

# i-Tree Open Academy

*Spring 2023*

## Session 6: Putting i-Tree To Work

*Using i-Tree data to help your canopy grow*

*April 25, 2023*

*1:00pm Eastern Time*






*Davey Institute/USDA Forest Service*




*i-Tree is a  
Cooperative  
Initiative  
among these  
partners*









# Accessing the Science of Tree Benefits

-  [www.itreetools.org](http://www.itreetools.org)
-  Session 1-5 now online!
-  Exercises available
-  Use Chat for questions
-  Certificates of completion available after Academy close



**The trees around you:**  
remove hazardous pollutants from the air you breathe, absorb carbon dioxide from the air to store as wood, and control storm water by intercepting and absorbing rainfall.

Trees provide more than just beauty and shade.  
They work hard for all of us, every day!  
[Click here to learn more.](#)

Tools for assessing individual trees	
	<b>MyTree</b> Are you new to i-Tree? Start with our EASIEST tool! MyTree helps you quickly assess <b>individual trees</b> with a minimum of fuss. <i>web browser or Android   Apple devices; Learn How to use it!</i>
	<b>i-Tree Design</b> A full-featured web tool with expanded building interactions and forecasting for estimating the benefits of <b>individual trees</b> . <i>via your web browser; Learn How to use it!</i>
	<b>i-Tree Eco</b> Eco is our flagship tool that accommodates tree inventory IMPORT or field data evaluation to derive <b>individual tree</b> benefit estimates. <i>requires installation on a Windows PC; Learn How to use it!</i>
Tree canopy area assessment tools	
	<b>OurTrees</b> Beta release: Quick <b>tree canopy</b> and related information for your community within the continental US! <i>web browser or Android   Apple devices</i>
	<b>i-Tree Landscape</b> US <b>tree canopy</b> and Census maps (data at your fingertips)! Identify priority planting & protection areas for climate & social issues. <i>via your web browser; Learn How to use it!</i>
	<b>i-Tree Canopy</b> From your chair, easily estimate land cover and <b>tree canopy</b> plus benefits using random point sampling on aerial imagery. <i>via your web browser; Learn How to use it!</i>

More tools...

i-Tree is for everyone.

These are free tools and free support for students of all levels, homeowners, community advocates, sustainability officers, urban foresters, and more!

## i-Tree Open Academy - Spring 2023

### What:

Join us for our newest learning series! The i-Tree Open Academy will provide a broad introduction to the i-Tree suite of tools. This is a virtual opportunity for anyone interested in better understanding the benefits of trees and exploring the latest i-Tree has to offer. There is no fee for the Academy, and we can accept the first 250 participants to each live session. [Register by filling out the participant form.](#)

### Who:

The intended audience is new i-Tree users or folks who haven't checked-in for a few years. The Academy will serve as a refresher and an introduction to the newest tools and features.

### How:

All sessions will be streamed live via this [Microsoft Teams link](#). Ensure you have the up-to-date session information by [filling out the participant form](#). All sessions will be recorded and posted to this page as well as the i-Tree YouTube channel, so that you can catch up on anything you missed. There are no requirements for this course, and there will be self-directed exercises that you can use to gain experience using the tools. You are encouraged to submit any questions related to the course via [info@itreetools.org](mailto:info@itreetools.org), and there will be opportunities to ask questions during certain live sessions and office hours.

### When:

Each session is one hour long and offered at 1:00 pm (Eastern US time).

- March 14th – Introduction to i-Tree.** Understand the basic science of i-Tree and the USFS research behind it. Explore the relationships between the i-Tree tools and the data they provide. Start to consider which i-Tree tools will be best for the application you have in mind.
 
  - o Video recording
  - o Presenter slides
  - o Self-directed exercise - Session 1
  - o Q&A
- March 21st – Online with MyTree, i-Tree Design, and i-Tree Planting.** Explore the easiest to use online i-Tree tools for individual trees. Get a better sense of their advantages and most common uses.
  - o Video recording (coming soon)
  - o Self-directed exercise - Session 2
- March 28th – The view from the top: i-Tree Canopy and OurTrees.** You can't manage your forest resource unless you know what you have. Get an estimate of tree canopy cover for any area or monitor change with a few hours of image analysis. Or save your mouse clicks and see if a quick visit to OurTrees will get you what you need.

# Using i-Tree to Help Your Canopy Grow

- 🌳 **Education:** demonstrating value of trees and fostering stewardship
- 🌳 **Engagement:** tree data for advocacy and connections
- 🌳 **Management and Opportunity:** understanding what you have and how you want it to grow



**The trees around you:**  
remove hazardous pollutants from the air you breathe,  
absorb carbon dioxide from the air to store as wood,  
and control storm water by intercepting and absorbing rainfall.

**Trees provide more than just beauty and shade.**

**They work hard for all of us, every day!**

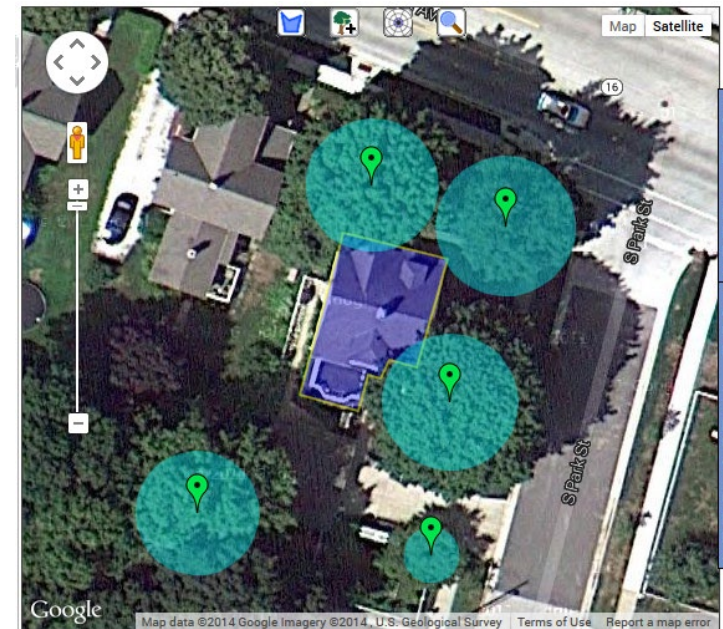
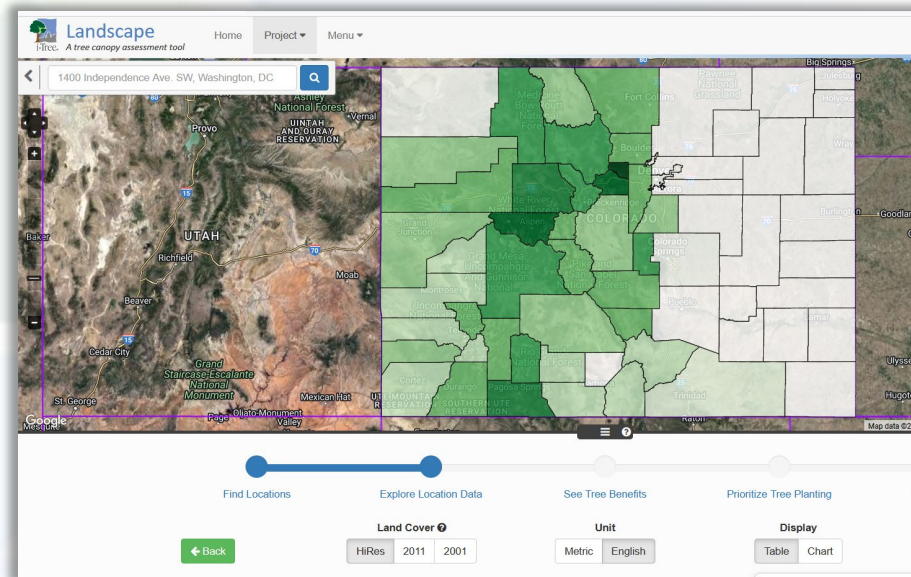
Click here to learn more.



# i-Tree for Community Engagement



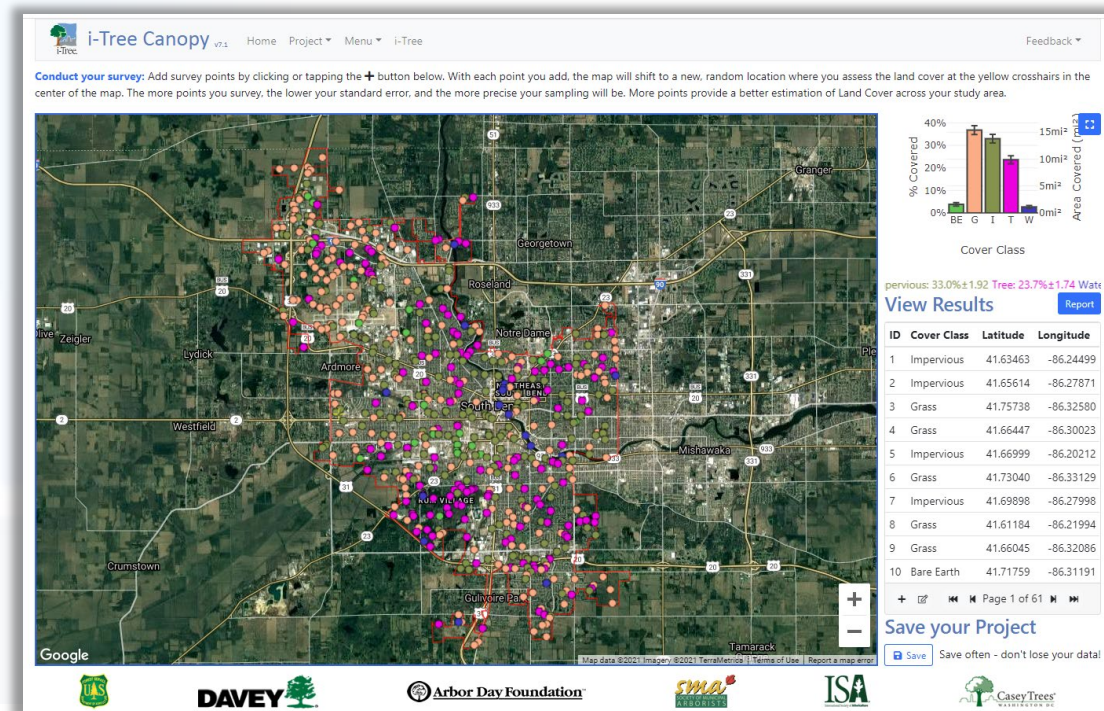
- Free tools for anyone with a small budget
  - A little knowledge can go a long way
- Sharing tree science with folks who aren't tree scientists
  - Meeting your stakeholders where they are
- Using i-Tree for messaging beyond trees: equity, health and climate risk



# What does it mean to “Speak for the Trees”?



- Putting canopy in **context**
  - Trees co-exist with people, habitats, infrastructure
- Knowing more about the landscapes around us helps us understand the **relationships** between people and nature
- Visualizing the canopy in your community makes an instant connection: **You Are Here!**
- Assessing canopy alongside other meaningful data – *relating to risk, needs, and objectives* - can help us better manage tree benefits for the **future**




# Inform Community Decisions and City Priorities


Regreen Springfield in partnership with the US Forest Service:

## i-Tree Canopy Assessment

of Springfield Neighborhoods August 2014




Prepared August 2014  
Special Assistant, Ph.D. US Forest Service  
Todd Smith, University of Massachusetts  
Thomas Soren, Regreen Springfield, Inc.



### The Values of Urban Tree Canopy

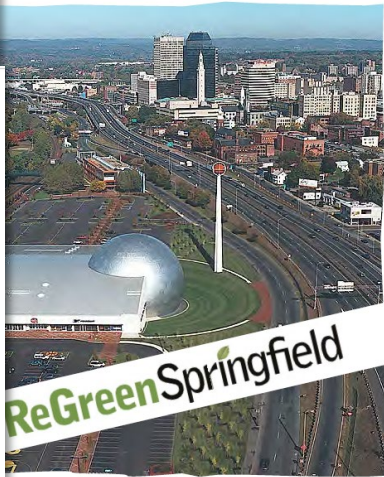
Urban and community forests can be considered part of the "green infrastructure" that complements our grey infrastructure and should be managed with equal importance. Urban tree canopy assessments can help a community determine how much of their land area is covered by trees, location of those trees and where there are new opportunities to plant trees. UTC assessments also determine the amount and location of impervious cover in a community. The power of an UTC assessment is the GIS framework where it resides. Canopy cover can be assessed by watershed, zoning or land use category, political boundary, neighborhood, business district, census tract or individual parcel. Results of analyses focus on specific community needs and provide a blueprint of available and unavailable





Regreen Springfield in partnership with the US Forest Service:

## Urban Tree Canopy Assessment

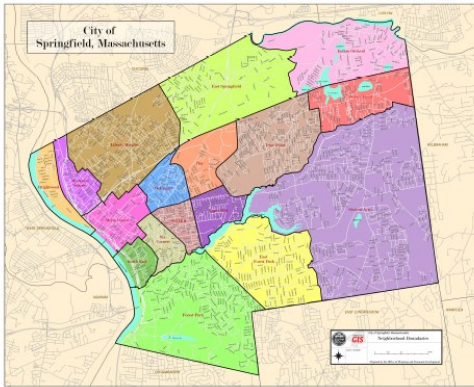
Springfield, Massachusetts August 2014



Prepared August 2014  
Special Assistant, Ph.D. US Forest Service  
Todd Smith, University of Massachusetts  
Thomas Soren, Regreen Springfield, Inc.







## i-Tree Canopy



### Springfield Report

March 2021

# Highlight Benefits and Neighborhood Assets



## i-Tree Canopy Analysis

Neighborhood	Percent
Sixteen Acres	50.0%
Boston Road	44.0%
Forest Park	41.3%
East Forest Park	30.7%
Indian Orchard	30.2%
Pine Point	29.3%
Liberty Heights	28.0%
Bay	26.7%
Brightwood	20.0%
East Springfield	17.3%

Forest Park, a Victorian garden district developed between 1880 and 1920. It and surrounds the 735-acre Frederick Forest Park neighborhood has within walking distance. It land, 41% of which is on the National Register of Historic Places. A 195-acre section of the Forest Park Heights house Forest Park Heights developed between 1890 and 1920. The neighborhood is a gracious Colonial Revival, Anne, and Shingle Style homes. The neighborhood occupies more than half of the south left largely Naturalist in style, although elegant bridges. It is home to many sp

## i-Tree Canopy v7.1

Cover Assessment and Tree Benefits Report

Brightwood Neighborhood, Springfield, MA

Estimated using random sampling statistics on 3/10/2021

### Land Cover

Cover Class	% Covered
H (Grass/Herbaceous)	~16%
IB (Impervious Buildings)	~10%
IO (Impervious Other)	~8%
IR (Impervious Road)	~14%
S (Soil/Bare Ground)	~6%
T (Tree/Shrub)	~25%
W (Water)	~21%

The Southeast corner of the city, is Springfield's largest neighborhood with a population of 24,252 people. Sixteen Acres includes Springfield University, the Pioneer School, Pioneer and the 18-hole, Course. Besides colonial, split-neighborhood has complexes on Acres also features Park, a recently and two private clusters on Allen Street shopping, Fresh Acres Market. Sixteen Acres residents have a quick employers, such as Hasbro and American Saw.

Massachusetts's principal commercial and retail corridor. It is a neighborhood, containing 727 acres plus rights-of-way and water are the Boston & Albany Railroad to the north; the North to the south; the Town of Wilbraham to the east; and Cobb and Boston Road remains a commercial stronghold, home to the various big box stores, a movie theater, and a branch of from the above mentioned Hampden Bank. Springfield city and Loon Pond provide places to swim, fish, boat, and Science & Technology Putnam Vocational High School are located

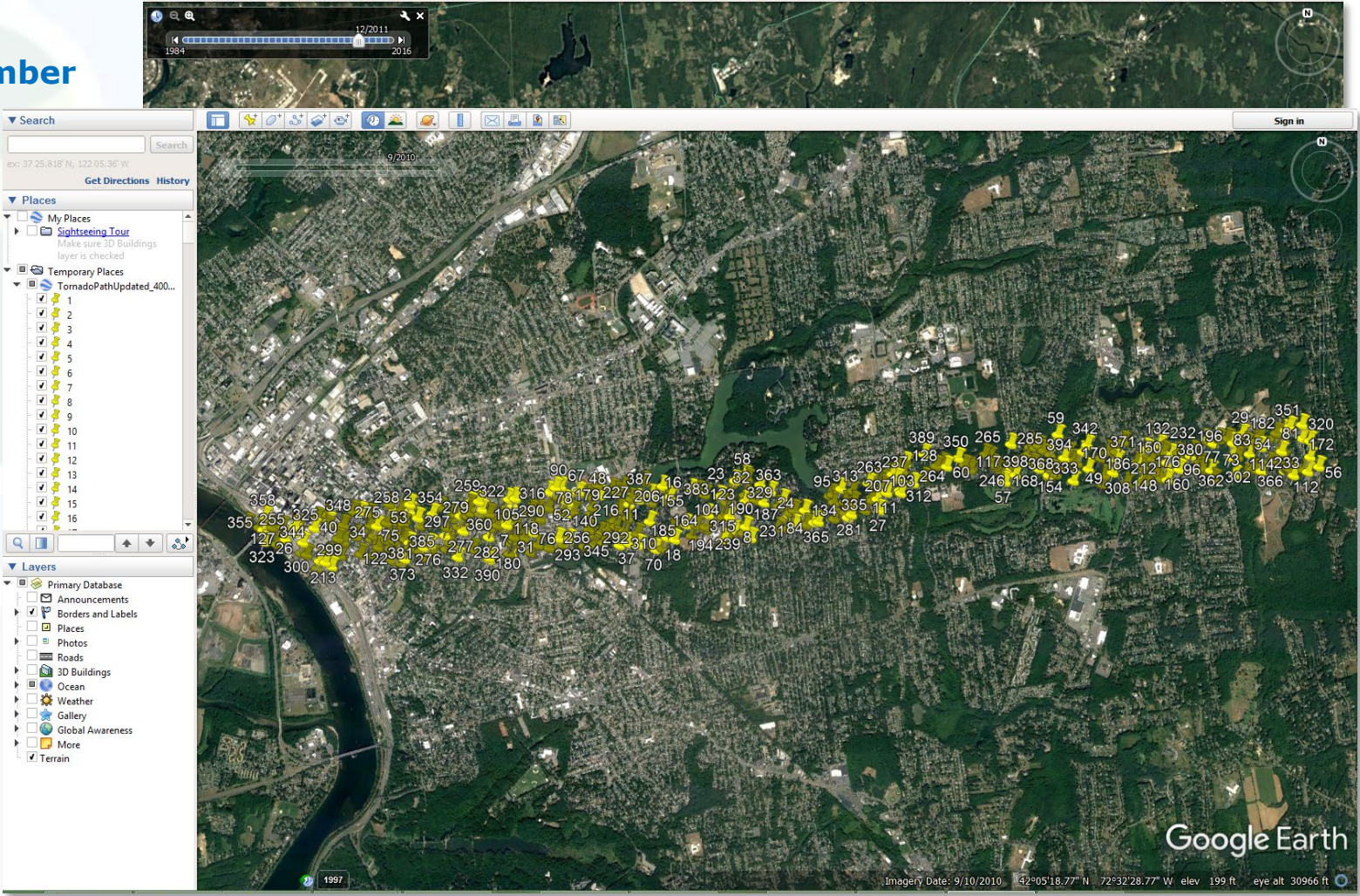


# Monitoring Change, Progress, and Resilience



*Western Massachusetts 2011 tornado visible in satellite imagery*

**December  
2012**



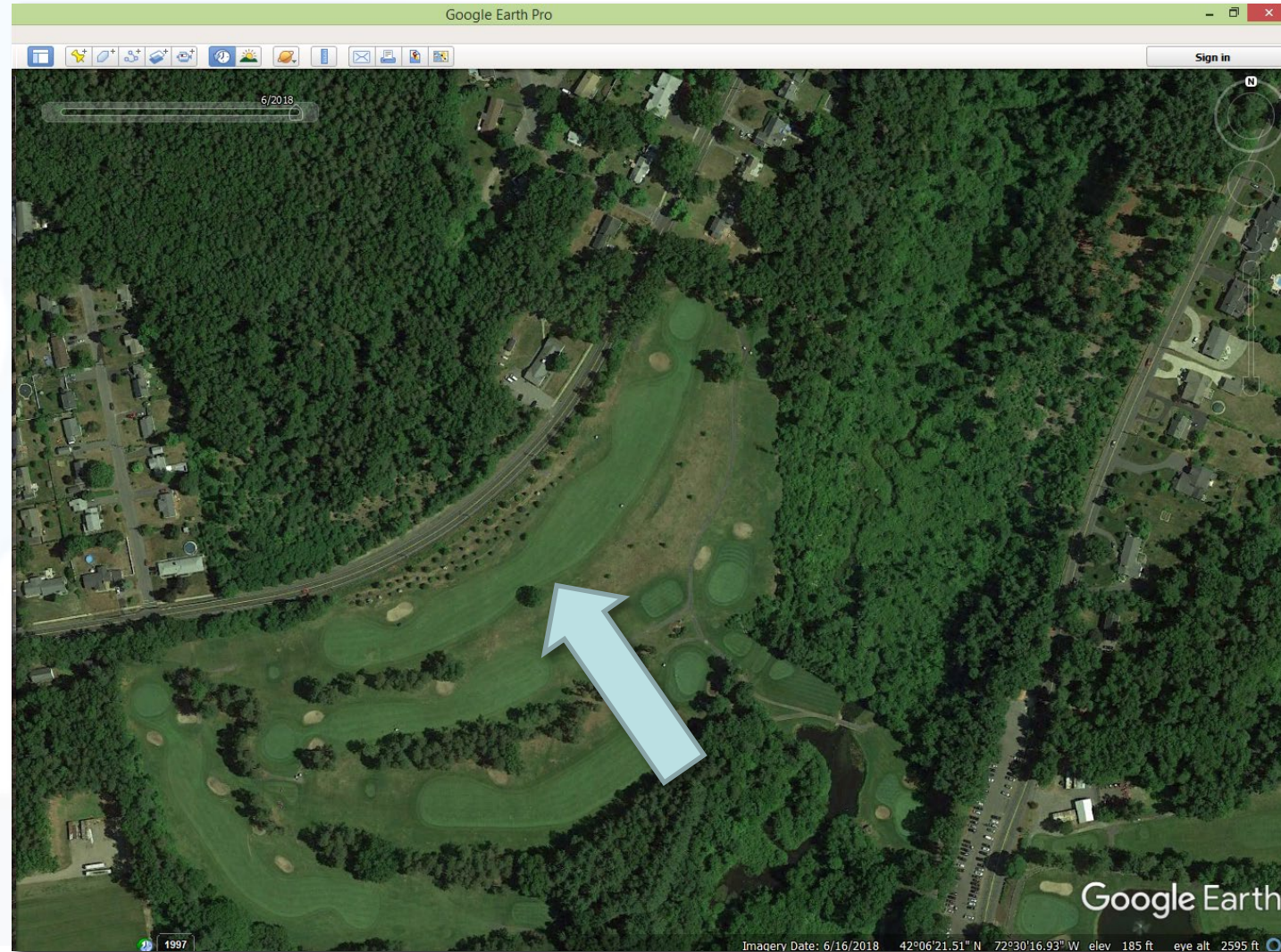
# Veterans Memorial Golf Course



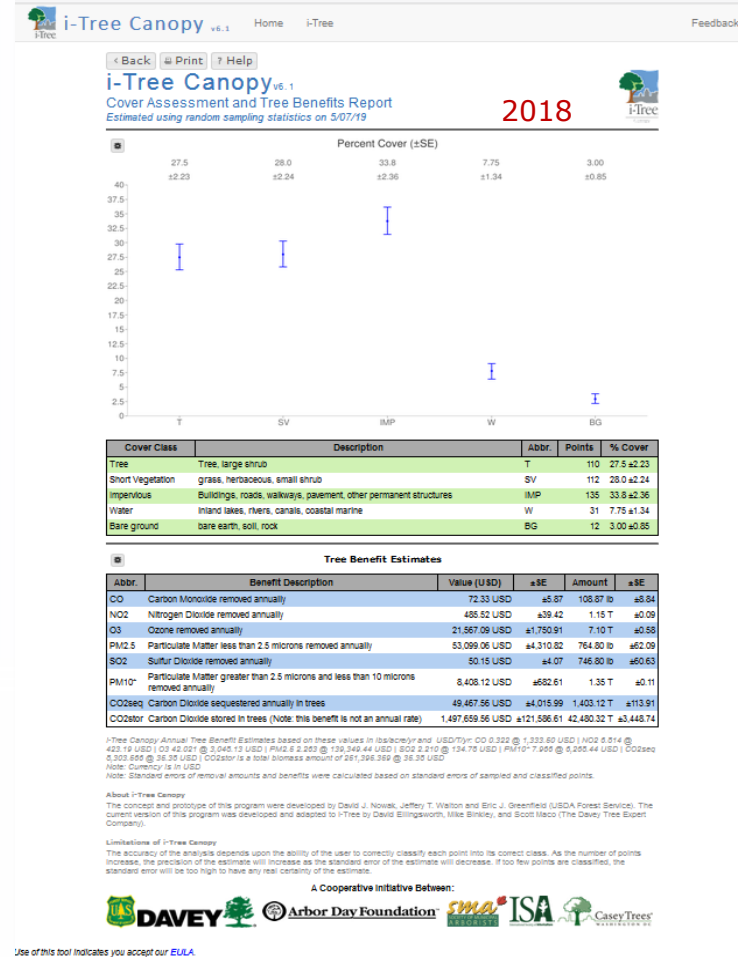
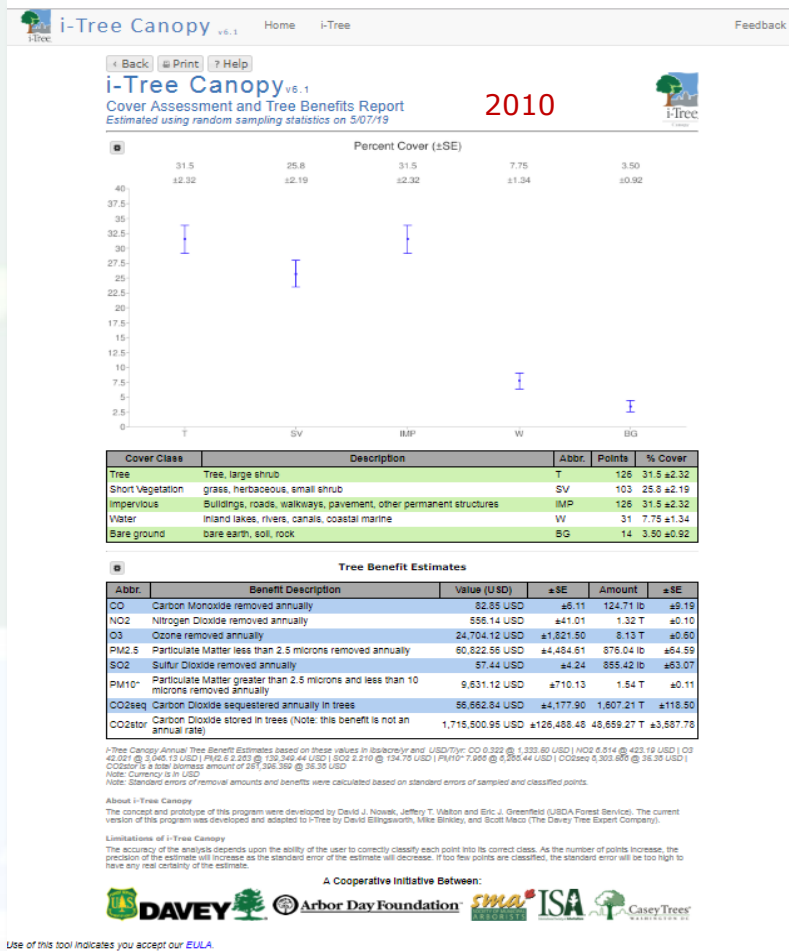
2010

2012

2018



# Follow-up Can Inform Project Success, Impact, and Future Needs



# Focus on Features That Matter to Your Neighborhood



- Distribution of resources and challenges

The composite image displays the i-Tree software interface, which includes a map view on the left and a thermal image view on the right. The thermal images show temperature variations across a street scene and a park area. The top-left thermal image shows a street with a temperature of 137°F on the left and 153°F on the right. The bottom-left thermal image shows a park area with a temperature of 92.5°F on the left and 125°F on the right. The right side of the composite shows two street photos corresponding to the thermal images. A feedback window is visible on the right side of the thermal images.

Infrared Sensor	Temperature for each
1.7	20.60
1.5	23.45
1.9	39.94

# Share What Priorities Might Look Like



- Targeting equity for canopy benefits and populations

The screenshot displays the i-Tree Landscape v4.0.1 web application. The main map shows a geographic area with various data layers overlaid, including land cover and population density. A sidebar on the right contains navigation and analysis tools. At the bottom, there is a progress bar and a 'Common Scenarios' section.

**Navigation and Analysis Tools:**

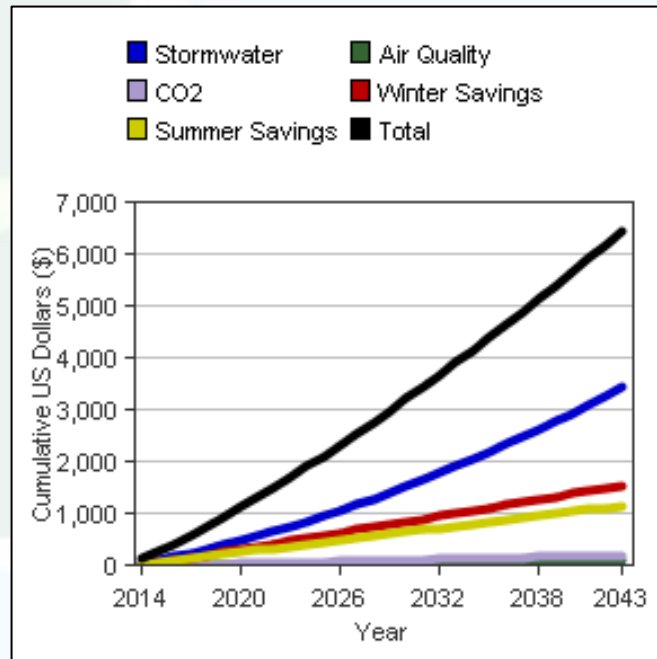
- Start on **Main**, then explore the map layer tabs.
- Map Layer Tabs: Main, Canopy & Land, Forest Risk, Health Risk, Future Climate.
- Base Maps: +
- Boundaries: +
- Selection Visibility Settings: +
- Choose a boundary area to analyze: US Census Block Group
- Tools: Navigate, Identify, Select, Box-Select, Geo-Swap, Clear, Process (121), Start Over.
- Planting Prioritization: +
- Map details are located in the references.

**Progress and Scenarios:**

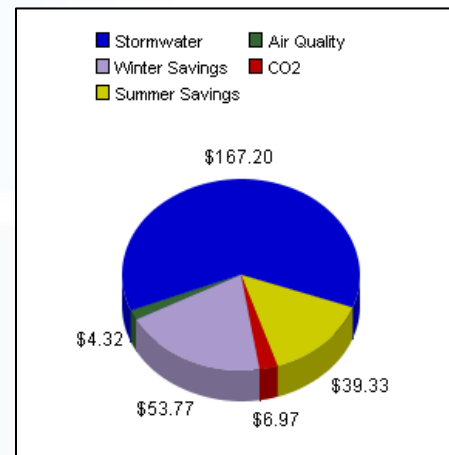
- Progress Bar: Find Locations, Explore Location Data, See Tree Benefits, Prioritize Tree Planting, Generate Report.
- Land Cover: HiRes, 2011, 2001
- Common Scenarios: Population, Minorities, Poverty
- Buttons: Back, Next

# Show Trees Are an Investment

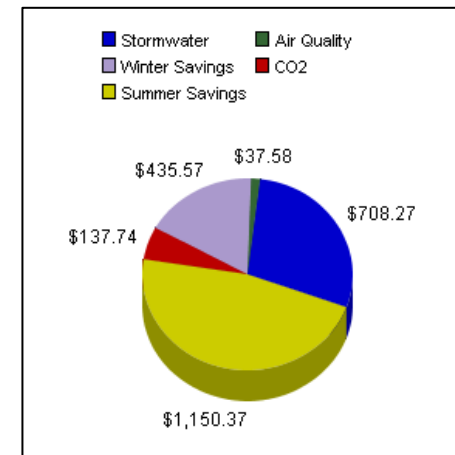
- Sometimes money talks



**\$6,476** worth of benefits over the next 30 years ...and growing



Benefits in 2044 = **\$272**



To date = **\$2,470**

# Advocate for Tree Care

- Highlight gems, suggestions for overall health and diversity

[Start Over](#)  
[Return to Setup](#)  
[View Report](#)  
[Print](#)  
[Save Result](#)  
[About](#)

**i-Tree Design v7.0** York Haven, PA 17370, USA

Display results for: All Trees

Overall Benefits | Stormwater | Energy | Air Quality | Carbon Dioxide

**In 40 years, these trees will conserve 3,832.9 Kilowatt-hours of electricity and reduce consumption of heating fuel by 320 therms that year.**

Trees modify climate and conserve building energy use in three principal ways:

- Shading reduces the amount of heat absorbed and stored by buildings.
- Evapotranspiration of moisture by foliage reduces air temperatures.
- Trees slow down winds thereby reducing the amount of heat lost from a home.

Strategically placed trees can increase home energy efficiency. In summer, trees shading east and west walls generally keep buildings cooler. In winter, allowing the sun to strike the southern side of a building can warm interior spaces.

Unexpected results may include the following:

- A tree may produce negative energy savings due to an increase in winter heating costs. For example, if southern walls are shaded by dense evergreen trees there may be a resultant increase in winter heating costs.



- A building that is neither heated nor air conditioned will have no associated energy benefits.
- A tree that is too small or located too far from a structure may have no energy benefits.
- A tree may have an energy effect even if it is located outside of the illustrated colored benefit zones, as wind break effects can occur at significant distances from a structure.
- When two or more tree crowns overlap the total energy savings are adjusted so that benefits are not double-counted in the overlap area.

# Putting It All Together

- What you know powers the way forward
  - *What You Have, Where You Have It*
- Unique needs and observations can be meaningful
  - Sharing with AND learning from communities
- Changes can drive conversations with communities and policy makers
  - Opportunities for engagement, stewardship, and resource management
- *Strategies that can build resilience for both trees and neighborhoods*



## OAKS OF NORTH LAWNDALE

### Community Roots That Grow On Trees

Spotlight: North Lawndale, Chicago, IL

The ways that trees benefit a community are as numerous as their branches. Planning for trees, understanding their benefits, planting them and caring for them fosters engagement, stewardship and sustainability.

When you add that to their public health and environmental advantages, trees can have a positive impact on neighborhoods for generations. Inspired by the 7000 Oaks art installation, the Oaks of North Lawndale project partners neighborhood residents with the city and the School of the Art Institute of Chicago in an effort to nurture a greener, peaceful, and re-forested community.



Photos courtesy of Foundation for Human Squares  
In September 2017, SAIC set up its mobile Foundry at their Homon Square campus, site of the project launch event with artist Pedro Reyes, who joined residents in the melting of weapons to create shovel heads which were used to plant the first trees.

The Oaks of North Lawndale project could raise canopy coverage in the neighborhood to at least 23%, representing an increase of more than 38% over current canopy amounts.

Trees would be planted over a multi-year period, providing opportunities for sustained collaboration among neighbors, artists and educators at SAIC, a local tree nursery and gardeners, the North Lawndale Employment Network and job skills training programs, along with other organizations.

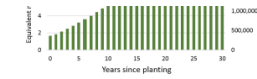
Trees in urban environments are known to...

- improve human health.
  - Improve air quality
  - Improve respiratory health, overall well-being, and reduce stress
  - Protect from harmful UV light
- benefit the community.
  - Reduce crime by fostering neighborhood social interactions
  - Lower summer air temperatures and reduce energy costs
  - Provide aesthetic benefits and promote community equity
  - Enhance property values
- provide environmental services.
  - Reduce stormwater runoff
  - Absorb carbon dioxide a greenhouse gas that traps heat in the atmosphere



Impacts from 7,000 newly planted trees in North Lawndale as they grow to maturity over 30 years

the community of North face temperatures about 10 than the regional average. trees in Douglas Park help nce by more than 3 degrees.



- Trees improve public health by removing harmful air pollutants. Poor air quality is a common problem in many urban communities. It can contribute to serious respiratory health problems such as childhood asthma, bronchitis, and other cardiovascular health incidents.
- Trees help absorb stormwater runoff and reduce the risk of flooding. Precipitation is caught by leaves and filtered through soil, instead of running over pavement and impervious city surfaces that can overwhelm water and sewer lines during a heavy rainstorm.

Where the numbers come from: The benefits and values associated with trees were estimated using i-Tree Eco and Landscape software from the US Forest Service. The programs use local weather, pollution, and population data to estimate how the woody and leafy parts of trees interact with the environment and the people who live there. Tree growth was predicted using i-Tree's Forecast module, and assumed that all trees are cared for and survive to maturity. The growth predictions consider local climate along with the rates different sizes and species of trees typically grow. Five common trees were modeled to represent future tree species to be planted.



A typical block of newly planted street trees (left) would see an increase of more than 10,000 sq. ft. in canopy coverage, and the environmental, economic, and health benefits that come with them.

Want to get involved? Visit <https://www.facebook.com/oaksafnorthlawndale/> to learn more about the project and how to lend a hand.

Powered by i-Tree and The Davey Institute. i-Tree represents cutting-edge peer-reviewed USDA Forest Service research packaged into tools and applications easily used by everyone. [www.itreetools.org](http://www.itreetools.org)



# i-Tree and Funding

## Why talk about funding?

- Trees aren't free
- Better data and science lead to better outcomes
- i-Tree can help

## Examples

- Apply for funding
- Decide what to fund
- Make sure we fund the right things
- Ensure accountability



## **USDA Forest Service Urban & Community Forestry Inflation Reduction Act Notice of Funding Opportunity (NOFO)**

### **SUMMARY INFORMATION**

**Federal Awarding Agency Name:** U.S. Department of Agriculture – Forest Service (FS) Urban and Community Forestry Program.

**Notice of Funding Opportunity Title:** Inflation Reduction Act – Urban and Community Forestry

**Notice of Funding Opportunity Number:** USDA-FS-2023-UCF-IRA-01 Grants.gov

<https://www.grants.gov/web/grants/home.html>

**Assistance Listing:** This program is listed in the Assistance Listings on [Sam.gov](https://www.sam.gov) under [10.727 Inflation Reduction Act – Urban & Community Forestry](#)

**SAM.gov Registration:** All applicants must have an active registration at sam.gov and maintain active registration throughout the life of the award. This is the government-wide web-based system that supports all contracts, grants, and the electronic payment system. This requirement for registration may be found at 2 CFR 25.200.

# i-Tree Canopy



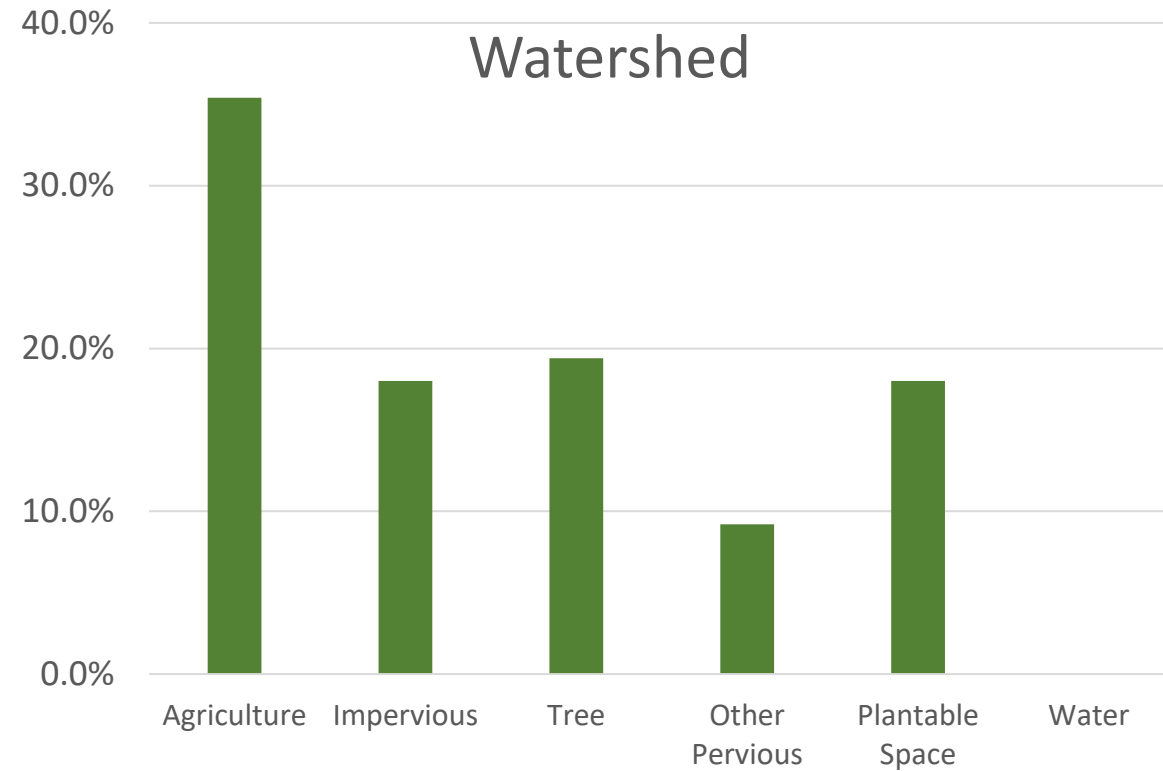
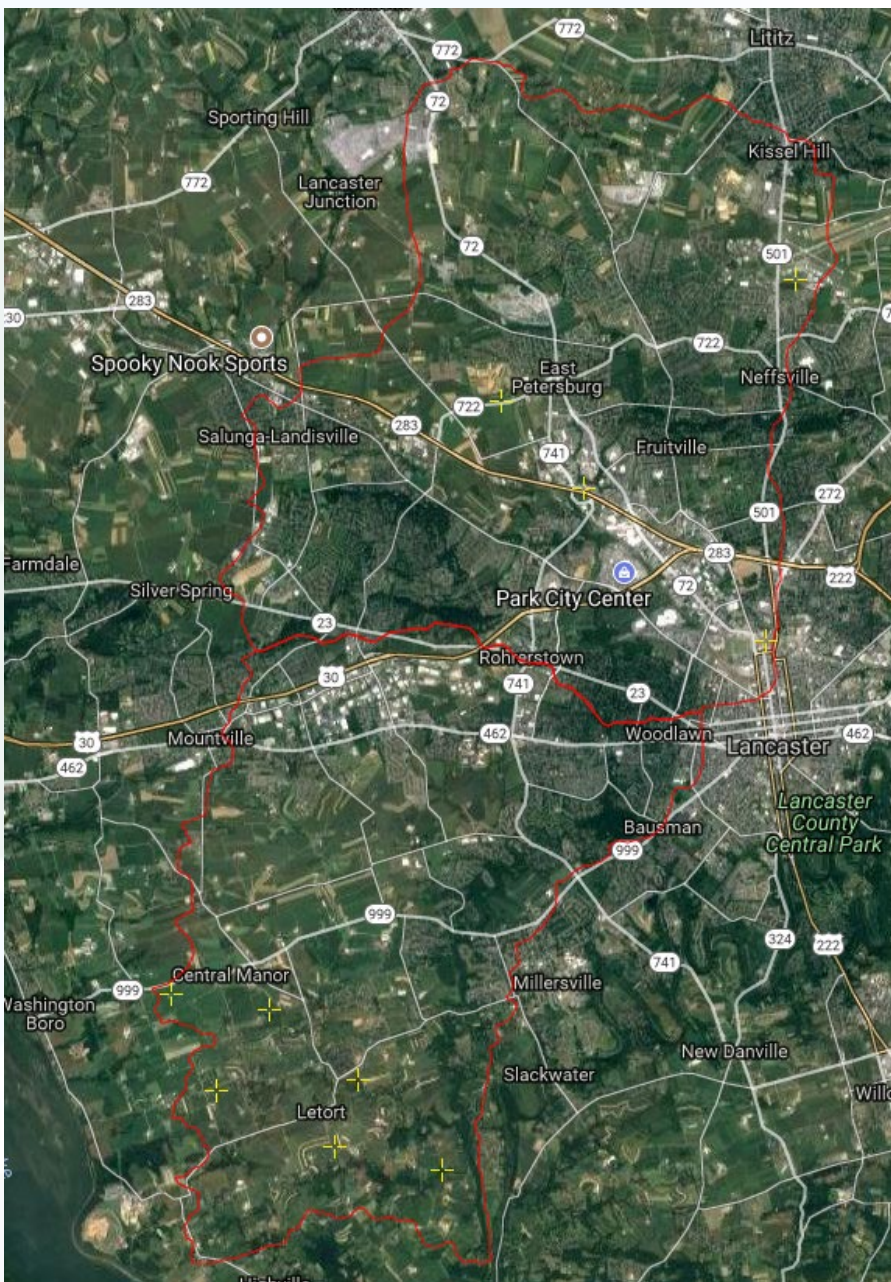
The majority of Lancaster residents obtain their drinking water from the Conestoga and Susquehanna Rivers. The Conestoga River Watershed has the highest nutrient concentration of any watershed flowing into the Susquehanna River.



**To preserve and enhance the watershed for its citizens and the environment through education and restoration projects.**

# i-Tree Canopy

Watershed  
65.53 sq. mi.



**419 acres** of new canopy needed to raise tree cover by **1%**

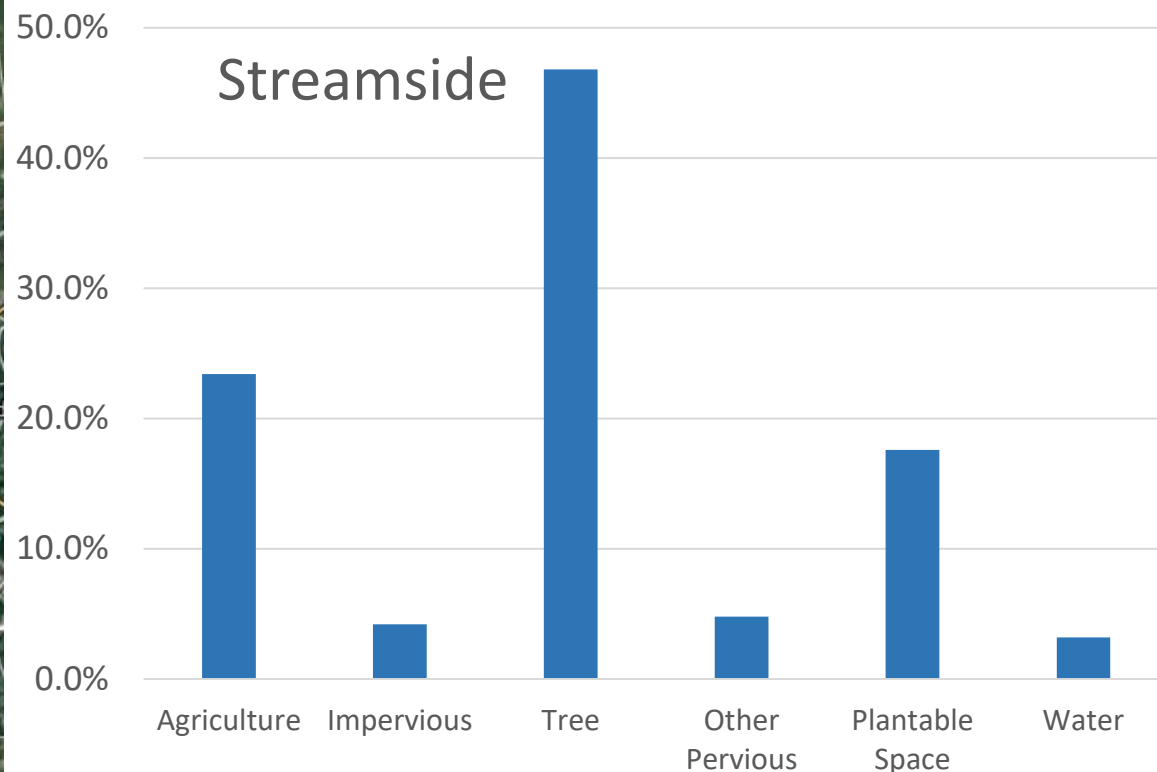


# i-Tree Canopy

## Streamside

50ft buffer

2.55 sq. mi.

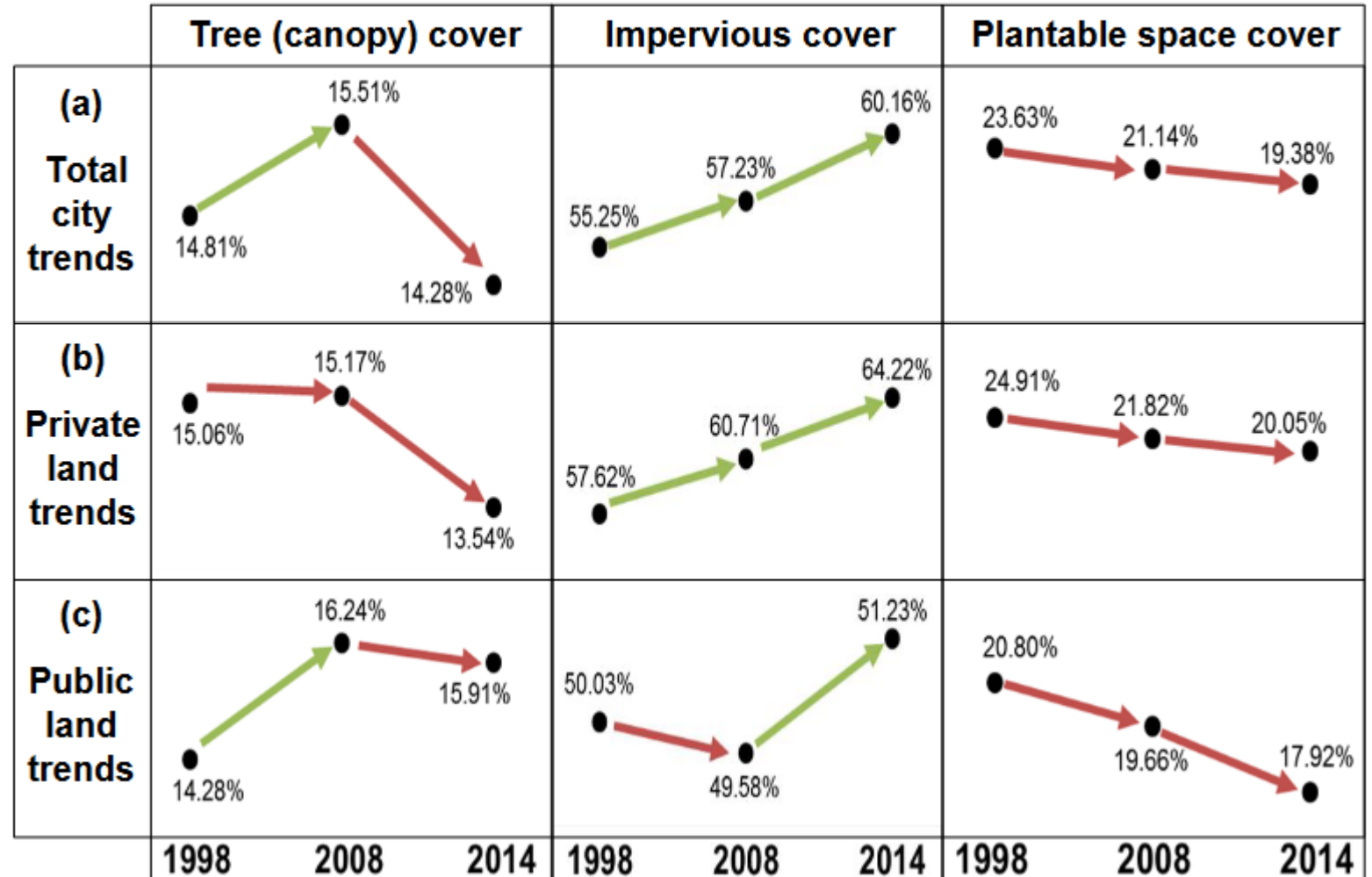
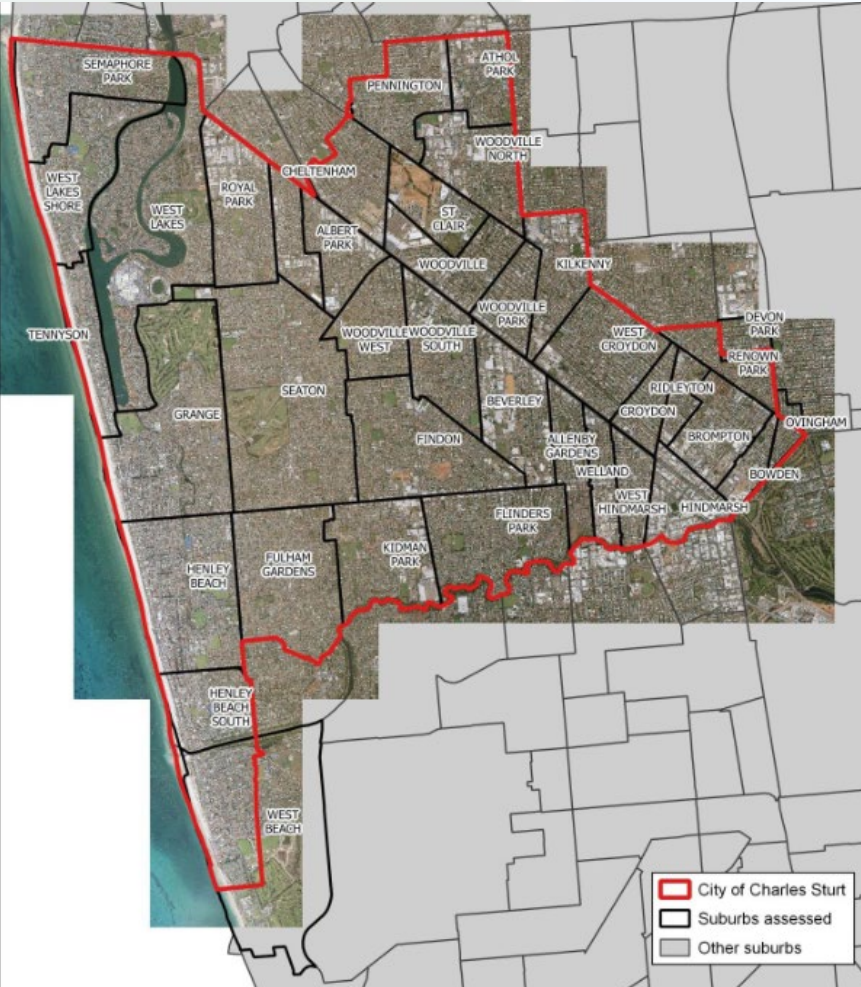


**16.3 acres** of new canopy needed to raise tree cover by **1%**

# Tree Canopy Cover in the City of Charles Sturt



## Benchmark Assessment



# i-Tree Canopy: Benchmarking and impact accounting



## Benchmarking

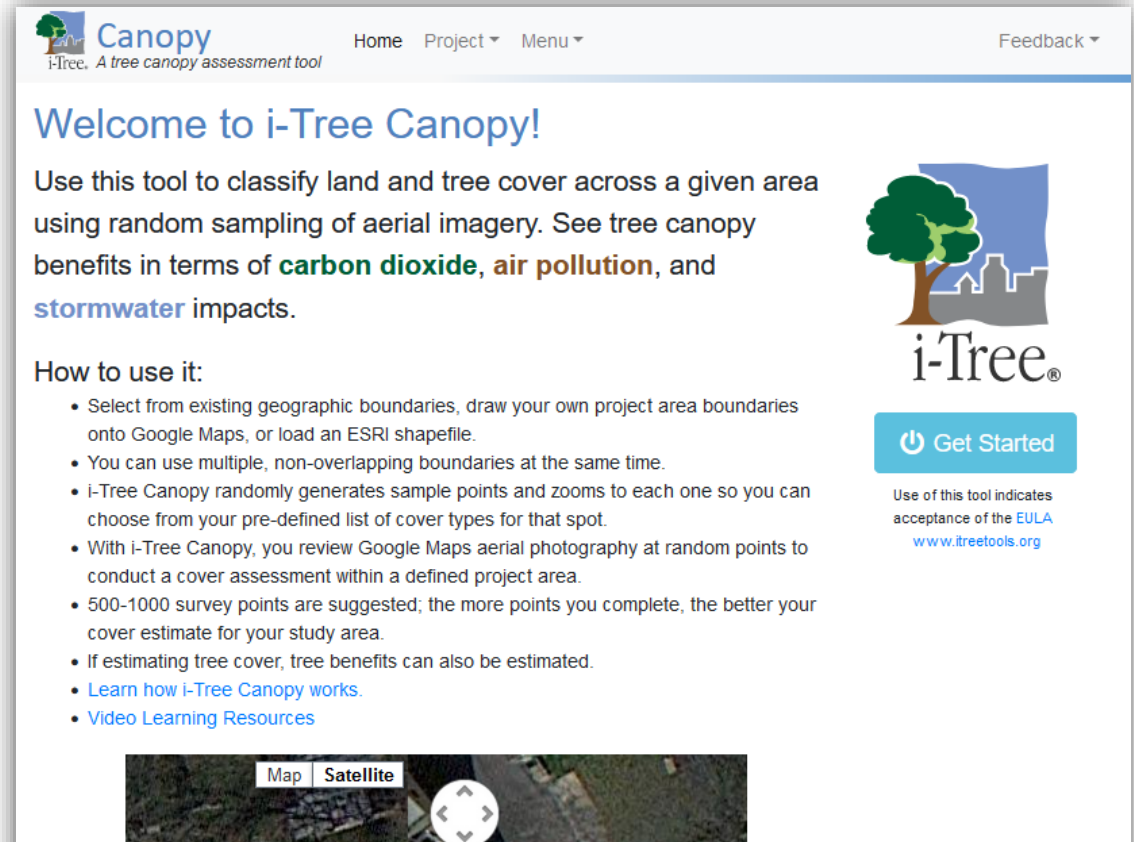
- Identify the scope of the challenge
- Determine current direction
- Multipliers estimate the impact of change

## Accounting

- What has been the impact of your past work?
- Capture your success
- Adapt to new information

## Why i-Tree Canopy?

- Fast
- Precise
- Up-to-date
- Flexible



The screenshot shows the i-Tree Canopy website. At the top left is the i-Tree logo and the text "Canopy i-Tree. A tree canopy assessment tool". To the right are navigation links: "Home", "Project", "Menu", and "Feedback". The main heading is "Welcome to i-Tree Canopy!". Below this is a paragraph: "Use this tool to classify land and tree cover across a given area using random sampling of aerial imagery. See tree canopy benefits in terms of carbon dioxide, air pollution, and stormwater impacts." To the right of this text is the i-Tree logo. Below the logo is a blue button with a power icon and the text "Get Started". Underneath the button is a small disclaimer: "Use of this tool indicates acceptance of the EULA www.itreetools.org". The "How to use it:" section contains a list of instructions: "Select from existing geographic boundaries, draw your own project area boundaries onto Google Maps, or load an ESRI shapefile.", "You can use multiple, non-overlapping boundaries at the same time.", "i-Tree Canopy randomly generates sample points and zooms to each one so you can choose from your pre-defined list of cover types for that spot.", "With i-Tree Canopy, you review Google Maps aerial photography at random points to conduct a cover assessment within a defined project area.", "500-1000 survey points are suggested; the more points you complete, the better your cover estimate for your study area.", "If estimating tree cover, tree benefits can also be estimated.", "Learn how i-Tree Canopy works.", and "Video Learning Resources". At the bottom of the page, there is a small map interface with "Map" and "Satellite" tabs and a directional pad.

# i-Tree Planting



**PHS**  
PENNSYLVANIA  
HORTICULTURAL  
SOCIETY



**PHA – Richard Allen Tree Planting**  
180 Yard Trees

0 120 Feet



7/29/2014

# i-Tree Planting

**Pennsylvania Horticultural Society**  
planting for the  
**Philadelphia Housing Authority**

Energy Savings over the next 30 yrs

- **\$108,000** in winter
- **\$87,000** in summer





# i-Tree Planting: The power of projections



## Projecting benefits

- Small trees = small benefits
- Show project impact
- Include reasons of maintenance
- Evaluate species pallets

## Why i-Tree Planting?

- Fast
- Ties directly into funding for planting
- Justification for your design
- Already accepted (CalFire, LEED certification)

A screenshot of the i-Tree Planting Calculator website. The page has a navigation bar with 'Planting' as the active page, and links for 'Home', 'Project', 'Menu', and 'Feedback'. The main content area features a welcome message, a description of the tool's purpose, and instructions on how to use it, including a list of required and optional input parameters and a list of calculated estimates.

**Planting** Home Project Menu Feedback

## Welcome to the i-Tree Planting Calculator!

This tool helps you estimate the long-term environmental benefits from a tree planting project in terms of **carbon dioxide**, **air pollution**, **stormwater** impacts, and **energy savings**.

How to use it:  
**It is easy to get these estimates!**

Enter groups of trees with the following:

- Tree species
- Size of trees at planting
- Condition of the trees
- The number of trees in the group
- Project lifetime years

Optionally, you can enter more values to fine tune your estimates:

- Distance and direction to the nearest building
- Estimated mortality of the trees over the project lifetime
- Specific greenhouse gas values for your region

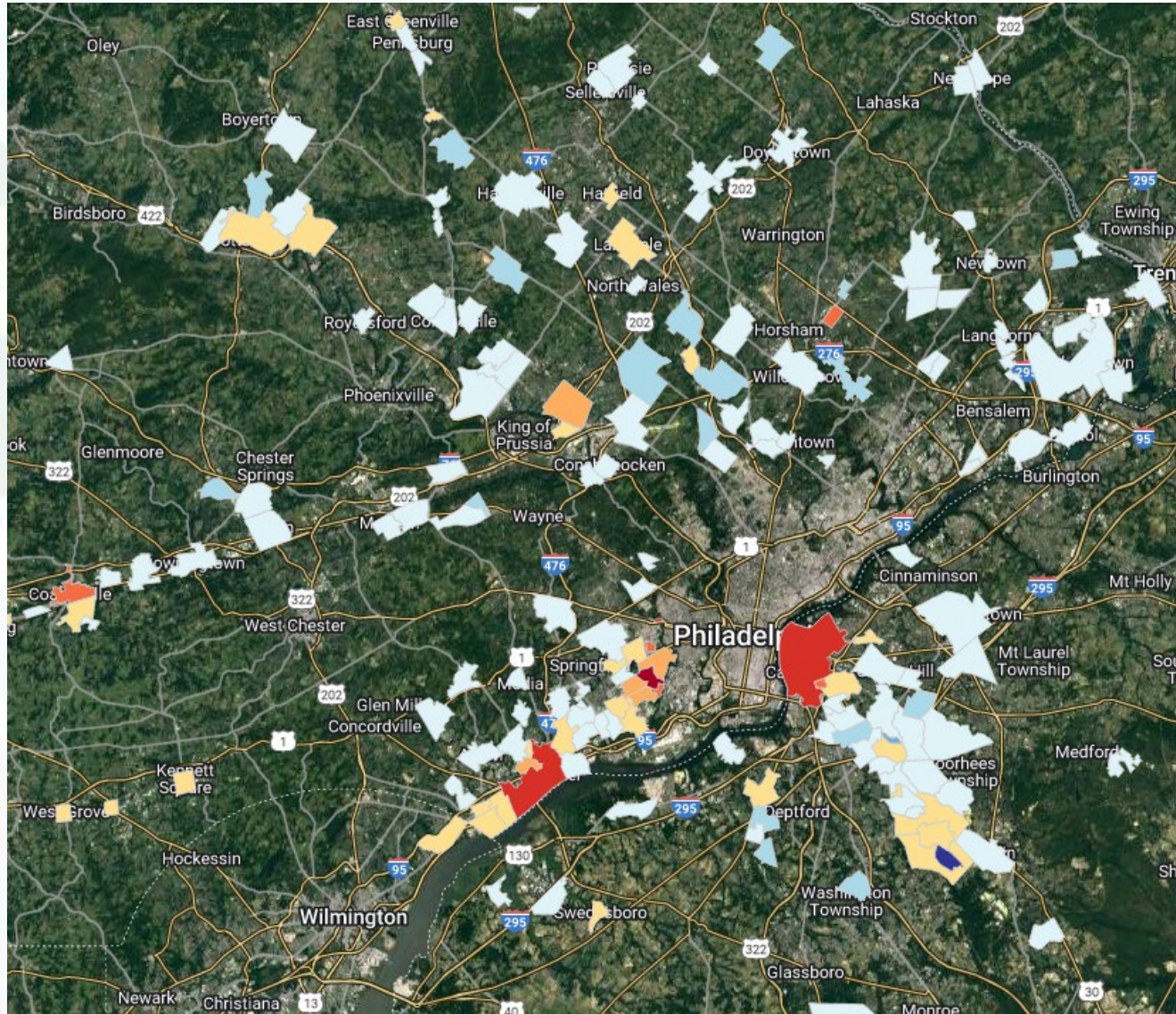
**The following estimates are calculated in amounts and dollar values:**

- Carbon dioxide sequestered
- Carbon dioxide avoided due to reduction in building energy use
- Energy conserved
- Air pollutants captured and avoided
- Stormwater filtered
- Tree total biomass

# i-Tree Landscape



Using **i-Tree Landscape**  
To prioritize where  
tree planting is  
equitable



Place	Priority Index
Darby	100
Camden	91
Millbourne	87
Chester	86
Woodlynne	77
Colwyn	77
Warminster	76
Coatesville	75
East Lansdowne	72
Norristown	71
Upland	67
Yeadon	65
Collingdale	65
Sharon Hill	64
South Coatesville	60
Avondale	58
Lansdowne	58
Clifton Heights	57
Pottstown	56
Bridgeport	56
Oxford	55

# i-Tree Landscape



Temperature differentials

Existing tree cover





# i-Tree Landscape: Where to plant Prioritization

- Find locations that address funder's goals
- Show trees are meeting a need
- Tie to key metrics – human health, carbon, heat island, resilience, etc.

## Why i-Tree Landscape?

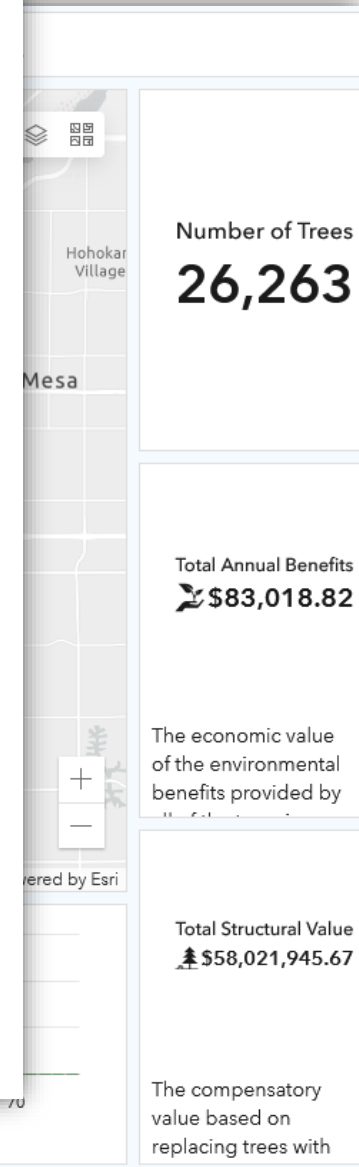
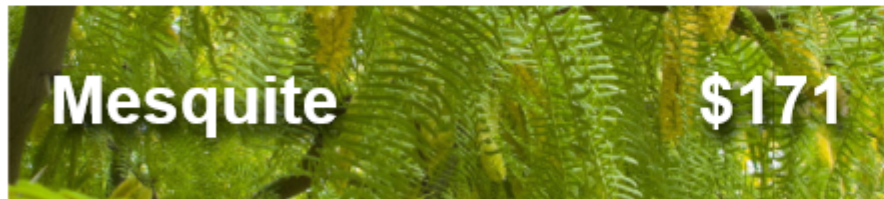
- Maps with out GIS
- Wide variety of day
- Key to connecting trees to people

Type	Name	ID	Swap	Highlight	Equity		
					CEJST	Tribal Land	
Block Group	N/A	110010088031	↕	<input type="checkbox"/>		Yes	No
Block Group	N/A	110010095013	↕	<input type="checkbox"/>		Yes	No
Block Group	N/A	110010093021	↕	<input type="checkbox"/>		No	No
Block Group	N/A	110010092042	↕	<input type="checkbox"/>		Yes	No
Block Group	N/A	110010092041	↕	<input type="checkbox"/>		Yes	No
Block Group	N/A	110010092032	↕	<input type="checkbox"/>		No	No

... dioxide, and fine particulate matter. Reduced pollutants in the air has proven benefits to human health - trees truly

## Tree Species Value

In collaboration with Tempe city staff, six drought tolerant species that represent a high prevalence in the existing stock were chosen for a more detailed i-Tree economic value analysis. This analysis illustrates the yearly economic benefits pertaining to energy, carbon reduction, stormwater management and aesthetic appeal at maturity. The six tree species detailed in the following graphic were chosen to give City of Tempe guidance when choosing species for expanding the urban forest. This list is not meant to be a recommendation, as the siting of individual trees is very location specific and should be based on a Right Tree, Right Place planting strategy.





ELSEVIER

Research Paper

Achieving in  
greenspace:

S. Raum<sup>a,\*</sup>, K.L.

<sup>a</sup> Centre for Environmental P

<sup>b</sup> Forest Research, Farnham,

<sup>c</sup> School of Environment, Ea

<sup>d</sup> Forest Research, Roslin, U

Contents lists available at ScienceDirect

Landscape and  
Urban Planning

## Landscape and Urban Planning

Examples described by the interviewees for the use of the i-Tree Eco project results were linked to the use of data by a specific group or for a particular purpose, including helping Swansea (Tawe Catchment) to **inform tree species selection and priority areas for new planting**; by Devon Ash Resilience Forum to **support monitoring and management of diseased trees**; the Task and Finishing Forum within a council to **support tree maintenance**; by local authority tree officers and advisors to **build a case for a broader approach to tree management for wider public benefits**; and by one council to set **climate change adaptation targets**.

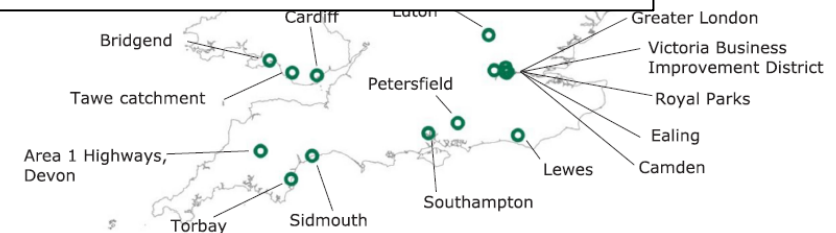


Fig. 1. Location of the 22 i-Tree Eco projects known to be completed or in progress in GB as of January 2018.



## Headline Figures

### Structure and Composition Compared

	2010	2022
Number of Trees (estimated)	692,000	458,800
Tree Canopy Cover	11.8%	18.2%
Tree Density (trees/hectare)	109	71
Most Common Tree Species	<i>Cuprocyparis leylandii, Fraxinus excelsior, Acer pseudoplatanus</i>	<i>Fraxinus excelsior, Acer pseudoplatanus, Corylus Avellana</i>
Replacement Cost (CTLA)	£371 million	£310 million







# Next steps...make your own action plan

## Putting what you learned in the i-Tree Academy to work

- Plan is simple and flexible
- Meant to reinforce learning
- Should help you and your organization



# What are the parts of an action plan?



Objective: What issue or need will you address? Where will you work?

i-Tree tools: Which i-Tree tool or tools will use and why?

Resources: Do you have the resources to complete your plan? Will you need help from collaborators/funders?

Challenges: Do you expect any challenges in completing your plan? How will you overcome them?





# Resources

- Start at the [Academy page](#)
- Video learning [page](#)
- Support [page](#)

## Support

*i-Tree helps people understand the benefits that trees provide* and our support team is here to help you understand i-Tree. The i-Tree team offers free support in using the tools, understanding the science (and pointing the way to more in-depth articles), plus we provide periodic online training.

[Overview](#) of the support we provide.

For new users, here is a handy [Resource Guide](#).

### Learn to use the i-Tree tools

- Video learning
- Manuals, Guides, and Workbooks
  - Project Planning and Management
- Teaching

### i-Tree Academy

- [i-Tree Open Academy 2023 - Sessions Starting March 14th](#)
- [About the Domestic i-Tree Academy \(2020-2021\)](#)
  - [Capstone Project Reports and Files](#)

### Understand the science of i-Tree

- [Understanding i-Tree: Summary of Programs and Methods](#). (2021) A comprehensive report describing i-Tree methods, potential limitations, future goals, and opportunities to facilitate new science and international collaboration from Dr. Dave Nowak senior scientist and i-Tree team leader with the USDA Forest Service.
  - US Forest Service [webpage](#) with links to appendices including biomass equations, wood density values, allometric equations and more (2021).

how to collect data with the mobile data collector for i-Tree Eco inventory and plot based projects.

# Post course details

- Certificates of participation
- Course feedback survey



## i-Tree Academy Spring 2023

Occurs on Tuesdays @ 1:00pm ET  
March 14 - April 28, 2023  
via [Microsoft Teams](#)  
visit [itreetools.org](http://itreetools.org) for more details  
email [info@itreetools.org](mailto:info@itreetools.org) with questions

Name \*

Short answer text

Email \*

Short answer text

# More learning opportunities coming soon



- i-Tree for grants [next week](#)
- UNRI webinar [series](#)
- Future i-Tree Academies
- Forest Service Urban and Community Forestry IRA [grants](#).

## i-Tree for Funding Opportunities - May 2023

### What:

Urban and Community Forestry is making headlines this spring. In April, USDA's Forest Service announced the availability of \$1 billion to increase equitable access to trees and green spaces in urban and community forests where more than 84% of Americans live, work, and play. This is an enormous opportunity for communities large and small, and i-Tree is here to help. We will hold two free, one-hour workshops during the first week of May for an in-depth look at what i-Tree tools can offer. We will also host online office hours to answer i-Tree technical questions. Find a shareable/printable flyer with this information [here](#).

### How:

[Please register here to participate](#). All are welcome. Sessions will be live streamed on Microsoft Teams. Both sessions will be recorded and posted below as well as on [i-Tree's YouTube channel](#). There are no requirements for this course. Participants are encouraged to submit session-related questions to [info@itreetools.org](mailto:info@itreetools.org).

### When:

- **Benchmarking and Prioritizing Impacts - Wednesday, May 3, 1:00-2:00 pm ET** This session will cover how to use [i-Tree Canopy](#) to identify what you have, [i-Tree Planting](#) to examine impact metrics, and [i-Tree Landscape](#) to prioritize your needs. Learn how to get estimates of tree canopy cover, discover priority areas within your community, and analyze the equity and distribution of canopy benefits.
- **Monitoring, Forecasting, and Strategic Management - Friday, May 5, 1:00-2:00 pm ET** This session will cover how to use [i-Tree Eco](#) to examine what you'll need to move your goals forward. Learn how an i-Tree Eco inventory can help you better manage your urban forest to maximize trees' benefits and ensure those benefits are delivered where they are most needed.

# Thanks from the team



Supported by:

USDA Forest Service

Urban and Community Forestry Program

Jason Henning

Dave Bloniarz

Krista Heinlin

Eric Greenfield

Jay Heppler

Scott Maco

Success stories?

Questions?

Suggestions?

[info@itreetools.org](mailto:info@itreetools.org)

