


The background is a light gray gradient. It features several realistic water droplets of various sizes, some with highlights and shadows, scattered across the frame. A faint, concentric circular pattern is visible in the upper center, resembling a ripple in water.

# HOW TO USE I-TREE CANOPY



# CONTENTS

1. START UP SEQUENCE – DRAWING THE PROJECT BOUNDARY
  2. CATEGORIES – COLORS - LOCATION
  3. START THE TREE SURVEY
  4. SAVE THE PROJECT DATA – CREATE REPORTS
  5. I-TREE CANOPY SOFTWARE
- 

# 1. GET STARTED

## Welcome to i-Tree Canopy!

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.

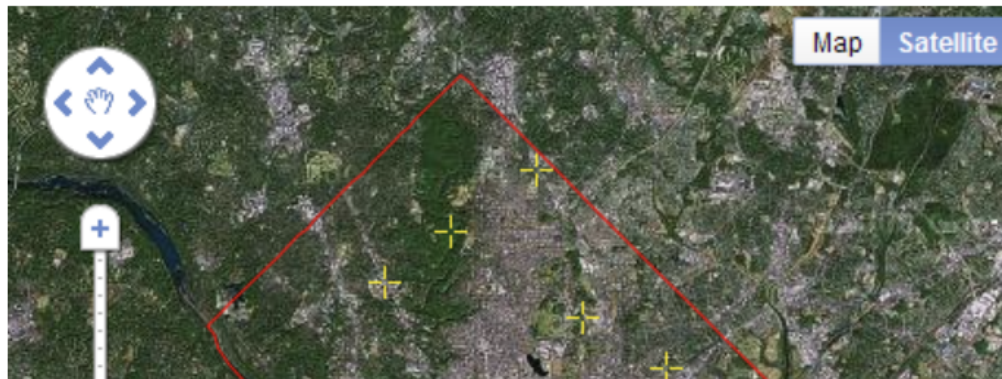
How to use it:

- 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.](#)
- [Video Learning Resources](#)



 Get Started

Use of this tool  
indicates acceptance  
of the [EULA](#)  
[www.itreetools.org](http://www.itreetools.org)





## 2. ENTER ZIP CODE

**Configuration step 1 of 3:** Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.



**2a. Select & Enter Zip Code**

**2b. Select Next**

**Map** **Satellite**

Just curious? Dive right into survey mode with an existing project.

[Launch Our Example Project](#)

Ready to survey your own area? Use these Selection Tools to map your project boundaries:

[US Boundaries](#) ▾

[UK Boundaries](#) ▾

[Load Shapefile Boundary](#)

[Draw Boundary](#)

Work with map boundaries

[Select](#) [Remove](#)

You can combine multiple boundaries!

Keyboard shortcuts | Map data ©2025 Imagery ©2025 NASA | [Terms](#)

[Next](#)



# 3. SELECT YOUR SITE

**Configuration step 1 of 3:** Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.



Map Satellite

97222

Just curious? Dive right into survey mode with an existing project.

Launch Our Example Project

Ready to survey your own area? Use these Selection Tools to map your project boundaries:

US Boundaries

UK Boundaries

Load Shapefile Boundary

Draw Boundary

Work with map boundaries

Select Remove

You can combine multiple boundaries!

Select a Close Up of Your Site

2. To Expose These

1. Select this icon

Next



# 4. DRAW PROJECT BOUNDARY

**Configuration step 1 of 3:** Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.



The screenshot displays the Canopy i-Tree web application interface. At the top, there's a navigation bar with the Canopy logo, a search bar containing '97222', and links for Home, Project, and Menu. A 'Feedback' link is also present. Below the navigation bar, a configuration step indicator reads 'Configuration step 1 of 3: Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.'

The main map area shows a satellite view of a residential neighborhood with streets labeled 'SE Rocky Ln', 'SE River Rd', 'SE Cedar Ave', and 'SE Maple St'. A red arrow points to a specific location on SE River Rd, labeled '2. Select starting point'. Another red arrow points to a blue button in the right-hand panel, labeled '1. Select this'. The right-hand panel contains a sidebar with the following options:

- Just curious? Dive right into survey mode with an existing project.**  
[Launch Our Example Project](#)
- Ready to survey your own area? Use these Selection Tools to map your project boundaries:**
  - [US Boundaries](#)
  - [UK Boundaries](#)
  - [Load Shapefile Boundary](#)
  - [Draw Boundary](#) (highlighted with a red arrow)
- Work with map boundaries**
  - [Select](#)
  - [Remove](#)
- You can combine multiple boundaries!**

At the bottom of the map, there's a Google logo, keyboard shortcuts, map data copyright information (©2025 Google Imagery, ©2025 Airbus, Maxar Technologies, Metro, Portland Oregon, Vexcel Imaging US, Inc.), and links for Terms and Report a map error. A 'Next' button is located at the bottom right corner.



# 4A. CONTINUE DRAWING BOUNDARY

**Configuration step 1 of 3:** Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.



5. Select fourth point

4. Select third point

3. Select second point  
Red line will appear

Map Satellite

SE Rocky Ln

SE River Rd

SE Cedar Ave

SE Maple St

SE Lee Ave

Just curious? Dive right into survey mode with an existing project.

Launch Our Example Project

Ready to survey your own area? Use these Selection Tools to map your project boundaries:

US Boundaries ▾

UK Boundaries ▾

Load Shapefile Boundary

Draw Boundary

Work with map boundaries

Select Remove

You can combine multiple boundaries!

Google

Keyboard shortcuts | Map data ©2025 Google Imagery ©2025 Airbus, Maxar Technologies, Metro, Portland Oregon, Vexcel Imaging US, Inc. | Terms | Report a map error



# 4B. COMPLETE THE BOUNDARY

**Configuration step 1 of 3:** Use the map and tools provided to define the area you want to survey. The easiest option is to select a pre-existing boundary, but you can draw your own areas right on the map, or load in one or more shapefiles.



**6. Connect 4th point To starting point**

**Project Area turns Red**

**7. Select Next**

Just curious? Dive right into survey mode with an existing project.

Launch Our Example Project

Ready to survey your own area? Use these Selection Tools to map your project boundaries:

US Boundaries

UK Boundaries

Load Shapefile Boundary

Draw Boundary

Work with map boundaries

Select Remove

You can combine multiple boundaries!

Next



# 5. SELECT CATEGORIES & COLORS

**Configuration step 2 of 3:** On this page, please configure the land cover classes you wish to survey. Defaults are basic land cover types, but you may use simply Tree and Non-Tree. You may delete and add classes, such as Agriculture/Cropland, Wetlands, etc., as well as different types of tree cover, such as deciduous and evergreen.

Save

Load

Tree / Non-Tree

Basic Land Cover

## Cover Classes

Cover Class	Description	Abbreviation	Tree Cover?	Color
Tree/Shrub		T	Yes	#1BCA00CC
Grass/Herbaceous		H	No	#1A750DCC
Impervious Buildings		IB	No	#000000CC
Impervious Road		IR	No	#FF0000CC
Impervious Other		IO	No	#8A8A8ACC
Water		W	No	#0000FFCC
Soil/Bare Ground		S	No	#6E4D29CC

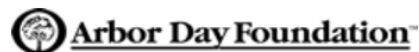


1. Edit, Add or Delete Categories

2. Select Next


Next

Since 2006, i-Tree has been a cooperative, public/private partnership between:





# 6. SELECT COUNTRY LOCATION

 **Canopy**  
i-Tree. A tree canopy assessment tool

Home Project Menu

Feedback

**Configuration step 3 of 3:** Use this page to assign appropriate tree benefit valuations to each land cover class that denotes tree canopy cover. You MUST select a location or provide benefit values to get tree benefit estimates.

Save Load

Available Locations

> ☒ United States of America

> ☐ United Kingdom

> ☐ Ukraine

> ☐ Sweden

> ☐ New Zealand

> ☐ Korea, Republic of

Selected Locations

• United States of America

☒ All ☐ Rural ☐ Urban

☒ Use benefits from selected locations

Currency

Code

USD

Symbol

\$

Measurement

Units

English

Air Pollution

Hydrological

Carbon

Air Pollution Benefits

Abbreviation	Description	Removal Rate (lbs/ac/yr)	Monetary Value (\$/T/yr)
CO	Carbon Monoxide removed annually	0.903	\$391.02
NO2	Nitrogen Dioxide removed annually	4.518	\$24.54
O3	Ozone removed annually	48.036	\$115.97
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	17.070	\$1,959.12
PM2.5	Particulate Matter less than 2.5 microns removed annually	2.374	\$4,911.46
SO2	Sulfur Dioxide removed annually	4.512	\$4.24

Currency is in USD. English Units: lbs = pounds, T = ton, ac = acre

**3. Select Next**

Next



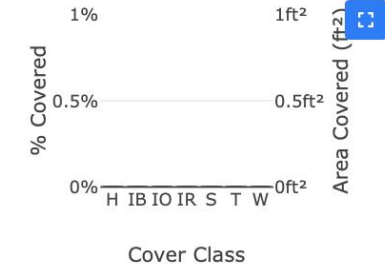
# 7. START THE SURVEY



Home Project Menu

Feedback

**Conduct your survey:** Add survey points by clicking the small **+** button below. With each point you add, the map shifts to a random location. Use the Cover Class dropdown to record the land cover at the yellow crosshairs at map center. The more points you survey, the lower your standard error, and the more precise your sampling will be. More points provide a better estimation of Land Cover across your study area.



us Buildings: 0.0%±0.00 Impervious Other: 0

[View Results](#)

[Report](#)

ID	Cover Class	Latitude	Longitude
----	-------------	----------	-----------

**1. Select Plus to Start the Survey**



[Save your Project](#)

[Save](#)

Save often - don't lose your data!

Google

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# 7B. WHEN THE SURVEY STARTS

**Conduct your survey:** Add survey points by clicking the small + button below. With each point you add, the map shifts to a random location. Use the Cover Class dropdown to record the land cover at the yellow crosshairs at map center. The more points you survey, the lower your standard error, and the more precise your sampling will be. More points provide a better estimation of Land Cover across your study area.



**After Selecting +**

**1. A Yellow + Appears at a Random Location**

**2. This Area Turns Dark**

**3. Cover Class Activates**

**% Covered**

1% 0.5% 0%

**Area Covered (ft<sup>2</sup>)**

1ft<sup>2</sup> 0.5ft<sup>2</sup> 0ft<sup>2</sup>

**Cover Class**

H IB IO IR S T W

Other: 0.0%±0.00 Impervious Road: 0.0%±0.0

**View Results** [Report](#)

**Add New Point**

**Cover Class**

Tree/Shrub

[Save](#) [Save & Create New](#)

**Save your Project**

[Save](#) Save often - don't lose your data!

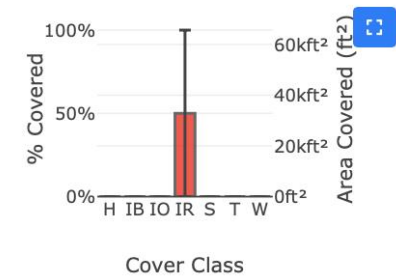
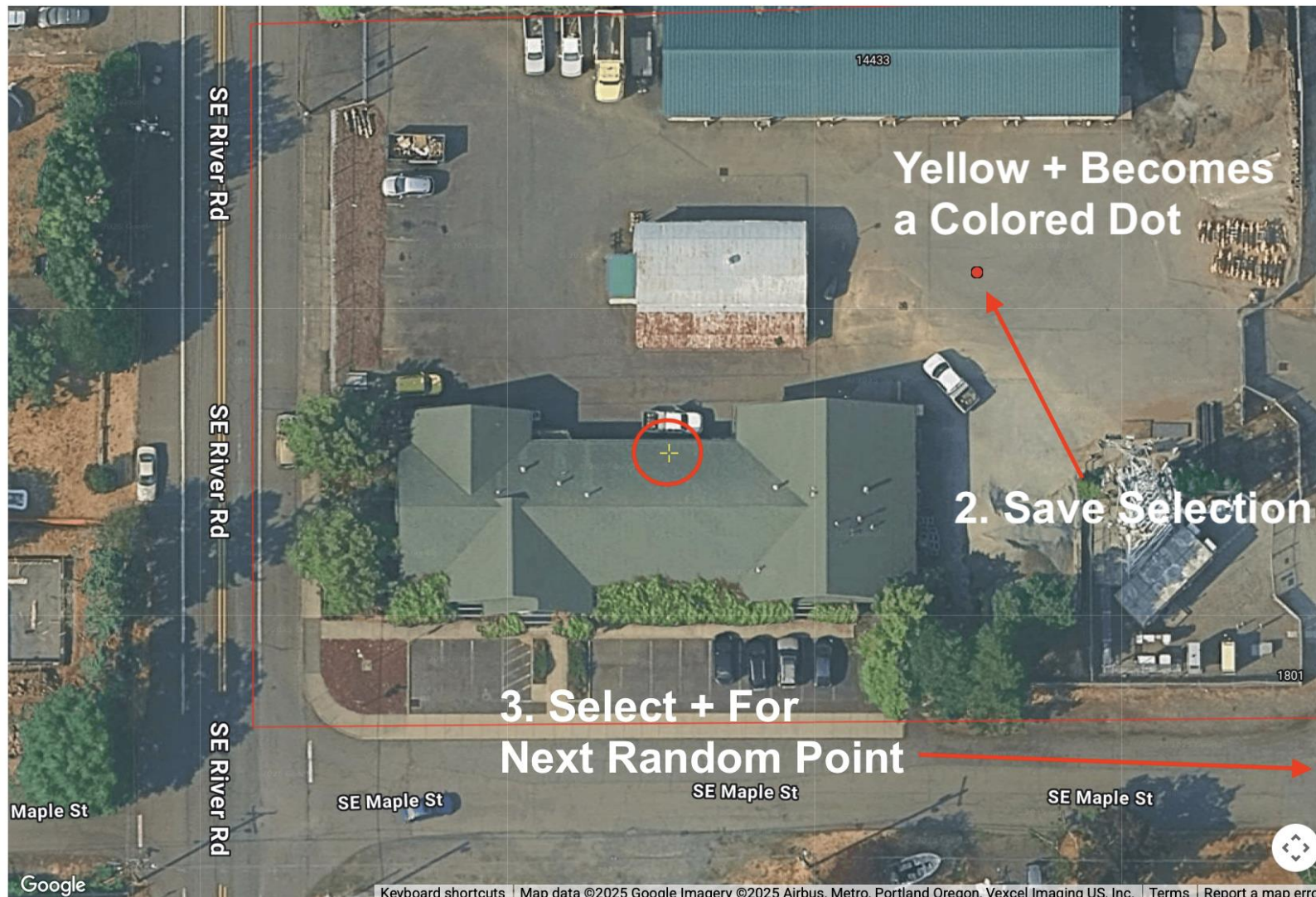
Page 1 of 1

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# 7C. AFTER THE SURVEY STARTS

**Conduct your survey:** Add survey points by clicking the small + button below. With each point you add, the map shifts to a random location. Use the Cover Class dropdown to record the land cover at the yellow crosshairs at map center. The more points you survey, the lower your standard error, and the more precise your sampling will be. More points provide a better estimation of Land Cover across your study area.



s/Herbaceous: 0.0%±0.00 Impervious Building:

[View Results](#)

[Report](#)

[Add New Point](#)

Cover Class

Impervious Buildings

[Save](#)

[Save & Create New](#)

1. Use Arrows to Select the Cover Class

[+](#) [-](#) [↶](#) [↷](#) Page 1 of 1 [↶](#) [↷](#)

[Save your Project](#)

[Save](#)

Save often - don't lose your data!



## 8. SAVE YOUR PROJECT

**Canopy**  
i-Tree. A tree canopy assessment tool

Home Project Menu Feedback

**Conduct your survey:** Add survey points by clicking the small + button below center. The more points you survey, the lower your standard error, and the more accurate your results will be.

**Save Project**

Project file:

Sample Project

Save Cancel

**3. Enter Project Name and Save**

**2. Screen Darkens**

**1. Select Save**

**Save your Project**

Save Save often - don't lose your data!

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Since 2006, i-Tree has been a cooperative, public/private partnership between:

## 8. SAVE YOUR PROJECT

**Canopy**  
i-Tree. A tree canopy assessment tool

Home Project Menu Feedback

**Conduct your survey:** Add survey points by clicking the small + button below center. The more points you survey, the lower your standard error, and the more accurate your results will be.

**Save Project**

Project file:

Sample Project

Save Cancel

**3. Enter Project Name and Save**

**2. Screen Darkens**

**1. Select Save**

**Save your Project**


Save often - don't lose your data!

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Since 2006, i-Tree has been a cooperative, public/private partnership between:



## 9. CREATE A REPORT




Canopy

i-Tree. A tree canopy assessment tool


[Home](#)
[Project](#)
[Menu](#)

Feedback

**Conduct your survey:** Add survey points by clicking the small **+** button below. With each point you add, the map shifts to a random location. Use the Cover Class dropdown to record the land cover at the yellow crosshairs at map center. The more points you survey, the lower your standard error, and the more precise your sampling will be. More points provide a better estimation of Land Cover across your study area.



## 1. Select Report



**% Covered**

**Cover Class**

ious Road: 50.0%±28.87 Soil/Bare Ground: 0.0%

**View Results**

**Report**

ID	Cover Class	Latitude	Longitude
1	Impervious Road	45.41872	-122.64466
2	Impervious Buildings	45.41858	-122.64501
3	Impervious Buildings	45.41892	-122.64452
4	Impervious Road	45.41876	-122.64530
5	Impervious Road	45.41886	-122.64511

**Save your Project**

**Save** Save often - don't lose your data!

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# 10. SAMPLE REPORT





The background is a light gray gradient. It is decorated with several realistic water droplets of various sizes, primarily located in the top-left, top-right, and bottom-right corners. In the center of the image, there is a faint, large circular logo that appears to be a stylized tree or a similar abstract design.

[I-TREE SOFTWARE LINK](#)