



# What's new with i-Tree

*Tools for assessing and managing community forests*

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# Plan for today...

- 🌳 An “All lands” approach
- 🌳 i-Tree Landscape
- 🌳 i-Tree Eco v6 & Streets update

i-Tree Landscape v1.2 beta Home Project Help

Find Locations Explore Location Data See Tree Benefits Prioritize Tree Pla

← Back Dataset: HIRes 2011 2001 Unit: Metric English Display: Table

Carbon		Air Pollution		Hydrology		Carbon Storage		Carbon Sequestration		CO <sub>2</sub> equivalent
Remove	Type	ID	Swap	Highlight	\$	Short Ton	\$/yr	t/yr	\$	
▼										
Total Selection:					60,481,263,846	434,369,323	769,892,832	5,529,279.8		60,481,263,828



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Arbor Day Foundation



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ESF

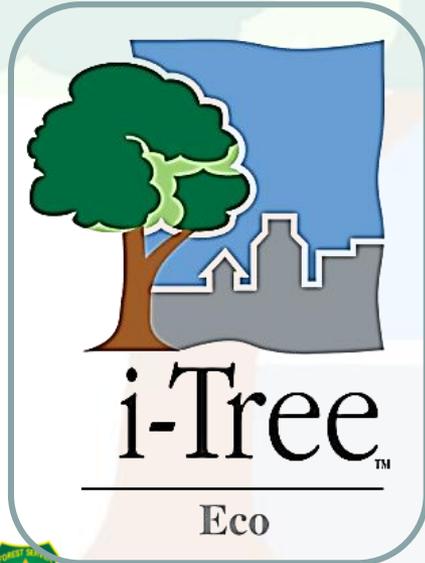


# The 2016 i-Tree Suite of Tools

Web-based,  
run in your  
browser



Installed on  
a Windows  
desktop or  
laptop



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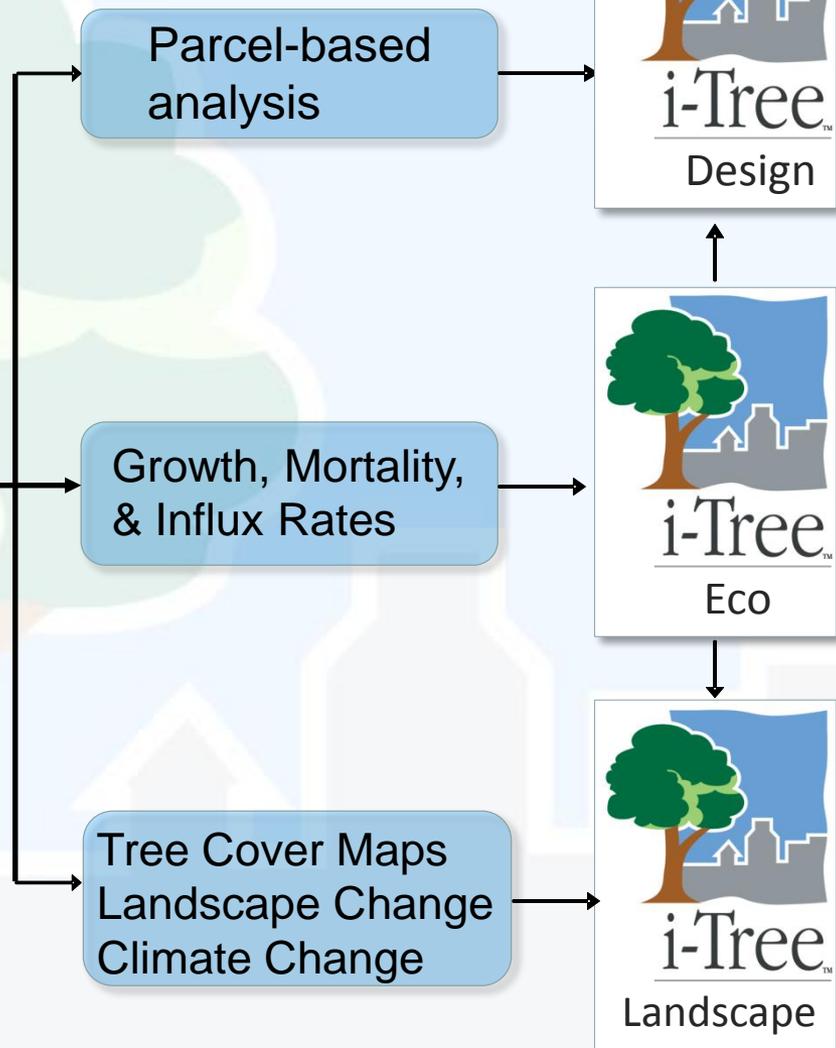


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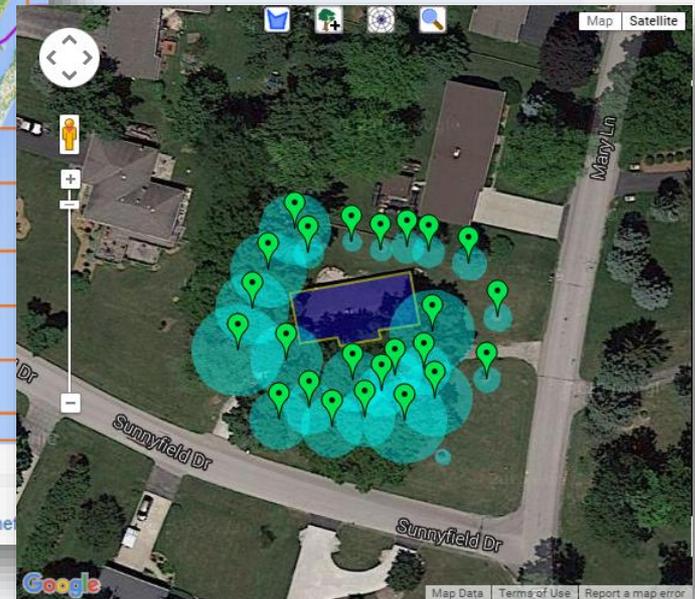
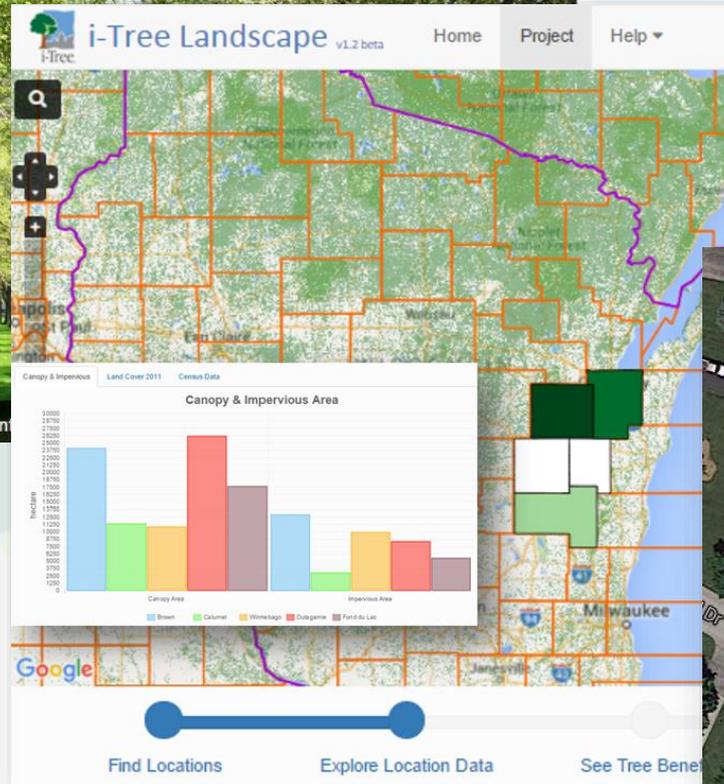
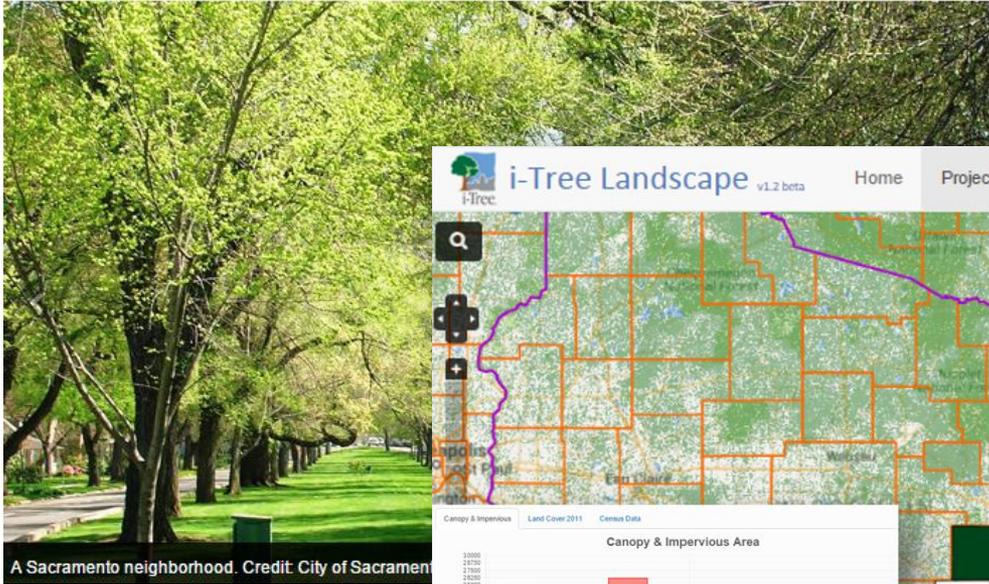
# “All Lands” approach to natural resource stewardship

- Restore & sustain forest landscapes
- Make landscapes more resilient to climate change
- Enhance water resources
- Create jobs & sustainable communities



Local  
SCALE  
Regional

# Structure → Function → Value

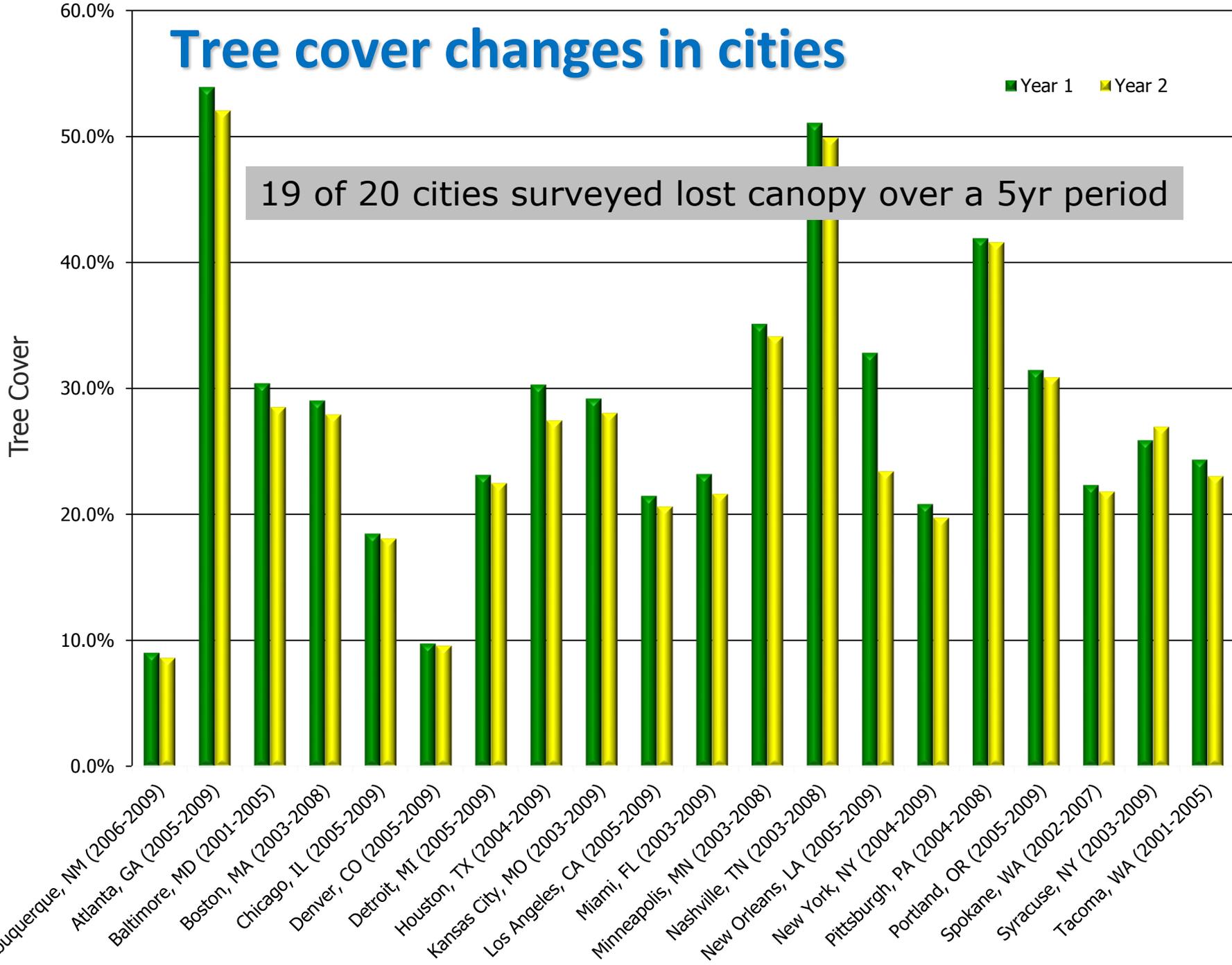


....state, county, region, watershed, neighborhood, home, etc.

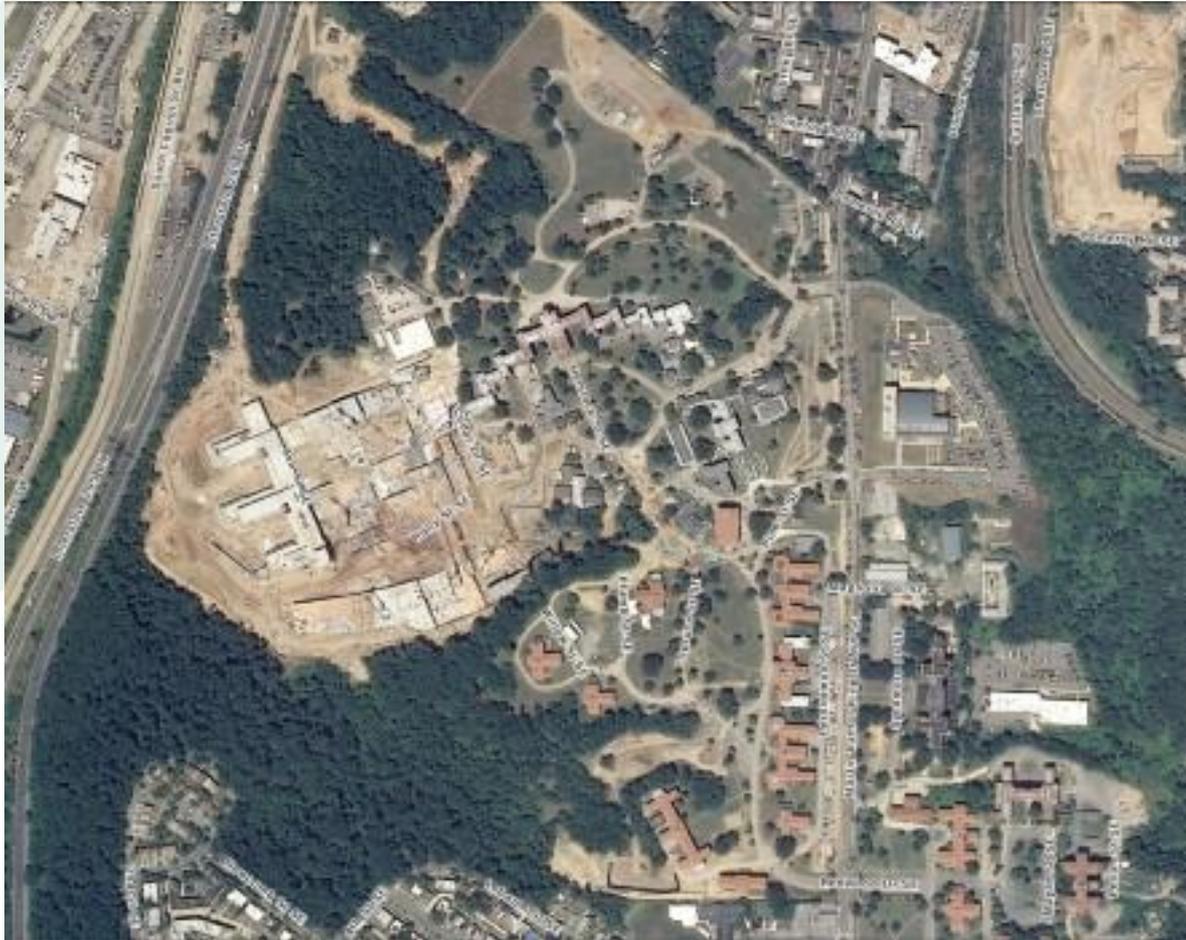
# Tree cover changes in cities

■ Year 1 ■ Year 2

19 of 20 cities surveyed lost canopy over a 5yr period



# Why private property trees matter



*St. Elizabeth Hospital D.C. 2006-2011 - courtesy of Casey Trees*



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SMA  
ARBORISTS

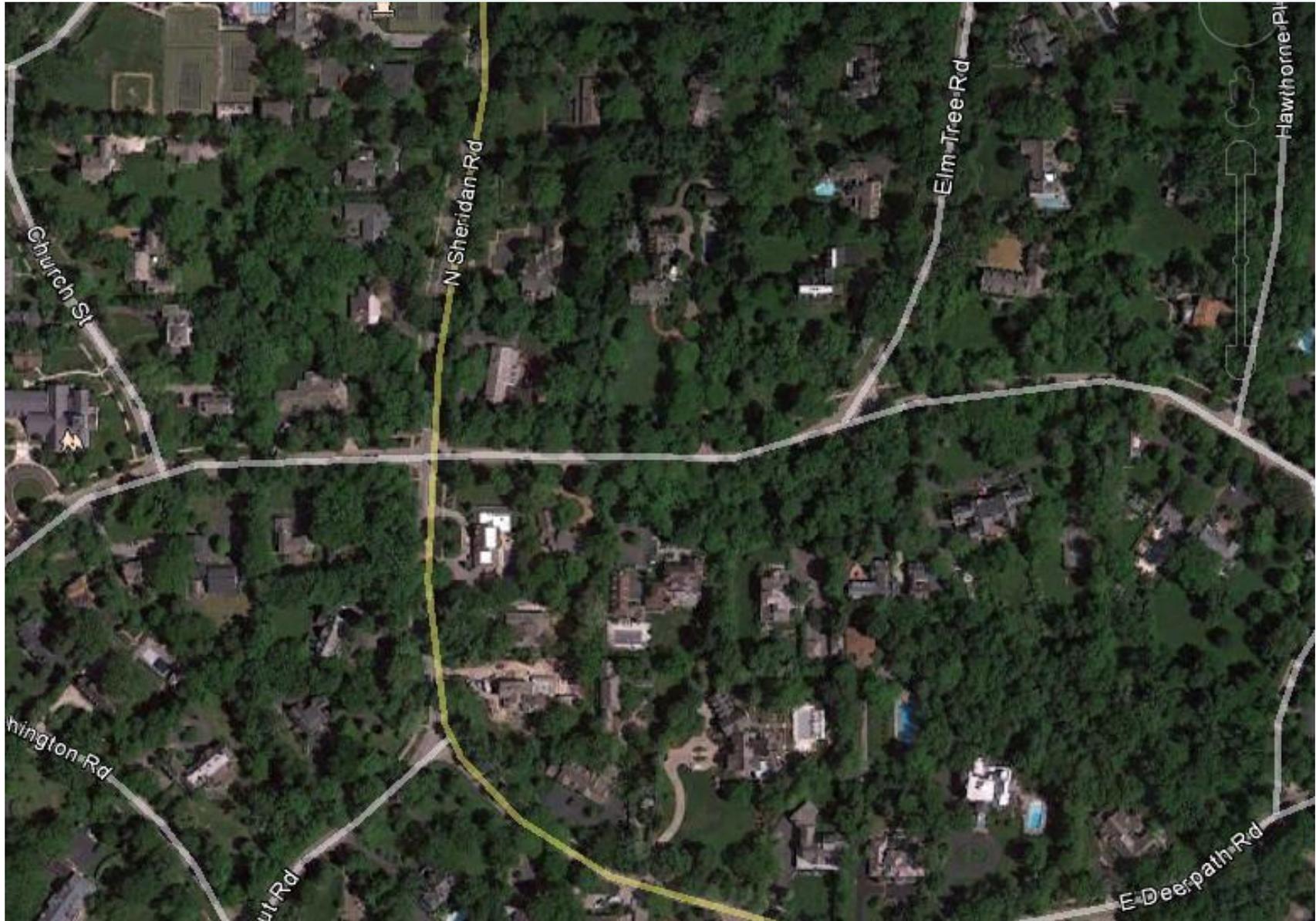
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Casey Trees

ESF

NAASF  
Northeastern Area Association of State Foresters

# Why private property trees matter



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Casey Trees

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NAASF  
Northern Area Association of State Foresters

# Connecting trees and people...

**Improving public health** through air pollution removal



U.S. urban forests remove 717,000 tons of air pollutants per year worth \$4.7 billion/year

🌳 Public health impacts: incidence reduction of:

- ~580 deaths / year
- ~580 emergency room visits / year
- ~330,000 asthma exacerbations / year
- ~485,000 acute respiratory symptoms / year



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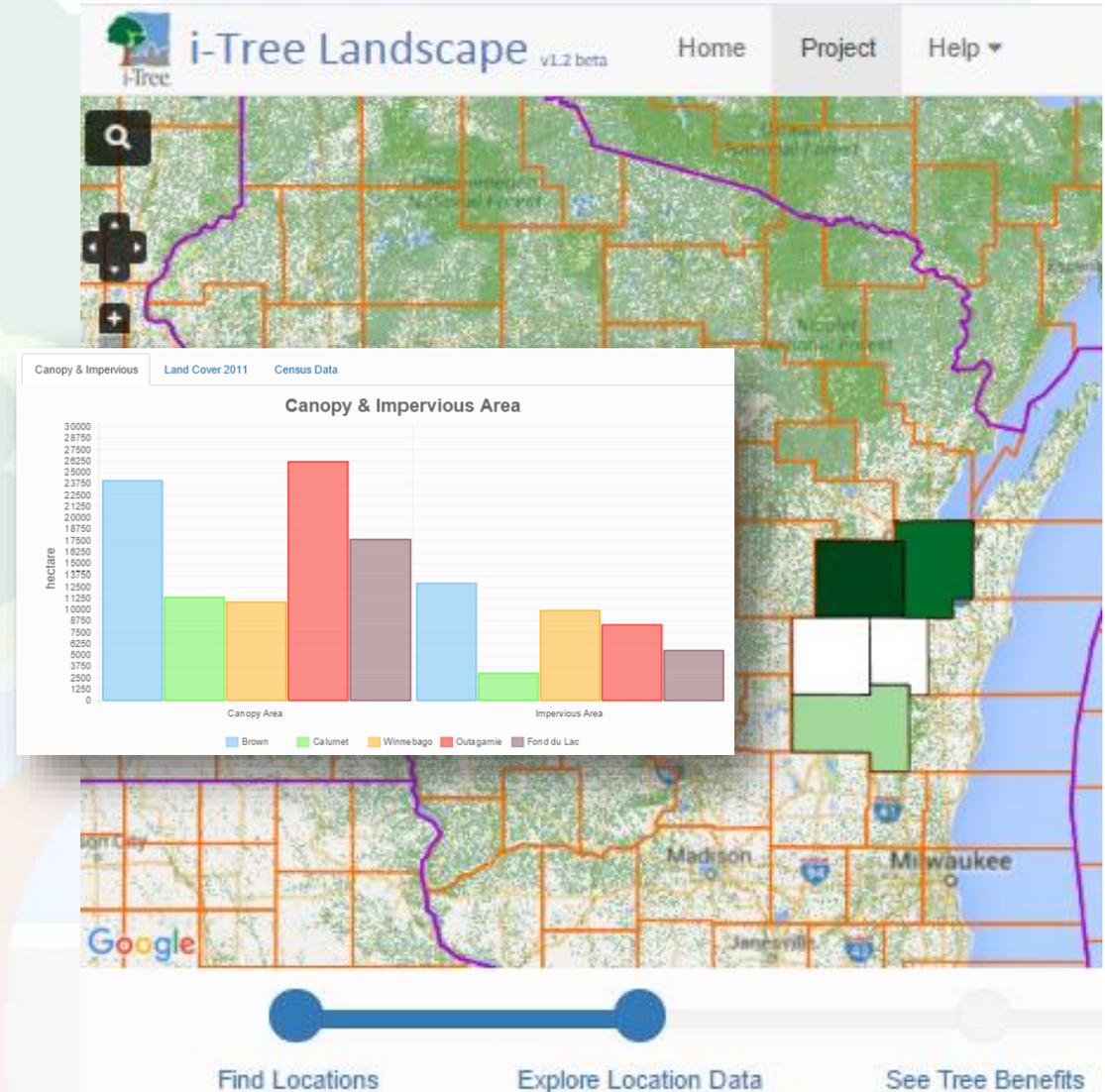
Casey Trees

ESF

NAASF  
Northern Area Association of State Foresters

# i-Tree Landscape vision

 A spatially distributed model that estimates ecosystem services of trees on all lands



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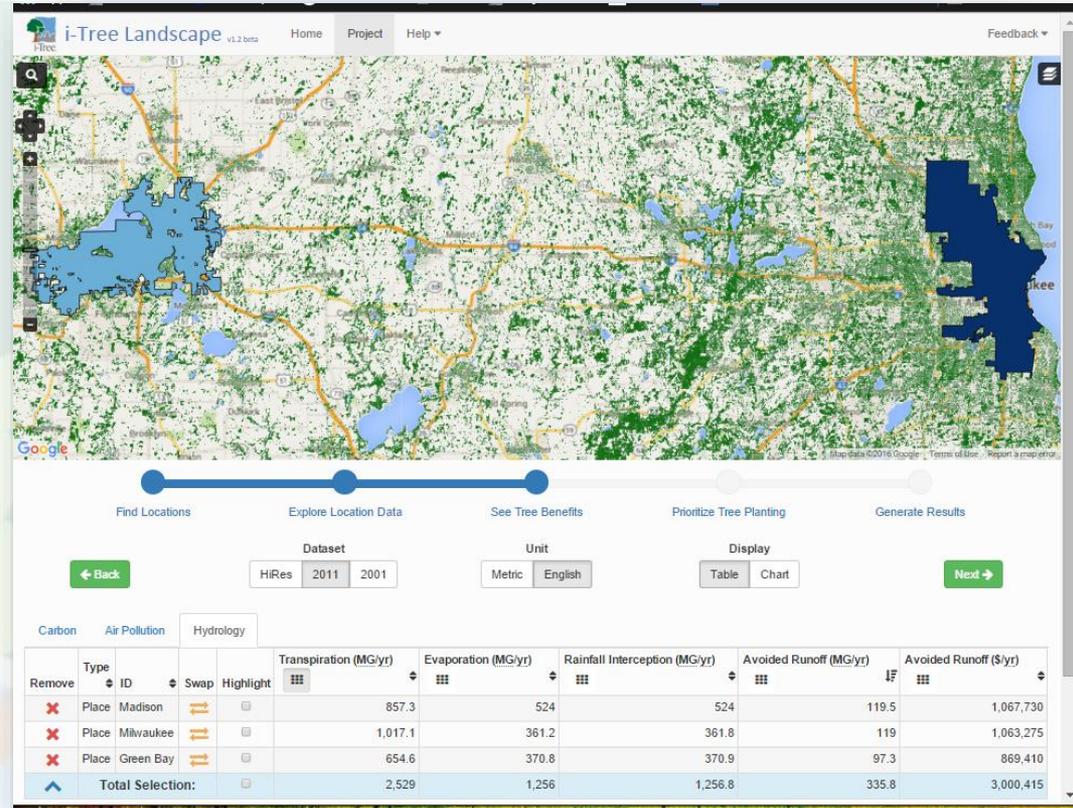
ESF



# i-Tree Landscape basics

🌳 Web browser tool using:

- Tree cover, impervious cover, land cover (NLCD 2011 & UTC where available)
- Census block groups and places
- County, state, congressional district boundaries
- National Forests & Parks



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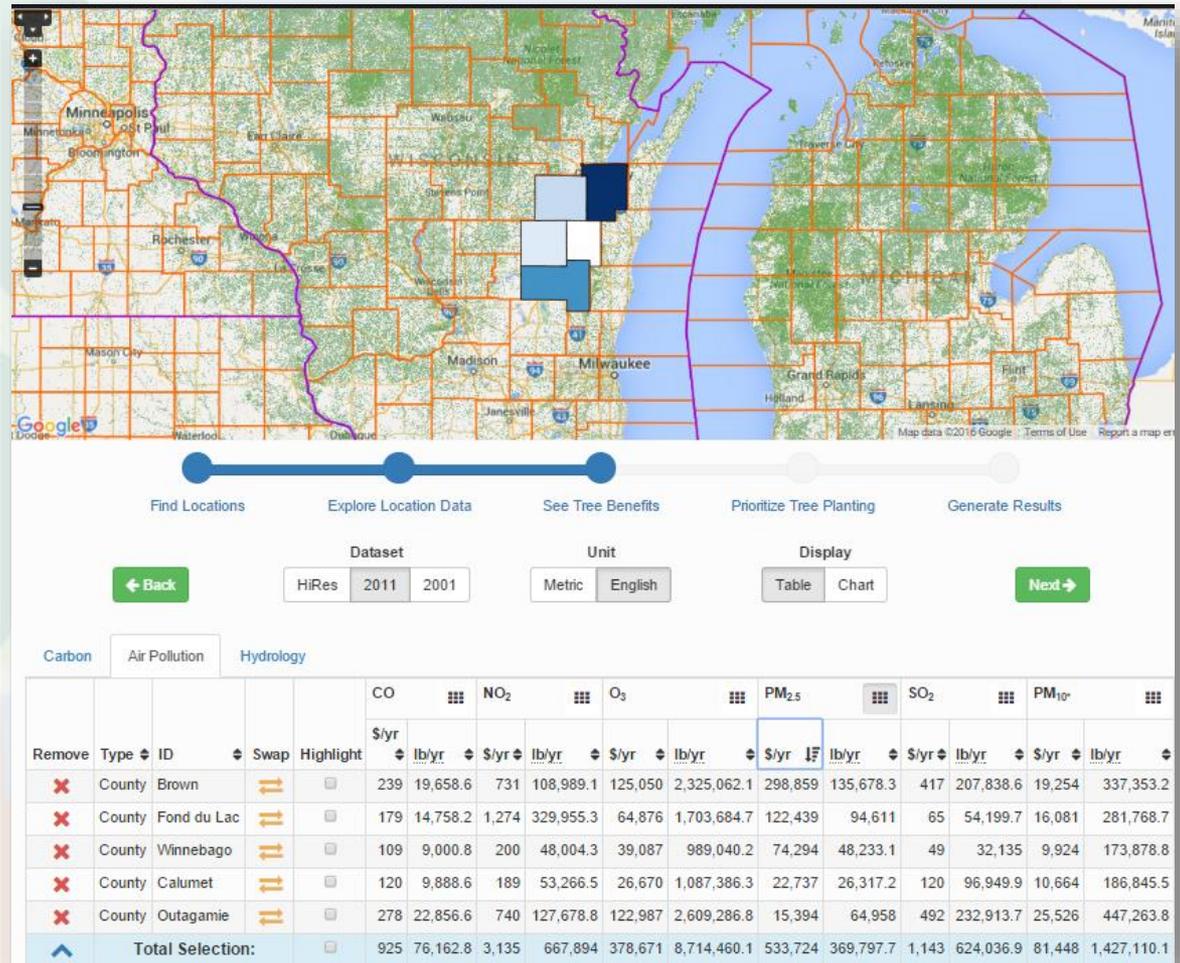
ESF



# i-Tree Landscape basics

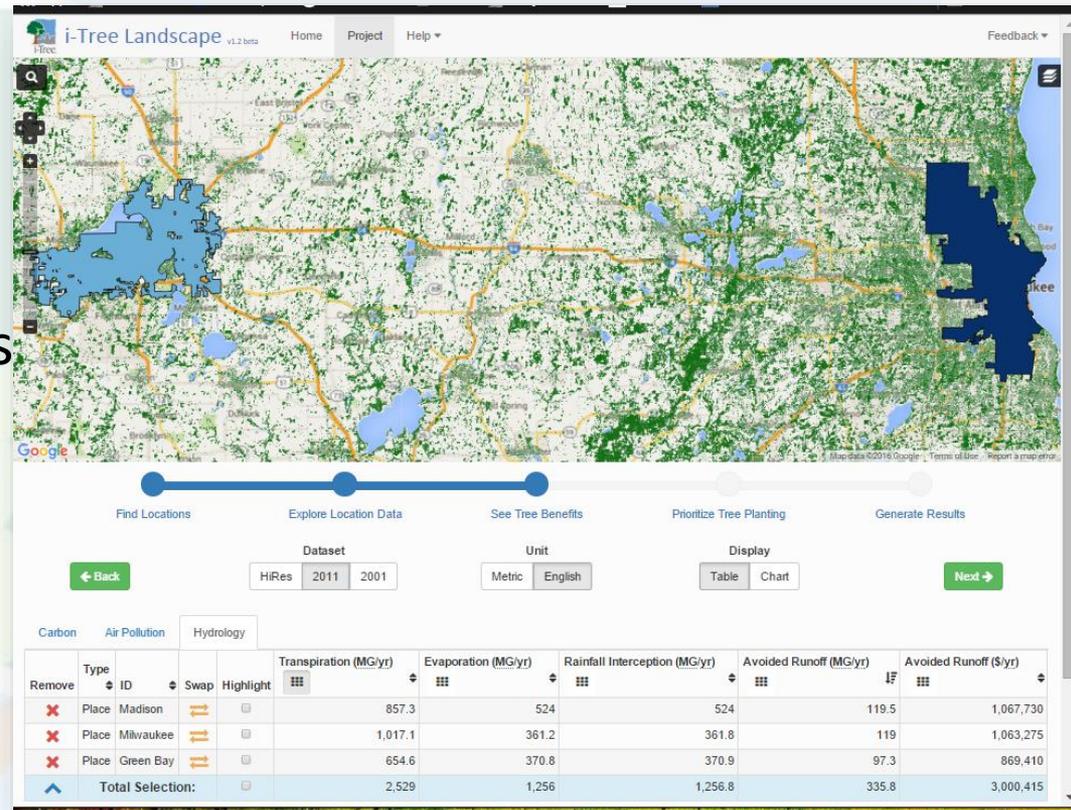
Tree benefits derived from

- Tree cover estimates
- Land classification
- UF & FIA data
- Local environmental variables
- Human populations – census data
- i-Tree Eco urban and rural pollution modeling and hydrology modeling



# What does i-Tree Landscape provide?

- 🌳 Canopy & impervious cover estimates
- 🌳 Ecosystem service estimates
  - Carbon storage & sequestration
  - Air pollution reduction
  - Hydrology effects
- 🌳 Assist with tree prioritization based on user criteria



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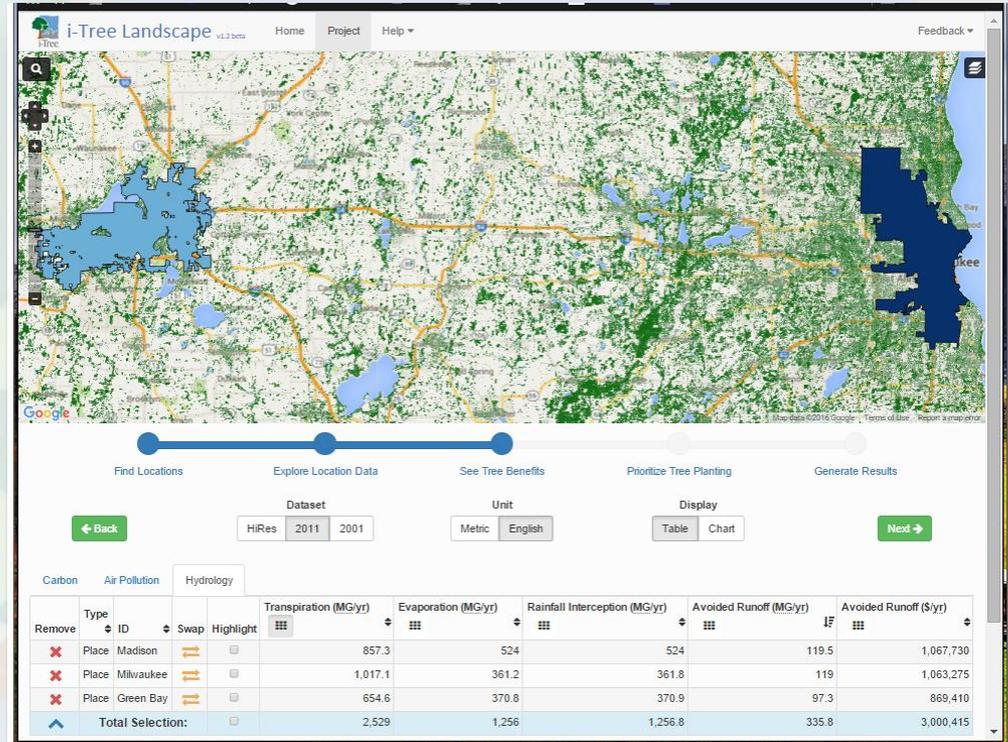


ESF



# Why i-Tree Landscape Matters?

- 🌳 Online accessible
- 🌳 Engage audiences visually
- 🌳 Explore relationships of trees, people and land
- 🌳 An “All lands” approach to estimating tree benefits



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# Home Page

Home - i-Tree Landscape

https://landscape.itreetools.org

i-Tree Landscape v1.1 beta Home Project Help Feedback

## Welcome to i-Tree Landscape! v1.1 beta

Offering more than just beauty and shade, trees provide intangible benefits, such as removal of atmospheric carbon dioxide and pollution, stormwater reduction, temperature modification, and more. i-Tree Landscape allows you to explore tree canopy, land cover, and basic demographic information in a location of your choosing. With the information provided by i-Tree Landscape, you will learn about the benefits of trees in your selected location, see how planting trees will increase the benefits provided, and map the areas where you decide to prioritize your tree planting efforts.

Step 1: Explore  
Step 2: Benefits

Ozone	
\$	gim <sup>3</sup> /yr
90122.16	8.59

PM2.5	
\$	gim <sup>3</sup> /yr
202948.10	0.42

Find Locations Explore Location Data See Tree Benefits Prioritize Tree Planting Generate Results

By removing carbon dioxide, trees help mitigate climate change. The shade provided by urban tree canopies can also help minimize the urban heat island effect. In addition, trees intercept stormwater, which can reduce flooding and improve water quality, and reduce air pollution, such as ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and fine particulate matter. Reduction of air pollution has proven benefits to human health - trees truly can enhance our lives! Click [Get Started](#) to begin an i-Tree Landscape project now.

i-Tree and its partners do not endorse any specific web-browser, but i-Tree Landscape has been tested to work well with modern versions of Chrome, Firefox, Internet Explorer, and Safari. Please, use the [Feedback](#) form to report issues.

# Help and References

The screenshot shows a web browser window with the URL <https://landscape.itreetools.org/help/>. The page title is "i-Tree Landscape v1.2 beta". The navigation bar includes "Home", "Project", "Help", and "Feedback". The "Help" dropdown menu is open, showing options: "How to Use", "References", "F.A.Q.", and "About". The main content area has a heading "How to Use i-Tree Landscape" and a "Welcome!" section. A "Quick links for the sections on this page." sidebar contains a list of links: "Important Features and Tools", "Project Steps" (with sub-links: "Find Locations", "Explore Location Data", "See Tree Benefits", "Prioritize Tree Planting", "Generate Results"), and "Helpful Hints". Below the welcome message is a section titled "Important Features and Tools" with a sub-section "Map Display" and a "Search Bar" section.

Help - i-Tree Landscape

<https://landscape.itreetools.org/help/>

i-Tree Landscape v1.2 beta

Home Project Help Feedback

## How to Use i-Tree Landscape

Welcome!

i-Tree Landscape allows you to explore tree canopy, land cover, and basic demographic information in a location of your choosing. With the information provided by i-Tree Landscape, you will learn about the benefits of trees in your selected location, see how planting trees will increase the benefits provided, and map the areas where you decide to prioritize your tree planting efforts.

*Interested in viewing this How-To text while you work on your Landscape project? Click on the **Help** drop-down list, in the navigation bar, at the top of the page, then right-click the **How to Use** option and click **Open Link in New Window**. This will open the How-To text in a separate window so you can conveniently view both webpages at once.*

### Important Features and Tools

As you work through your i-Tree Landscape project, you will see that there are five important features that are available on every page, except **Generate Results**.

#### Map Display

The map is usually displayed on the upper portion of the page, and spans the entire width of the page. This is where you can view the various boundaries, datasets, and map layers and select the geographic regions to include in your analysis. Use the other features described below (i.e., search bar, navigation tools, and control panel) to customize the map display and data shown here and to make your geographic selection.

#### Search Bar

The search bar is located at the top-left of the map display and can be used to quickly view a location, such as a city, state, or street address. Enter your location in the search bar and click on the magnifying glass. (Note that you may need to click on the magnifying glass first in order to open the search bar if it has been "collapsed.")

This feature is comparable to the search feature in routing and navigation software (e.g., car GPS, [MapQuest](#), [Google Maps](#), [Bing Maps](#), [Yahoo Maps](#), [OpenStreetMap](#)).

#### Quick links for the sections on this page.

- [Important Features and Tools](#)
- [Project Steps](#)
  - [Find Locations](#)
  - [Explore Location Data](#)
  - [See Tree Benefits](#)
  - [Prioritize Tree Planting](#)
  - [Generate Results](#)
- [Helpful Hints](#)

# Get Started

The screenshot shows the i-Tree Landscape website interface. At the top, there is a browser window with the URL <https://landscape.itreetools.org>. The website header includes the i-Tree logo, the text "i-Tree Landscape v1.1 beta", and navigation links for "Home", "Project", and "Help". A "Feedback" dropdown menu is also present.

## Welcome to i-Tree Landscape! v1.1 beta

Offering more than just beauty and shade, trees provide intangible benefits, such as removal of atmospheric carbon dioxide and pollution, stormwater reduction, temperature modification, and more. i-Tree Landscape allows you to explore tree canopy, land cover, and basic demographic information in a location of your choosing. With the information provided by i-Tree Landscape, you will learn about the benefits of trees in your selected location, see how planting trees will increase the benefits provided, and map the areas where you decide to prioritize your tree planting efforts.

Ozone	
\$	gim <sup>2</sup> /yr
90122.16	8.59

PM2.5	
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202948.10	0.42

**Get Started**

By removing carbon dioxide, trees help mitigate climate change. The shade provided by urban tree canopies can also help minimize the urban heat island effect. In addition, trees intercept stormwater, which can reduce flooding and improve water quality, and reduce air pollution, such as ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and fine particulate matter. Reduction of air pollution has proven benefits to human health - trees truly can enhance our lives! Click [Get Started](#) to begin an i-Tree Landscape project now.

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# Maps Layers

The screenshot displays the i-Tree Landscape web application. The browser address bar shows the URL <https://landscape.itreetools.org/maps/>. The page header includes the i-Tree logo, the text "i-Tree Landscape v1.2 beta", and navigation links for "Home", "Project", and "Help". A search bar at the top left contains the text "Waukesha Wi".

The main map area shows a map of the United States with red dots representing tree locations. State boundaries are outlined in purple. Major cities like Seattle, San Francisco, Los Angeles, San Diego, Las Vegas, Dallas, Houston, and Miami are labeled. The map is overlaid with a grid of US Census Block Groups. A search bar on the map also contains "Waukesha Wi".

On the right side, a "Map Layers" panel is open, showing the following layers:

- Administrative**
  - US Census Block Groups
  - US Census Places
  - US Counties
  - US Congressional Districts
  - US States
- Forest**
  - US National Forests
  - US Ranger Districts
  - CFLR Boundaries
- Canopy & Land Layers** (+)
- Base Maps** (+)

Below the map, a progress bar shows four steps: "Find Locations" (active), "Explore Location Data", "See Tree Benefits", and "Prioritize Tree".

At the bottom, there is a "Selection Tools" panel with the following options:

- US Census Block Group (dropdown menu)
- Navigate (+)
- Identify (i)
- Select (hand icon)
- Box-Select (checkbox icon)
- Swap (double arrow icon)
- Clear (red button)
- Process (green button)

The bottom of the page features the text: "The following descriptions provide a general overview of the steps involved in completing an analysis with i-Tree for more details and a thorough How-To!" followed by a large heading: "Let's Get Started!"

# Location

Maps - i-Tree Landscape

https://landscape.itreetools.org/maps/

i-Tree Landscape v1.2 beta Home Project Help Feedback

Map Layers

- Canopy & Land Layers
- Base Maps
  - Google Aerial
  - Google Streets
  - Google Aerial
  - Bing Streets
  - Bing Aerial
  - Open Street Map
  - Blank Canvas
  - US Census Block Group

Map navigation controls: + Navigate, i Identify, Select, Box-Select, Swap, Clear, Process

Find Locations Explore Location Data See Tree Benefits Prioritize Tree Planting Generate Results

Next

The following descriptions provide a general overview of the steps involved in completing an analysis with i-Tree Landscape. Visit the [Help](#) page for more details and a thorough How-To!

## Let's Get Started!

# Step 1: Find a Location

Maps - i-Tree Landscape

https://landscape.itreetools.org/maps/

i-Tree Landscape v1.2 beta

Home Project Help

Feedback

Map Layers +

Canopy & Land Layers +

Base Maps -

Google Aerial

Selection Tools -

US Census Places

Navigate Identify

Select Box-Select

Swap Clear

Process 26

Find Locations Explore Location Data See Tree Benefits Prioritize Tree Planting Generate Results

Next >

The following descriptions provide a general overview of the steps involved in completing an analysis with i-Tree Landscape. Visit the [Help page](#) for more details and a thorough How-To!

## Let's Get Started!

## Step 2: Explore Location Data

Explore Location Data - M... X +

https://landscape.itreetools.org/maps/locations/

Canopy & Impervious Land Cover 2011 Census Data

Remove	Type	ID	Swap	Highlight	Area		Canopy		Impervious	
					acre	%	acre	%	acre	%
X	Place	Chenequa	↔	<input type="checkbox"/>	3,014.9	1.76	1,390.8	46.13	70.5	2.34
X	Place	Oconomowoc Lake	↔	<input type="checkbox"/>	2,112.7	1.24	850.2	40.24	134.9	6.39
X	Place	Elm Grove	↔	<input type="checkbox"/>	2,101.5	1.23	718.1	34.17	478.7	22.78
X	Place	Delafield	↔	<input type="checkbox"/>	7,078.1	4.14	1,889.9	26.70	842	11.90
X	Place	Lac La Belle	↔	<input type="checkbox"/>	626.3	0.37	156.9	25.06	30.8	4.92
X	Place	Wales	↔	<input type="checkbox"/>	2,104	1.23	496.8	23.61	224	10.65
X	Place	Brookfield	↔	<input type="checkbox"/>	17,655.4	10.33	4,043.1	22.90	4,019.6	22.77
X	Place	Nashotah	↔	<input type="checkbox"/>	1,087.2	0.64	242	22.26	148.3	13.64
X	Place	New Berlin	↔	<input type="checkbox"/>	23,600.3	13.81	5,210	22.08	3,888.5	16.48
X	Place	Menomonee Falls	↔	<input type="checkbox"/>	21,316.5	12.47	4,028.9	18.90	4,150.2	19.47
X	Place	Lannon	↔	<input type="checkbox"/>	1,577.7	0.92	281.3	17.83	211.5	13.40
X	Place	Muskego	↔	<input type="checkbox"/>	23,021	13.47	3,591.5	15.60	2,165.6	9.41
X	Place	Okauchee Lake	↔	<input type="checkbox"/>	3,119.7	1.83	476.3	15.27	499.8	16.02
X	Place	Pewaukee	↔	<input type="checkbox"/>	13,540	7.92	2,026.3	14.97	2,353.6	17.38
X	Place	Hartland	↔	<input type="checkbox"/>	3,307.5	1.94	476.8	14.41	830.1	25.10
X	Place	Waukesha	↔	<input type="checkbox"/>	16,040.5	9.38	1,850.7	11.54	5,364.1	33.44
X	Place	Merton	↔	<input type="checkbox"/>	1,969.8	1.15	224.4	11.39	243.8	12.38
X	Place	Big Bend	↔	<input type="checkbox"/>	2,011.5	1.18	227	11.29	189	9.40
X	Place	Butler	↔	<input type="checkbox"/>	508.5	0.30	55	10.82	272.2	53.52
X	Place	North Prairie	↔	<input type="checkbox"/>	1,812.2	1.06	188.9	10.42	194.8	10.75
X	Place	Mukwonago	↔	<input type="checkbox"/>	5,185.9	3.03	538	10.37	769.6	14.84
X	Place	Dousman	↔	<input type="checkbox"/>	1,709.5	1.00	171.2	10.01	185.8	10.87

## Step 2: Explore Location Data

Explore Location Data - M... +

https://landscape.itreetools.org/maps/locations/ Search

Map data ©2016 Google Imagery ©2016 TerraMetrics Terms of Use Report a map error

Find Locations **Explore Location Data** See Tree Benefits Prioritize Tree Planting Generate Results

Dataset: HiRes **2011** 2001 Unit: Metric **English** Display: Table **Chart**

Canopy & Impervious Land Cover 2011 **Census Data**

Population Income Overview Home Overview Household Type Home Tenure Educational Attainment

Remove	Type	ID	Swap	Highlight	Median Income \$	PerCapita Income \$	Poverty %
✗	Place	Lannon	↕	<input type="checkbox"/>	48,967	30,412	11.3
✗	Place	Waukesha	↕	<input type="checkbox"/>	56,248	28,197	10.2
✗	Place	Butler	↕	<input type="checkbox"/>	48,554	25,196	9.1
✗	Place	Oconomowoc Lake	↕	<input type="checkbox"/>	103,125	95,053	6.5
✗	Place	Hartland	↕	<input type="checkbox"/>	67,099	33,474	6.5

# Step 3: Tree Benefits

See Tree Benefits - Maps - ...

https://landscape.itreetools.org/maps/benefits/

Map data ©2016 Google Imagery ©2016 TerraMetrics Terms of Use Report a map error

Find Locations Explore Location Data **See Tree Benefits** Prioritize Tree Planting Generate Results

← Back Dataset: HiRes 2011 2001 Unit: Metric English Display: Table Chart Next →

Carbon Air Pollution **Hydrology**

Remove	Type	ID	Swap	Highlight	Transpiration (MG/yr)	Evaporation (MG/yr)	Rainfall Interception (MG/yr)	Avoided Runoff (MG/yr)	Avoided Runoff (\$/yr)
✗	Place	New Berlin	⇄	<input type="checkbox"/>	565.3	137.5	137.5	22.5	200,706
✗	Place	Chenequa	⇄	<input type="checkbox"/>	141.9	39.1	39.1	0.8	7,034
✗	Place	Butler	⇄	<input type="checkbox"/>	6	1.5	1.5	0.2	2,120
✗	Place	Pewaukee	⇄	<input type="checkbox"/>	21.2	5.1	5.1	0.8	7,514
✗	Place	Waukesha	⇄	<input type="checkbox"/>	200.8	48.8	48.8	8	71,295
✗	Place	Nashotah	⇄	<input type="checkbox"/>	26.3	6.4	6.4	1	9,323

# Step 4: Prioritize Tree Planting

https://landscape.itreetools.org/maps/prioritize/

Find Locations   Explore Location Data   See Tree Benefits   **Prioritize Tree Planting**   Generate Results

Dataset: HiRes   2011   2001

Common Scenarios: Population   Minorities   **Poverty**

### How To Prioritize Tree Planting

Better areas to plant trees, based on existing tree canopy and impervious ground cover, can be expressed by a “**Priority Planting Index**”. This index is built upon individual indices calculated for each of the selected regions on the map. Each criteria affects a region’s priority for tree planting:

Recommended (as space is needed for new trees):

- **Tree Stocking Level:** a low level indicates land area that could accommodate trees, but currently does not. ?

Optional (select 0 to 4):

- **Tree Cover per Capita:** canopy area per person, prioritizing

### Customize The Criteria For Prioritizing ?

Tree Stocking Level

Importance (weight) 50 %

# Step 5: Generate Reports

Report - i-Tree Landscape x Report - i-Tree Landscape x Google+

https://landscape.itreetools.org/report/0a2db23a-1f13-4e18-a217-4

## Hydrology

MG/yr

Transpiration Evaporation Rainfall Interception Avoided Runoff

Big Bend Chenequa Okauchee Lake Dousman Oconomowoc Lake Oconomowoc Harland New Berlin Merton Sussex Pewaukee Brookfield Eagle Muskego Lannon Waukesha Butler Elm Grove Wales North Prairie Menomonee Falls Delafield

### Hydrology (2011 NLCD, Modeled Canopy Change = 0%)

Type	ID	Transpiration (MG/yr)	Evaporation (MG/yr)	Rainfall Interception (MG/yr)	Avoided Runoff (MG/yr)	Avoided Runoff (\$/yr)
Place	New Berlin	565.3	137.5	137.5	22.5	200,706
Place	Brookfield	438.6	106.7	106.7	17.4	155,751
Place	Menomonee Falls	424.1	109.8	109.8	9.8	87,792
Place	Muskego	378.1	97.9	97.9	8.8	78,259
Place	Pewaukee	219.8	53.5	53.5	8.7	78,060
Place	Delafield	205	49.9	49.9	8.1	72,804
Place	Waukesha	200.8	48.8	48.8	8	71,295
Place	Oconomowoc	80	19.5	19.5	3.2	28,425
Place	Elm Grove	77.9	19	19	3.1	27,662
Place	Wales	53.9	13.1	13.1	2.1	19,138
Place	Hartland	51.7	12.6	12.6	2.1	18,366
Place	Okauchee Lake	51.7	12.6	12.6	2.1	18,349

# Explore Other Geographic Aggregations

# Waukesha County by Census block

The screenshot displays the i-Tree Landscape v1.2 beta web application. The main map shows Waukesha County, Wisconsin, with a heatmap overlay indicating tree planting prioritization by census block. The color scale ranges from dark blue (low priority) to dark red (high priority). The interface includes a navigation menu (Home, Project, Help), a search bar, and various tool panels on the right side.

**Map Layers:** Canopy & Land Layers, Base Maps (Google Streets)

**Selection Tools:** US Census Block Group, Navigate, Identify, Select, Box-Select, Swap, Clear (299 items)

**Planting Prioritization:** Index Color Scale (5 color options), Transparency (0%)

**Navigation:** Find Locations, Explore Location Data, See Tree Benefits, Prioritize Tree

**Dataset:** HiRes, 2011, 2001

**Common Scenarios:** Population, Minorities, Po

**How To Prioritize Tree Planting:** Better areas to plant trees, based on existing tree canopy and impervious ground cover, can be expressed by a "Priority Planting"

**Customize The Cri**

# Explore Other Geographic Aggregations

## New Berlin by Census block

The screenshot shows the i-Tree Landscape v1.2 beta web application. The browser address bar displays the URL <https://landscape.itreetools.org/maps/locations/>. The application header includes the i-Tree logo, the text "i-Tree Landscape v1.2 beta", and navigation links for "Home", "Project", and "Help". A "Feedback" dropdown menu is also present.

The main map area displays a satellite view of New Berlin, Wisconsin, with census tracts overlaid. The tracts are color-coded: a large central tract is dark blue, several surrounding tracts are light blue, and others are white. The map includes labels for "Waukesha", "West Allis", "Greenfield", "Hales Corners", "Greendale", and "Hidden Lakes". Major roads like I-94, I-41, and I-43 are visible.

Below the map is a progress indicator with five steps: "Find Locations", "Explore Location Data", "See Tree Benefits", "Prioritize Tree Planting", and "Generate Results". The "Explore Location Data" step is currently active.

The control panel below the progress indicator includes:

- A "Back" button on the left.
- A "Dataset" section with buttons for "HiRes", "2011", and "2001".
- A "Unit" section with buttons for "Metric" and "English".
- A "Display" section with buttons for "Table" and "Chart".
- A "Next" button on the right.

Below the control panel, there are tabs for "Canopy & Impervious", "Land Cover 2011", and "Census Data". The "Census Data" tab is selected, showing a list of census variables: "Population", "Income Overview", "Home Overview", "Household Type", "Home Tenure", and "Educational Attainment".

At the bottom of the interface, there is a list of selected variables: "Remove", "Type", "ID", "Swap", "Highlight", "Median Income \$", "PerCapita Income \$", and "Poverty %". The "Poverty %" variable is highlighted with a red box.

# Explore Other Geographic Aggregations

## New Berlin by Census block

The screenshot shows the 'Explore Location Data' step of a web application. The map displays census blocks in various shades of green, with the central block highlighted in a darker shade. The interface includes a navigation bar with five steps: 'Find Locations', 'Explore Location Data', 'See Tree Benefits', 'Prioritize Tree Planting', and 'Generate Results'. Below the map, there are controls for 'Dataset' (HiRes, 2011, 2001), 'Unit' (Metric, English), and 'Display' (Table, Chart). A data table is shown below, with columns for 'Canopy' and 'Impervious' area. The table is filtered to show three census blocks, with the first row highlighted in red.

Remove	Type	ID	Swap	Highlight	Area		Canopy		Impervious	
					acre	%	acre	%	acre	%
✗	Block Group	551332016002	↔	☐	3,457	13.75	942.9	27.28	157	4.54
✗	Block Group	551332016003	↔	☐	2,540.7	10.11	641.6	25.25	117	4.60
✗	Block Group	551332015063	↔	☐	1,955	7.78	471.1	24.09	249.1	12.74

# Explore Other Geographic Aggregations

## New Berlin by Census block

Explore Location Data - M... X +

https://landscape.itreetools.org/maps/locations/ Search

Map data ©2016 Google Imagery ©2016 TerraMetrics | Terms of Use Report a map error

Find Locations Explore Location Data See Tree Benefits Prioritize Tree Planting Generate Results

Dataset: HiRes 2011 2001 Unit: Metric English Display: Table Chart

Canopy & Impervious Land Cover 2011 Census Data

Remove	Type	ID	Swap	Highlight	Area		Canopy		Impervious	
					acre	%	acre	%	acre	%
✖	Block Group	551332014042	↕	<input type="checkbox"/>	1,062	4.22	127.7	12.03	478.8	45.09
✖	Block Group	551332015061	↕	<input type="checkbox"/>	978.1	3.89	172.1	17.59	296.6	30.32
✖	Block Group	551332014033	↕	<input type="checkbox"/>	628.8	2.50	82	13.05	266.1	42.31

# Explore Other Geographic Aggregations

## New Berlin by Census block

See Tree Benefits - Maps - ... X +

https://landscape.itreetools.org/maps/benefits/ Search

Map data ©2016 Google Imagery ©2016 TerraMetrics | Terms of Use Report a map error

Find Locations Explore Location Data **See Tree Benefits** Prioritize Tree Planting Generate Results

Dataset Unit Display

← Back HiRes 2011 2001 Metric English Table Chart Next →

Carbon Air Pollution Hydrology

Remove	Type	ID	Swap	Highlight	Carbon Storage		Carbon Sequestration		CO <sub>2</sub> equivalent Storage		CO <sub>2</sub> equivalent Sequestration	
					\$	Short Ton	\$/yr	t/yr	\$	Short Ton	\$/yr	t/yr
✗	Block Group	551332016002	↕	<input type="checkbox"/>	5,417,753	38,909.7	82,280	590.9	5,417,753	142,572.5	82,280	2,165.3

# Explore Other Geographic Aggregations

## New Berlin by Census block

The screenshot shows the 'See Tree Benefits' web application interface. At the top, a browser window displays the URL <https://landscape.itreetools.org/maps/benefits/>. The main map area shows a satellite view of New Berlin, WI, with census blocks outlined in black. A large area of census blocks is highlighted in shades of blue, representing the 'New Berlin by Census block' aggregation. The interface includes a progress bar with five steps: 'Find Locations', 'Explore Location Data', 'See Tree Benefits' (the current step), 'Prioritize Tree Planting', and 'Generate Results'. Below the progress bar, there are controls for 'Dataset' (HiRes, 2011, 2001), 'Unit' (Metric, English), and 'Display' (Table, Chart). The 'Hydrology' tab is selected, and the data table below shows the following information:

Remove	Type	ID	Swap	Highlight	Transpiration (MG/yr)	Evaporation (MG/yr)	Rainfall Interception (MG/yr)	Avoided Runoff (MG/yr)	Avoided Runoff (\$/yr)
<input checked="" type="checkbox"/>	Block Group	551332016002	<input type="checkbox"/>	<input type="checkbox"/>	96.2	26.5	26.5	0.5	4,768
<input checked="" type="checkbox"/>	Block Group	551332016003	<input type="checkbox"/>	<input type="checkbox"/>	65.5	18	18	0.4	3,245

# Explore Other Geographic Aggregations

## New Berlin by Census block

See Tree Benefits - Maps - ...

https://landscape.itreetools.org/maps/benefits/

Map data ©2016 Google Imagery ©2016 TerraMetrics | Terms of Use | Report a map error

Find Locations | Explore Location Data | **See Tree Benefits** | Prioritize Tree Planting | Generate Results

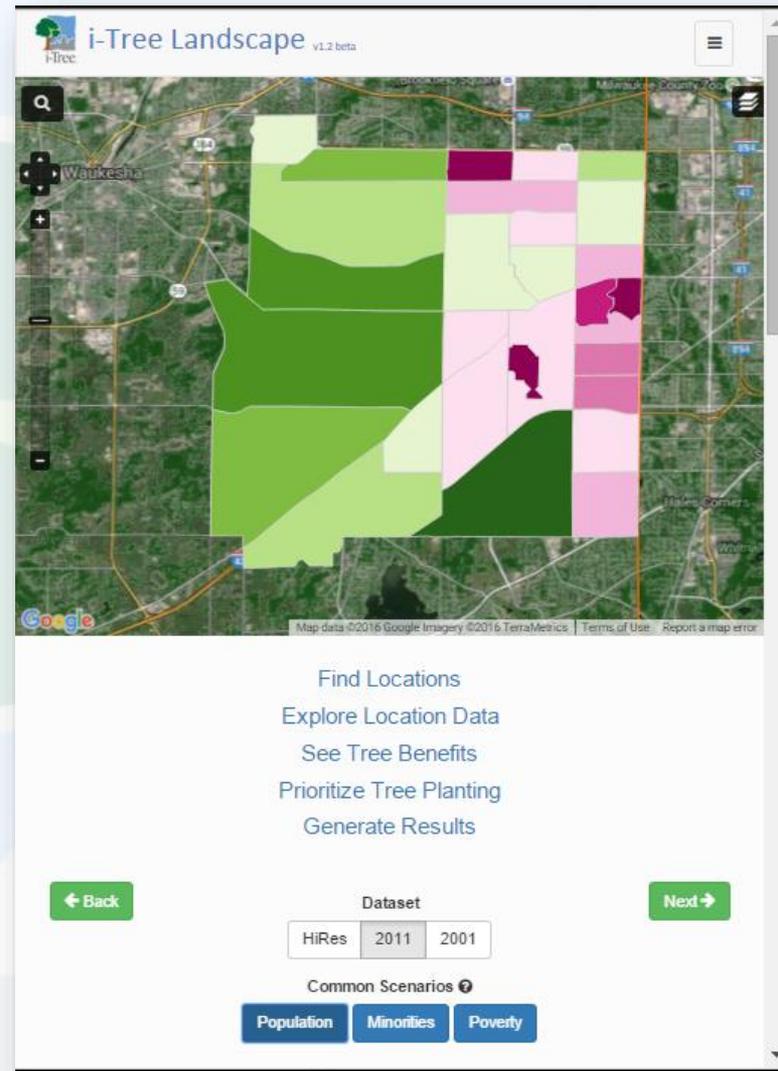
Dataset: HiRes | 2011 | 2001 | Unit: Metric | English | Display: Table | Chart

Carbon | Air Pollution | **Hydrology**

Remove	Type	ID	Swap	Highlight	Transpiration (MG/yr)	Evaporation (MG/yr)	Rainfall Interception (MG/yr)	Avoided Runoff (MG/yr)	Avoided Runoff (\$/yr)
<input checked="" type="checkbox"/>	Block Group	551332015063	<input type="checkbox"/>	<input type="checkbox"/>	51.1	12.4	12.4	2	18,147
<input checked="" type="checkbox"/>	Block Group	551332016004	<input type="checkbox"/>	<input type="checkbox"/>	31.8	7.7	7.7	1.3	11,276

# How can i-Tree Landscape help you?

- 🌳 Demonstrate tree value to audiences
- 🌳 Assess trees beyond streets and parks
- 🌳 Protect & plant trees where they do the most good
- 🌳 Justify tree maintenance, management and assessment.
- 🌳 Explore how tree canopy impacts people



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Arbor Day Foundation



ISA

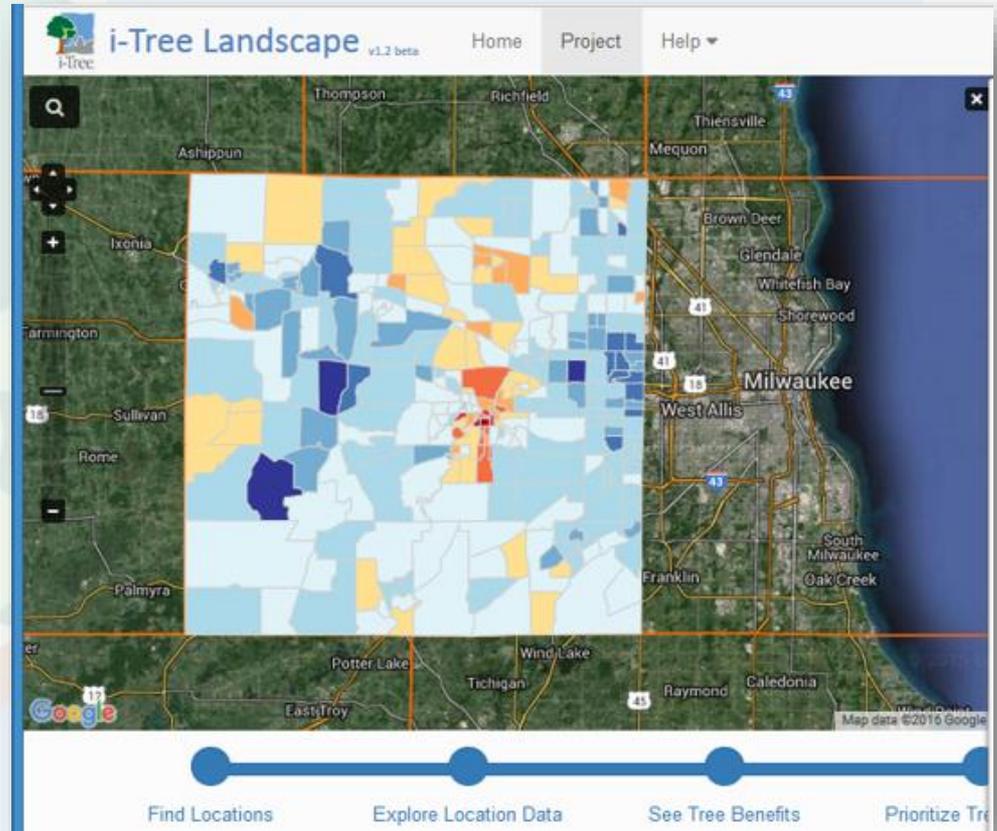


ESF



# Who can benefit by using Landscape?

- 🌳 Elected officials & decision makers
- 🌳 Advocacy groups
- 🌳 Sustainability groups
- 🌳 Private consultants
- 🌳 Tree care professionals
- 🌳 Tree preservation groups
- 🌳 UF Coordinators
- 🌳 Educators



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ARBORISTS

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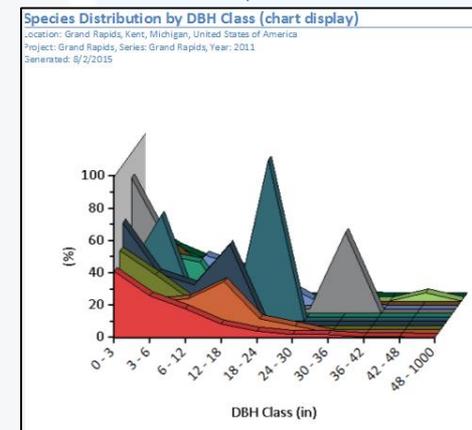
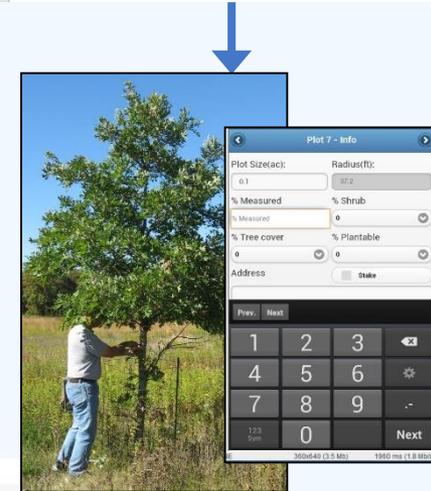
Casey Trees

ESF

NAASF  
Northeastern Area Association of State Foresters

# i-Tree Eco v6 update

- Field-based assessment requiring sample or complete inventory data
- Flagship software based on latest science & local data
- Originally developed for assessing whole urban forest
- Adapted for individual tree assessments
- Reports structure, function, and value



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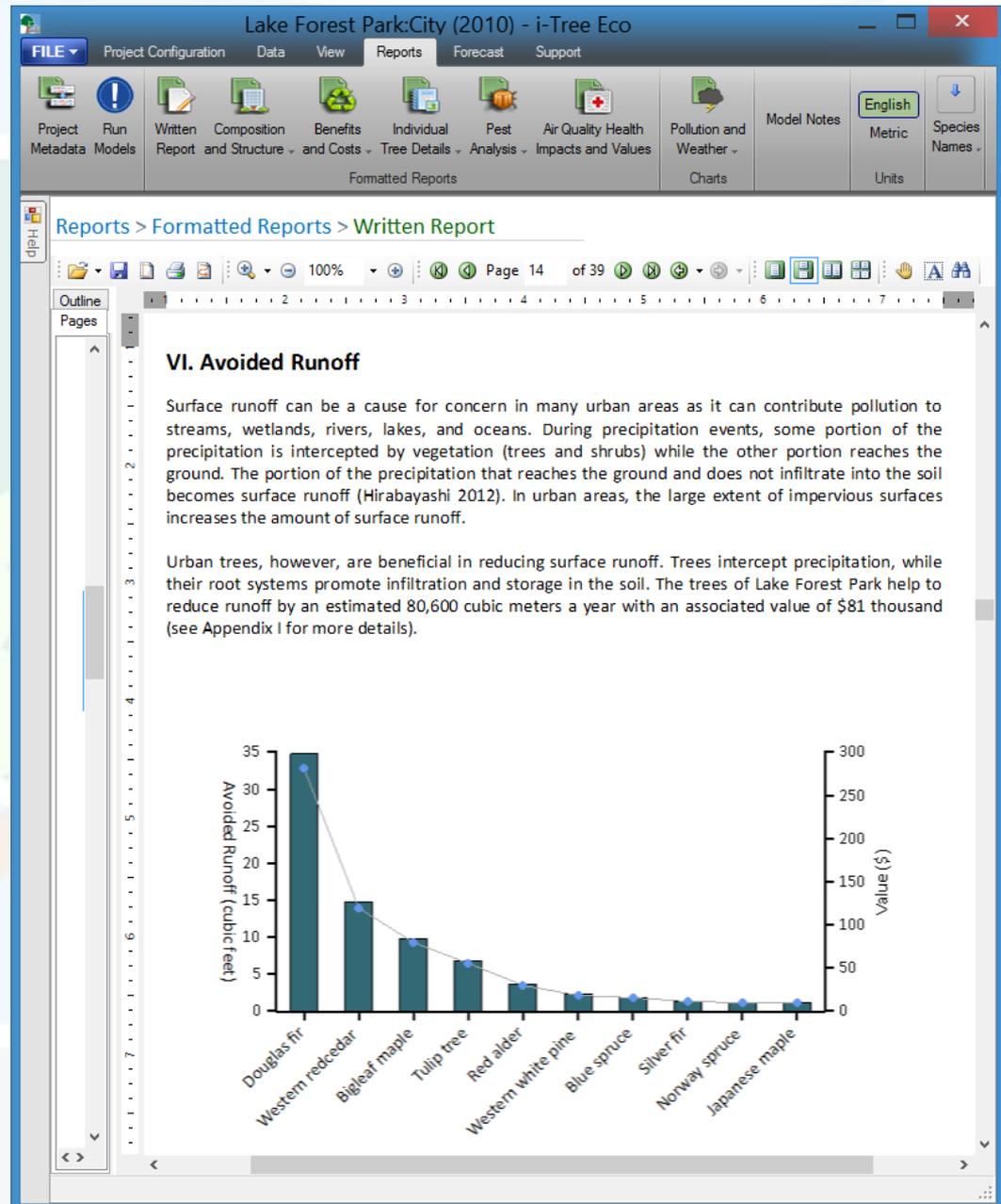


ESF



# i-Tree Eco Assess:

- Structure
- Function
  - Energy effects
  - Air quality
  - Carbon
  - Avoided runoff
  - Human health impacts
  - VOCs
- Value (\$)
- Management info
  - Pest risk
  - Tree health
  - Exotic/invasive spp.



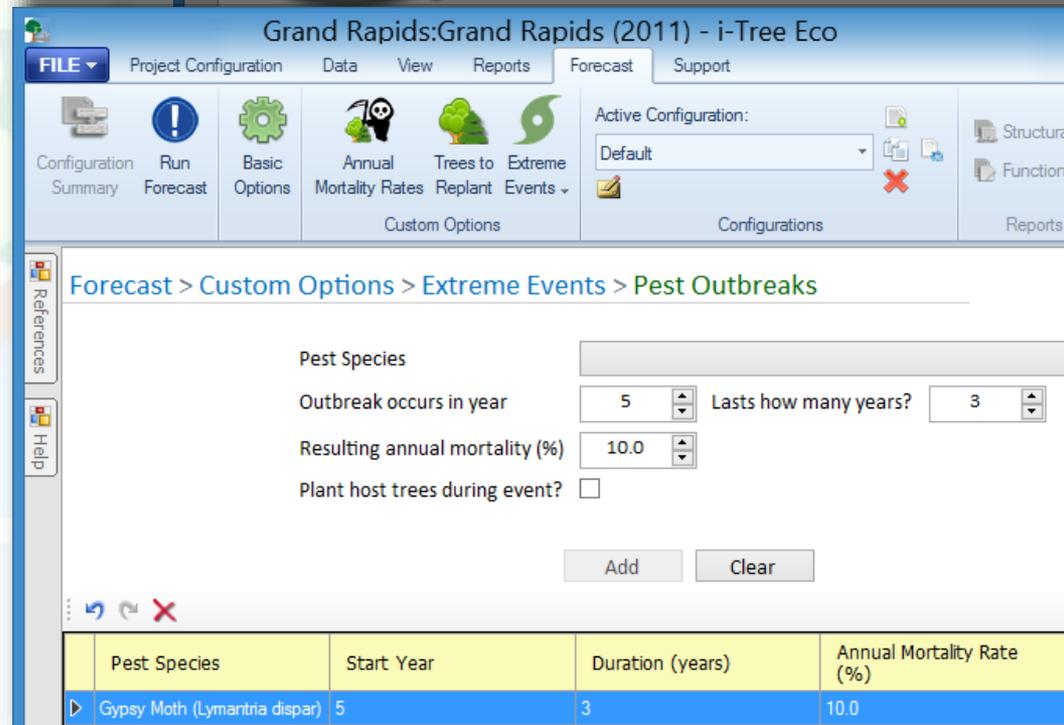
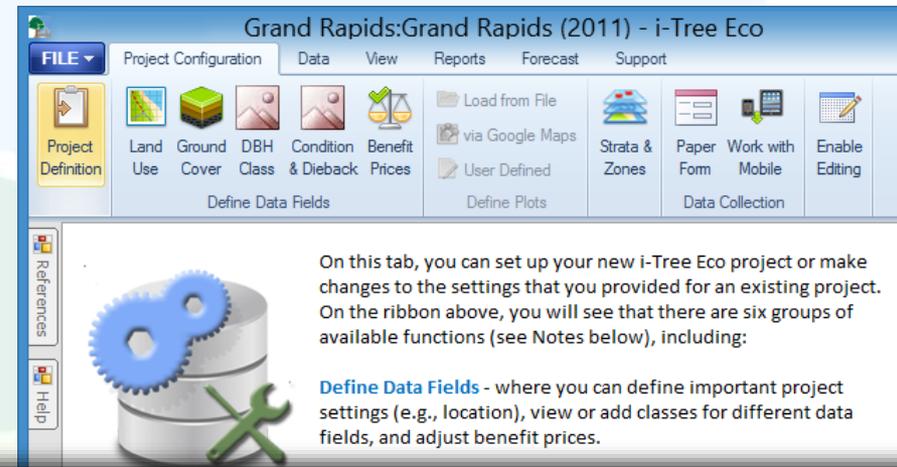
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# Eco v6 update highlights...

- New user interface design
- Multiple years of hourly pollution & weather data now available
- Simplified & new data collection options



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# Eco update highlights...

- Updated and expanded reporting options
- Forecasting capabilities
- Phase1 **i-Tree Streets** integration

Lewes East Sussex UK:Testing (2015) - i-Tree Eco

FILE Project Configuration Data View Reports Forecast Support

Project Definition Land Use Ground Cover DBH Class Condition & Dieback Benefit Prices Load from File via Google Maps User Defined Strata & Zones Paper Form Work with Mobile Enable Editing

Project Configuration > Define Plots > via Google Maps

i-Tree Eco  
Random Plot Generator  
Simple random (user drawn boundary)

First, decide how large the survey plots should be:  
 0.1 Acres is the standard plot size.

Or customize your plot size:  Acres by radius  
 Feet

Next, how many sample plots would you like?

Enter either the number of sample plots desired or the percentage of your project area to be sampled.

Number of plots:   
- or -  
Project area percentage:

Generate random sample plots

Project area: 47.7 Acres



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# Eco “Classic” Tree Data Variables

1. Tree species
2. Diameter at breast height DBH
3. Total tree height
4. Height to live top
5. Height to crown base
6. Crown width (N-S & E-W)
7. % Crown missing
8. Condition (% dieback)
9. Crown light exposure
10. Direction to building
11. Distance to building
12. Land use



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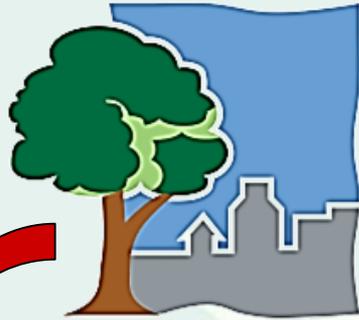
Casey Trees

ESF

NAASF  
Northeastern Area Association of State Foresters

# The 2016 i-Tree Suite of Tools

Web-based,  
run in your  
browser



i-Tree™

Landscape



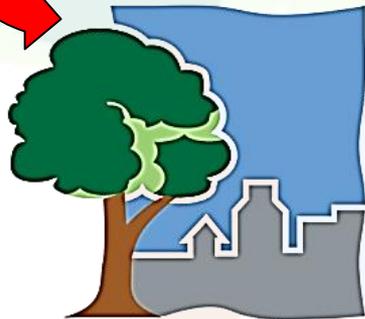
i-Tree™

Canopy



i-Tree™

Design



i-Tree™

Eco



i-Tree™

Streets



i-Tree™

Hydro

Installed on  
a Windows  
desktop or  
laptop



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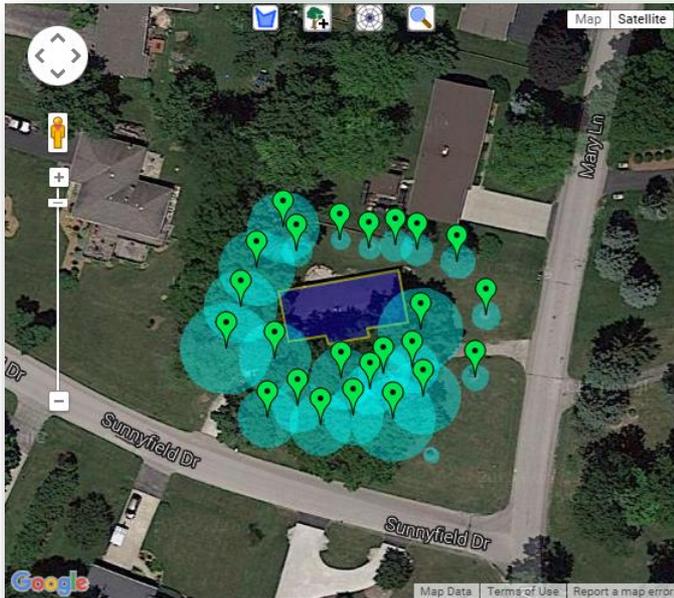


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NAASF  
Northeastern Area Association of State Foresters

# *Thank you!*



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