically valid estimate of land cover types (e.g., tree cover) using aerial images available in Google Maps. The data can be used by urban forest managers to estimate tree canopy cover, set canopy goals, and track success; and to estimate inputs for use in i-Tree Hydro and elsewhere where land cover data are needed.

Utility Programs

i-Tree Species[14] is a free-standing utility designed to help urban foresters select the most appropriate tree species based on environmental function and geographic area.

i-Tree Pest Detection Module[15] is a portable, accessible and standardized protocol for observing a tree for possible insect or disease problems. The i-Tree Pest Detection module is currently available within the i-Tree Streets program and is being integrated in i-Tree Eco. Pest Detection can be adapted to other external tree inventory programs also.

i-Tree Storm[16] provides a method for a community to assess widespread storm damage in a simple, credible, and efficient manner immediately after a severe storm. It is adaptable to various community types and sizes and provides information on the time and funds needed to mitigate storm damage.

Feedback

The i-Tree Development Team actively seeks feedback on any component of the project: the software suite itself, the User's Manual, or the administrative structure set up for dissemination, delivery, training and support. Please send us comments through any of the means listed on the i-Tree support page.

With feedback from you, these tools will continue to be updated and improved upon!

Links

1. http://www.itreetools.org
2. http://www.fs.fed.us
3. http://www.davey.com
4. http://www.arborday.org
5. http://www.urban-forestry.com
6. http://www.isa-arbor.com
7. http://www.caseytrees.org
8. http://www.itreetools.org/eco/index.php
9. http://www.itreetools.org/streets/index.php
10. http://www.itreetools.org/hydro/index.php
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16. http://www.itreetools.org/storm/index.php