HOW TO USE I-TREE CANOPY

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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:

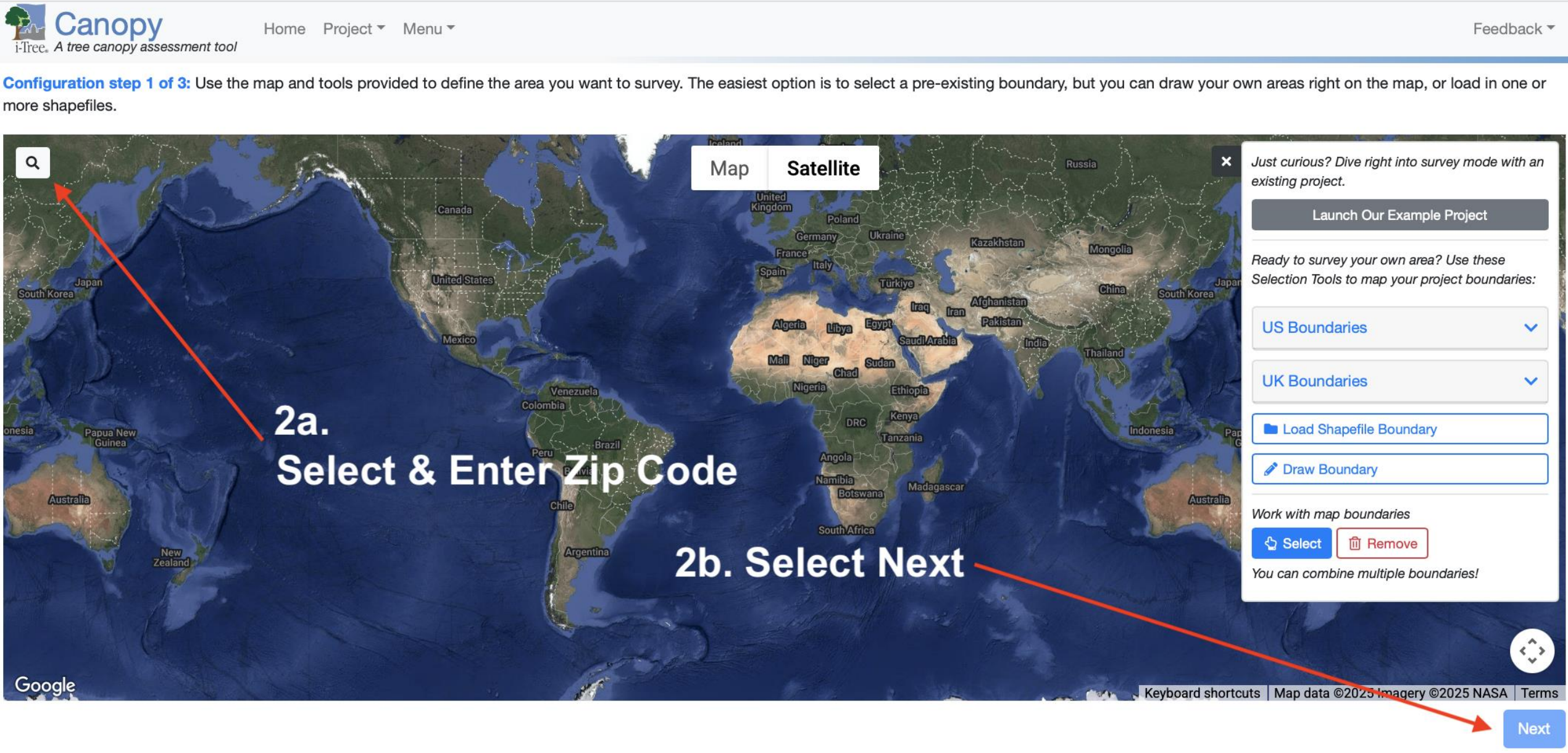
- Select from existing geographic boundaries, draw your own project area boundaries onto Google Maps, or load an ESRI shapefile.
- You can use multiple, non-overlapping boundaries at the same time.
- i-Tree Canopy randomly generates sample points and zooms to each one so you can choose from your pre-defined 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

i-Tree®

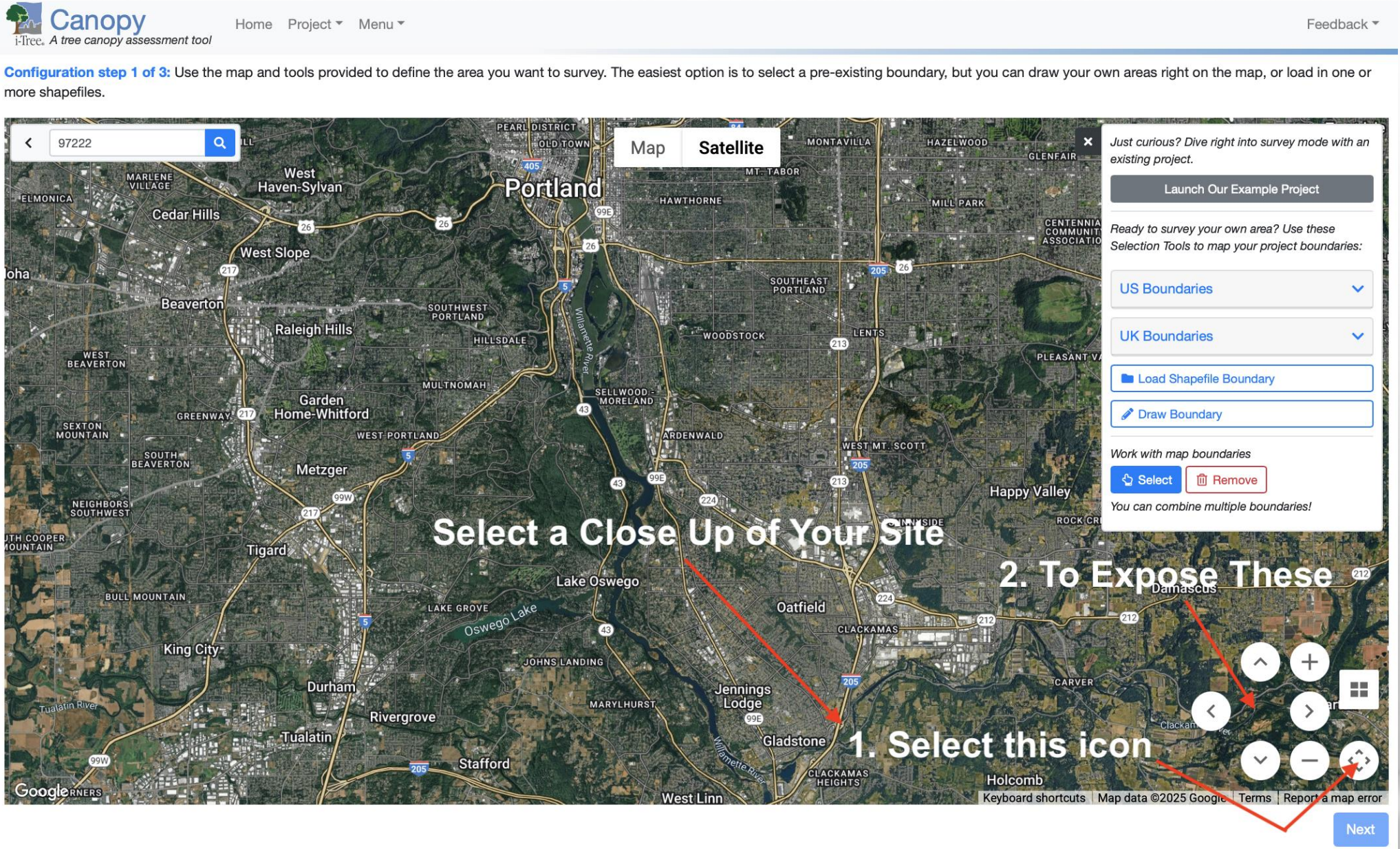
Get Started

Use of this tool indicates acceptance of the EULA www.itreetools.org

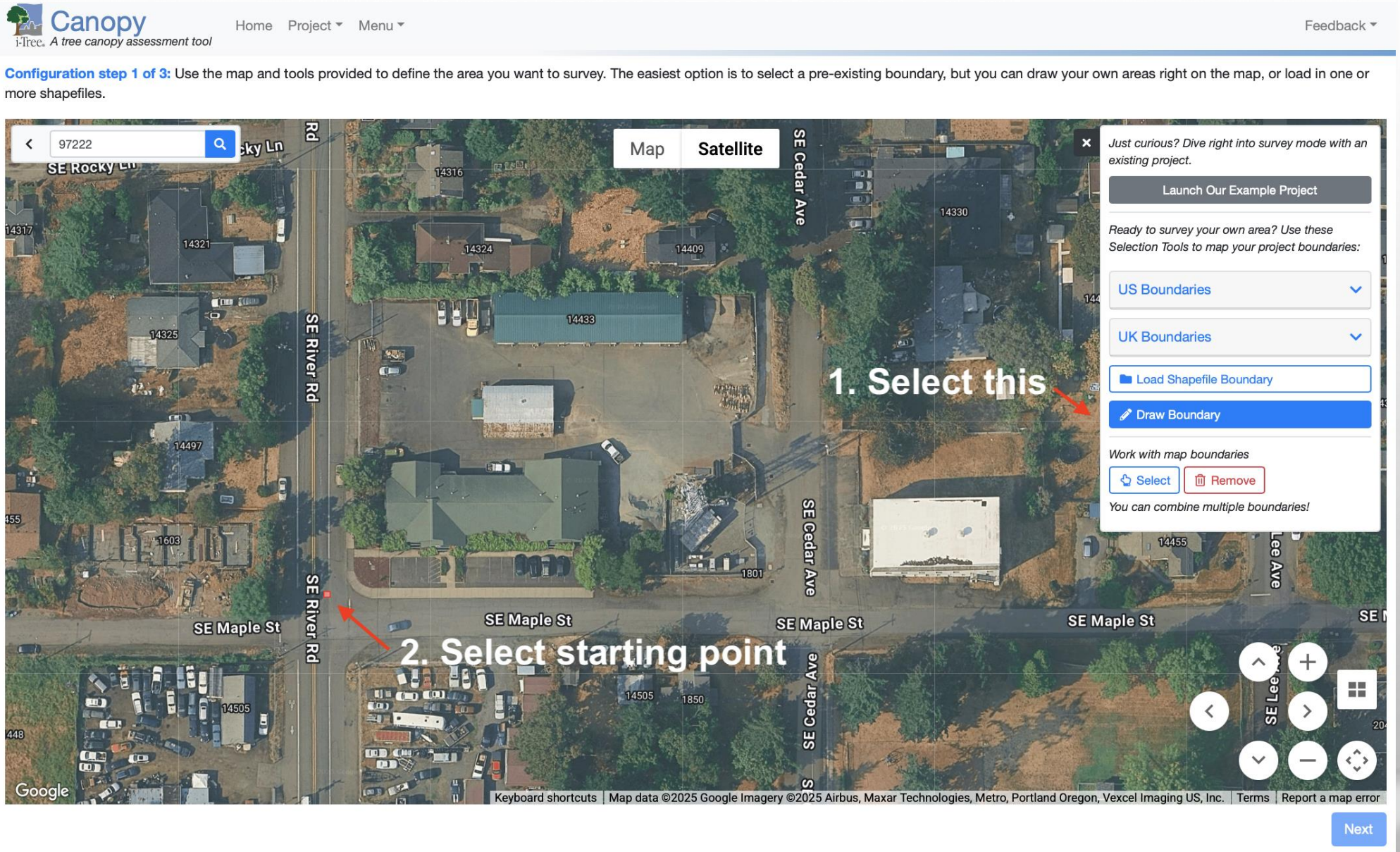
2. ENTER ZIP CODE



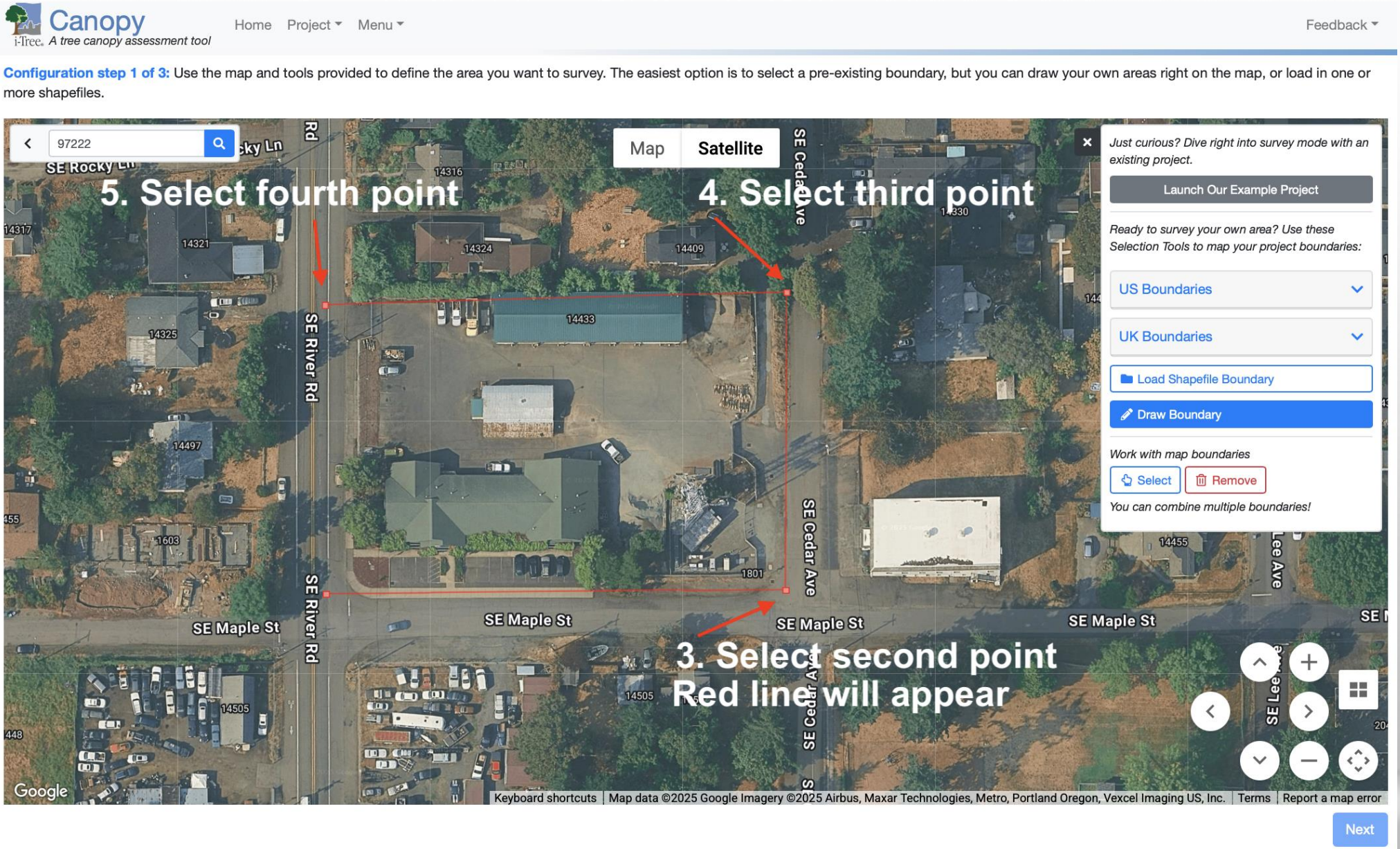
3. SELECT YOUR SITE



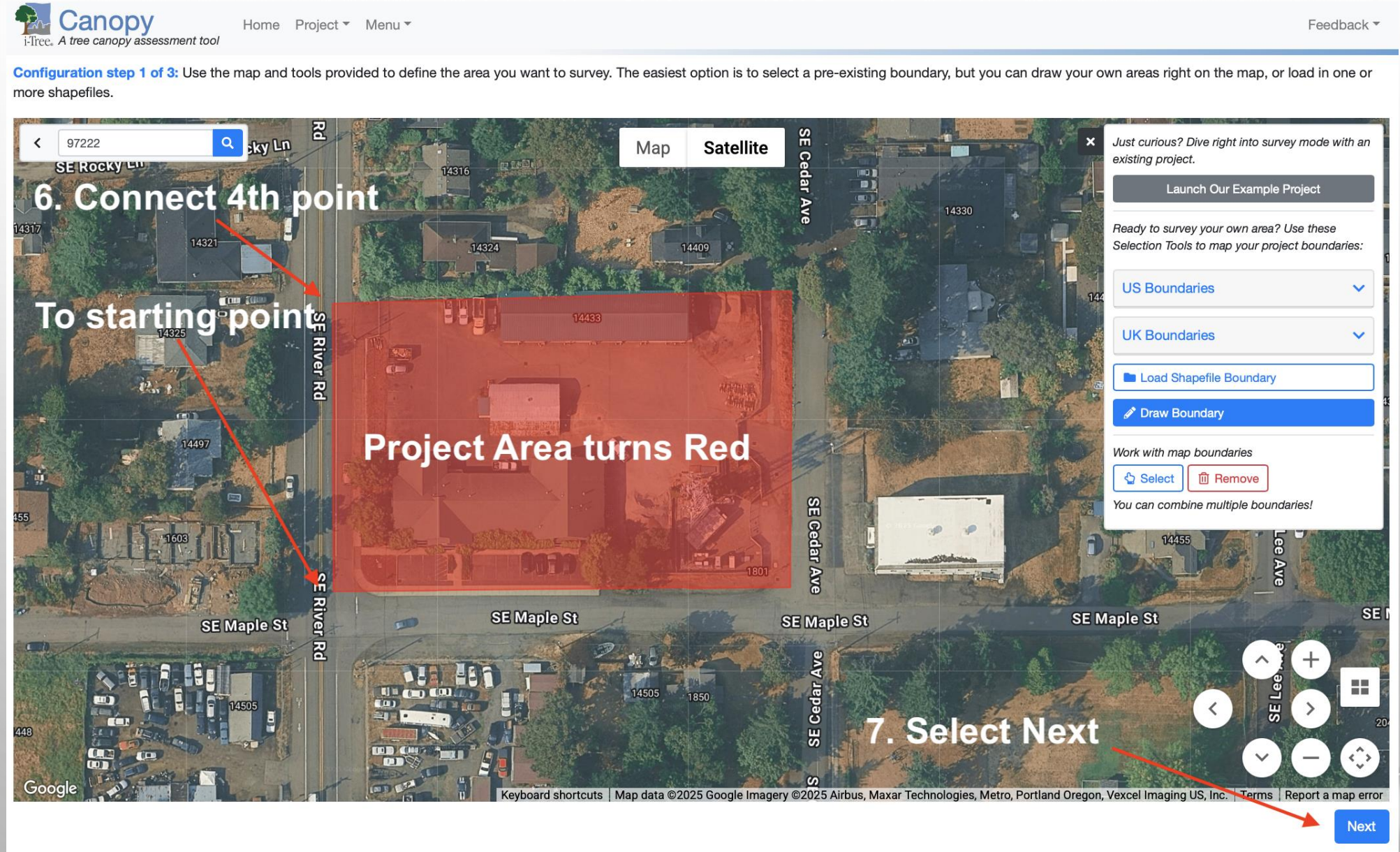
4. DRAW PROJECT BOUNDARY



4A. CONTINUE DRAWING BOUNDARY



4B. COMPLETE THE BOUNDARY



5. SELECT CATEGORIES & COLORS

Canopy
i-Tree A tree canopy assessment tool

Home Project Menu Feedback

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

+ ✎ 🗑

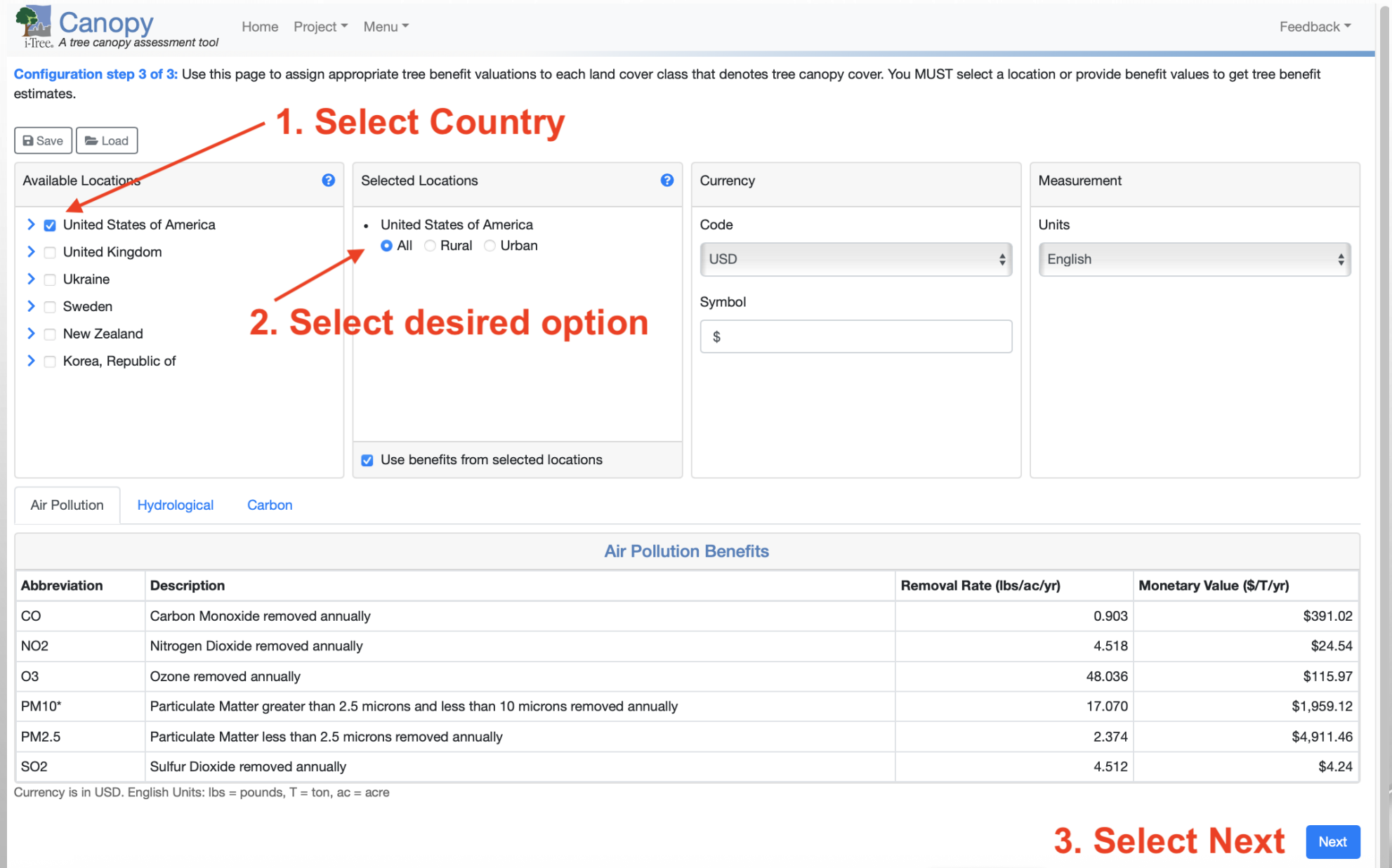
1. Edit,Add or Delete Categories

2. Select Next Next

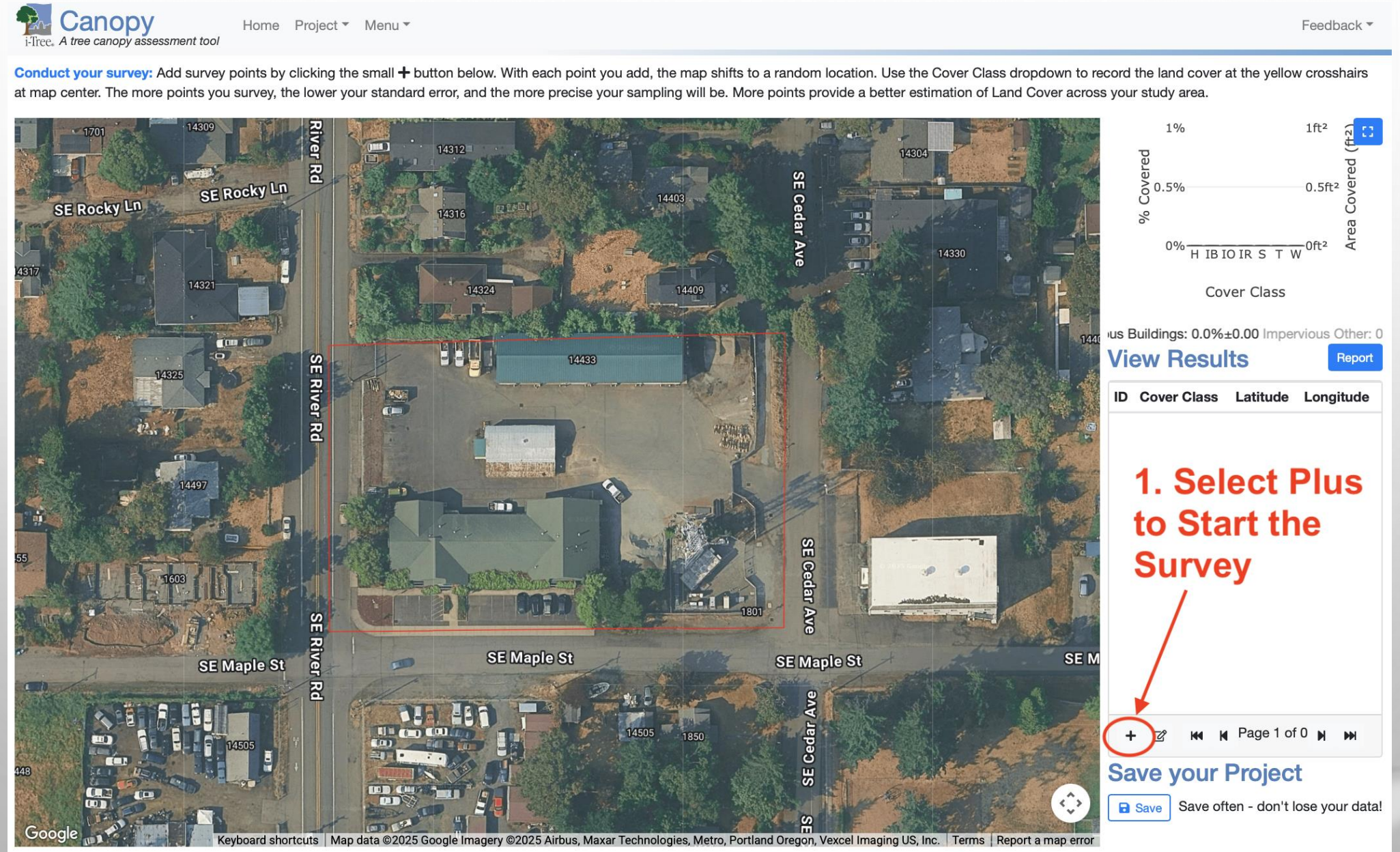
Since 2006, i-Tree has been a cooperative, public/private partnership between:

USFS DAVEY Arbor Day Foundation UCFS Urban & Community Forestry Society ISA Casey Trees Washington DC ESF National Association of State Foresters American Forests

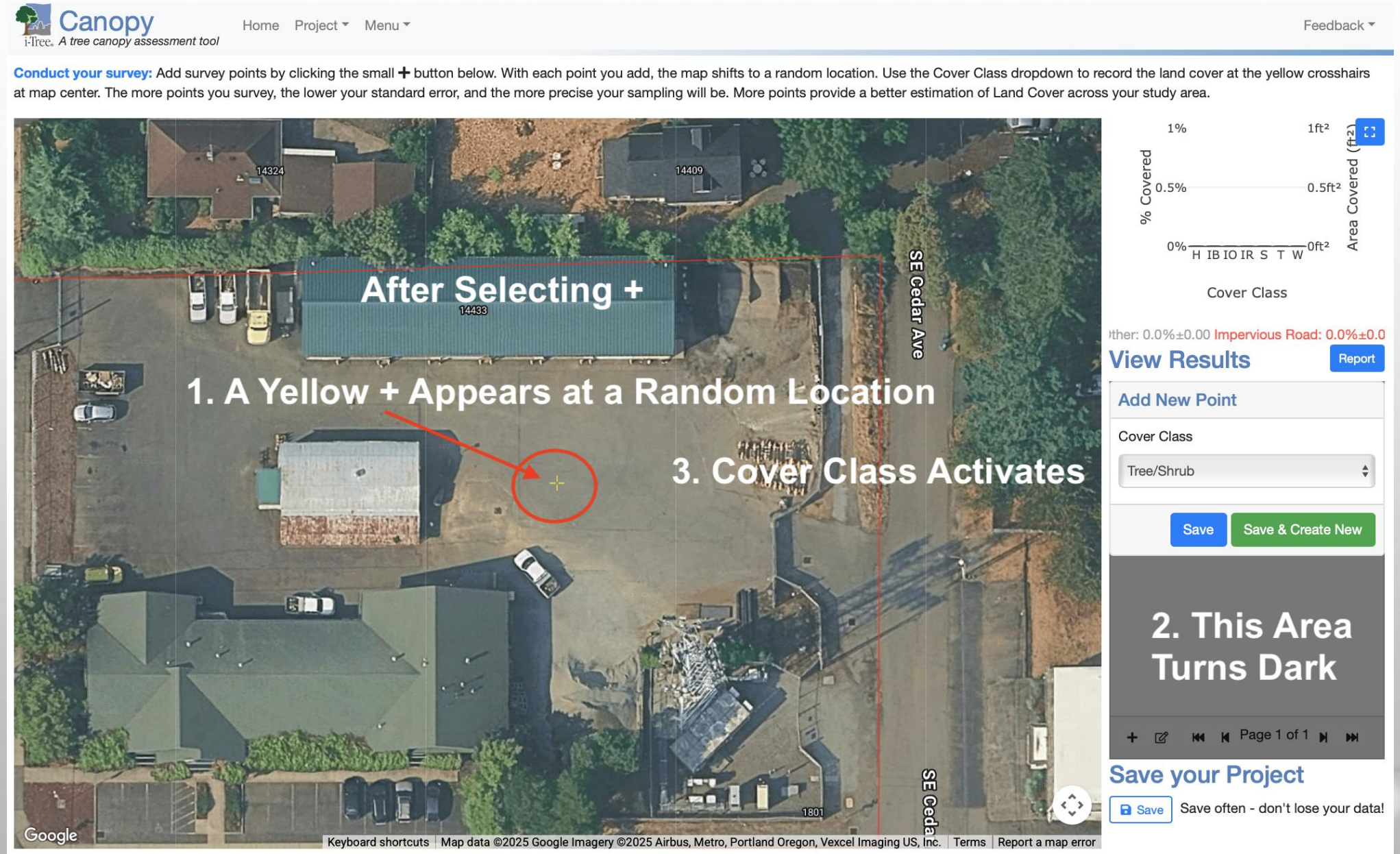
6. SELECT COUNTRY LOCATION



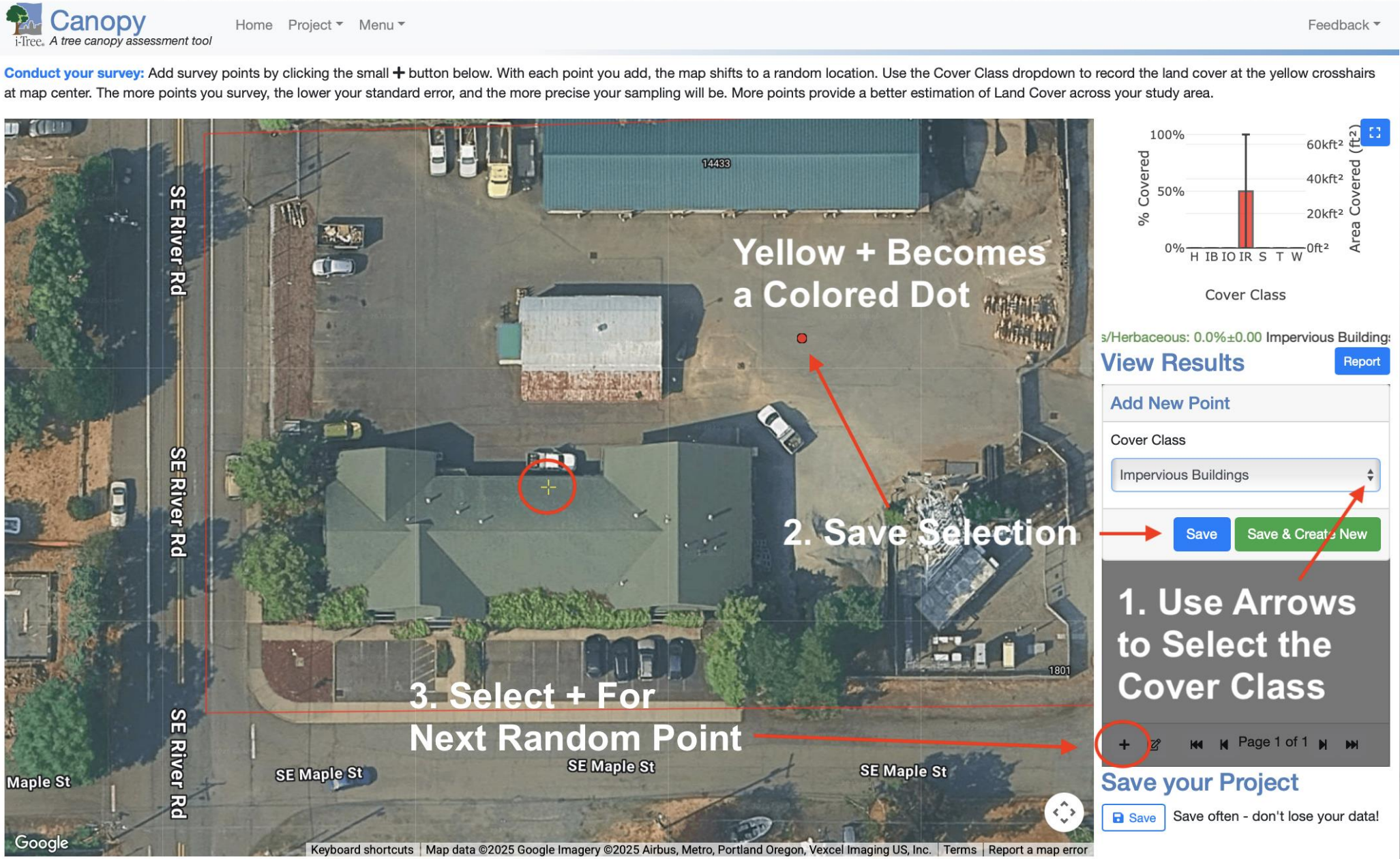
7. START THE SURVEY



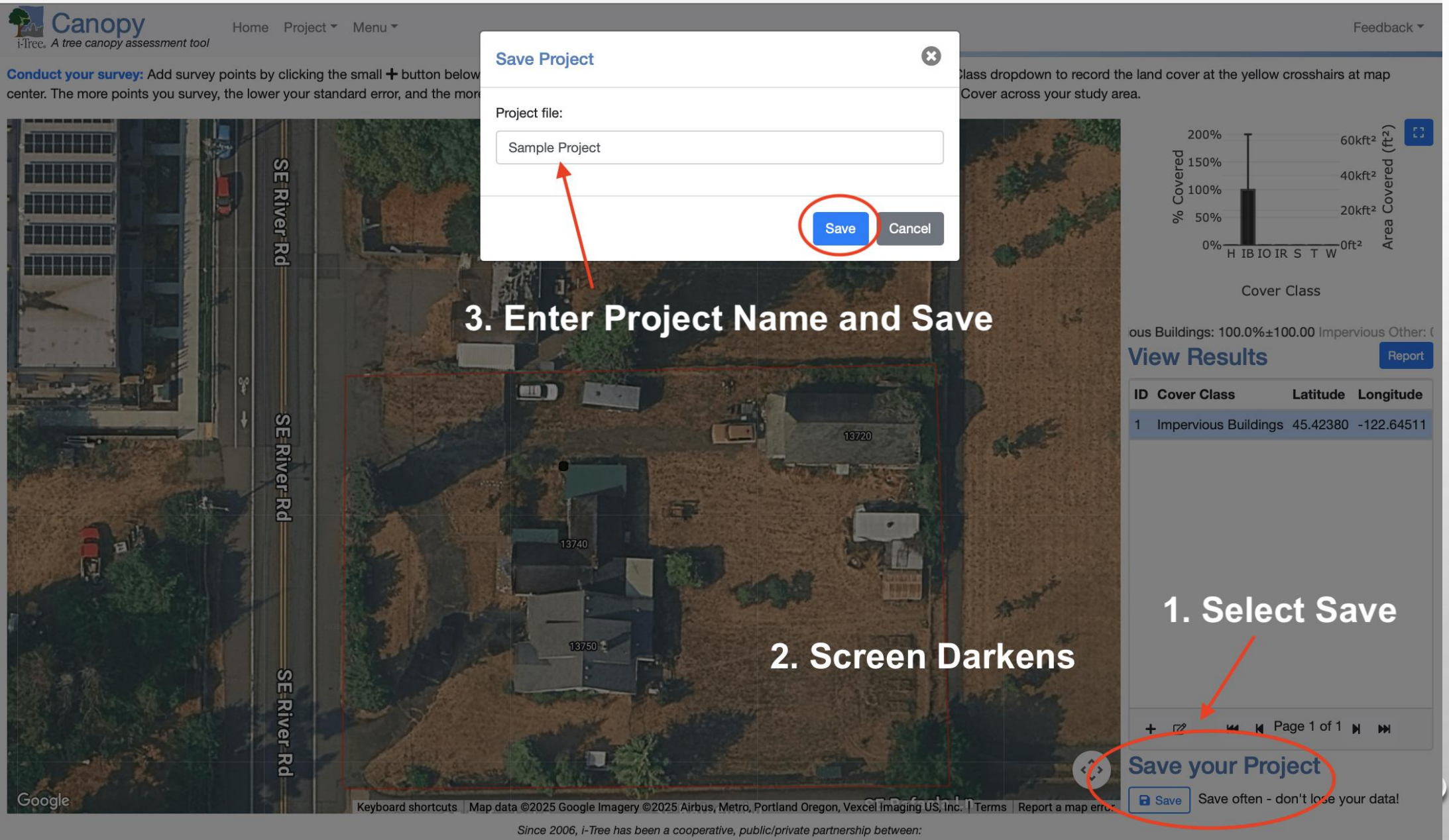
7B. WHEN THE SURVEY STARTS



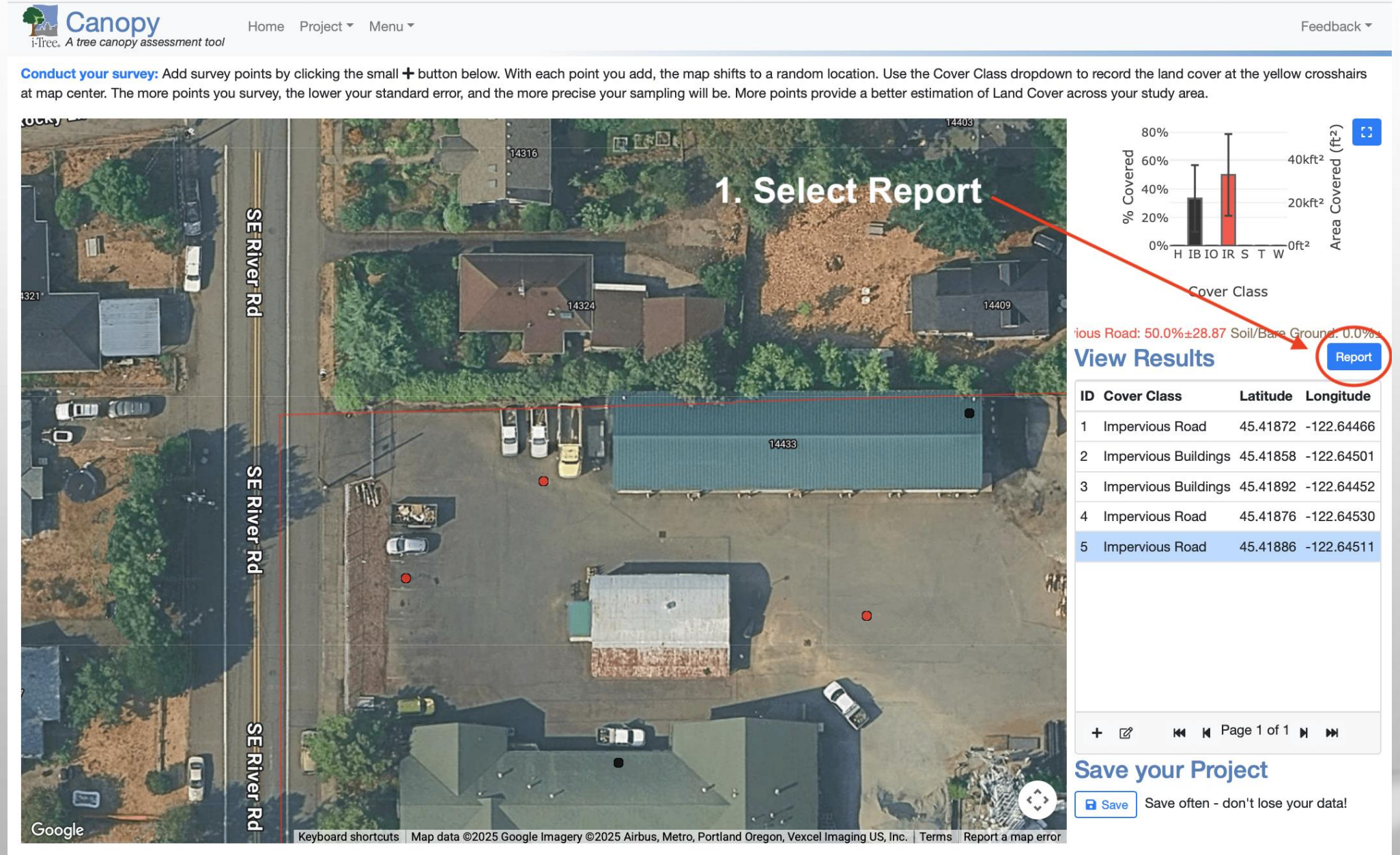
7C. AFTER THE SURVEY STARTS



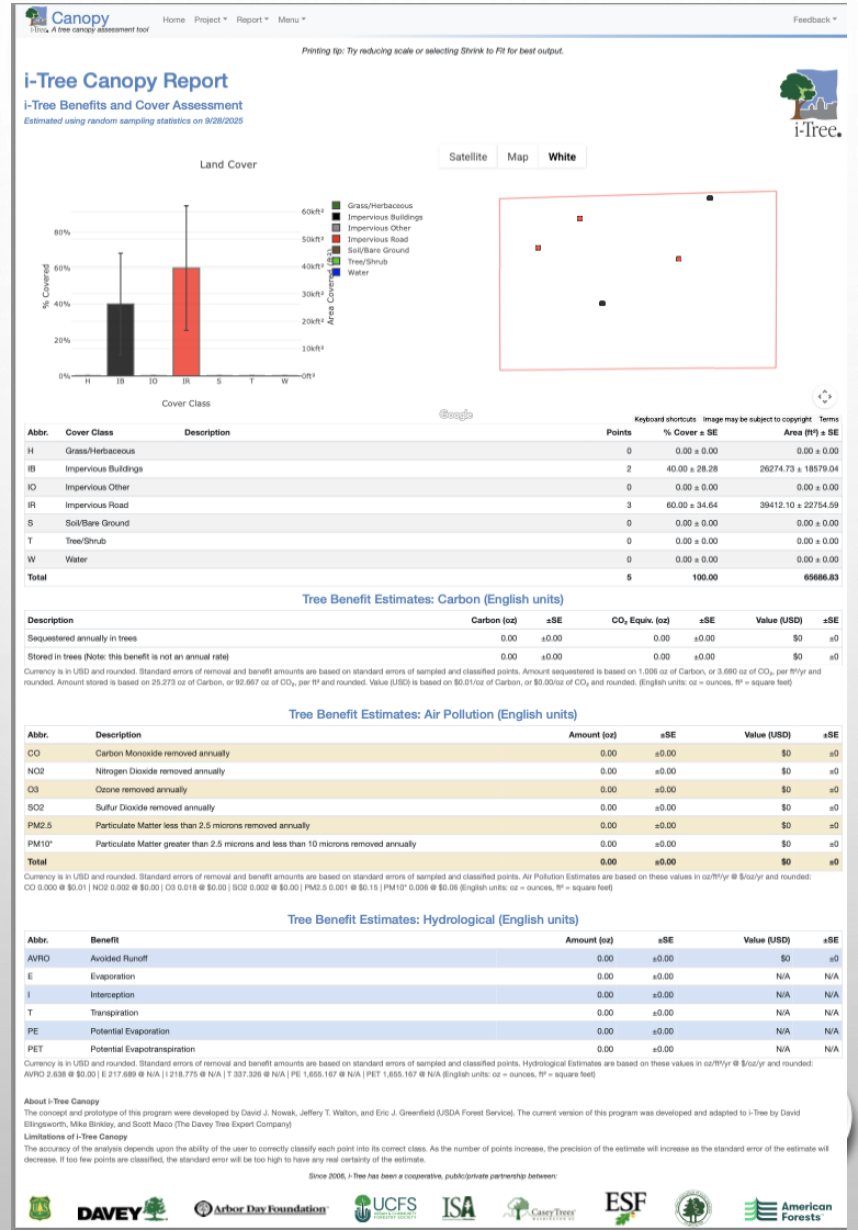
8. SAVE YOUR PROJECT



9. CREATE A REPORT



10. SAMPLE REPORT



Canopy — A tree canopy assessment tool

Home | Project | Report | Menu | Feedback

Printing tip: Try reducing scale or selecting Shrink to Fit for best output.

i-Tree Canopy Report

i-Tree Benefits and Cover Assessment

Estimated using random sampling statistics on 9/28/2025

Land Cover

Satellite | Map | White

Keyboard shortcuts | Image may be subject to copyright | Terms

Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ft²) ± SE
H	Grass/Herbaceous		0	0.00 ± 0.00	0.00 ± 0.00
IB	Impervious Buildings		2	40.00 ± 28.28	26274.73 ± 18579.04
IO	Impervious Other		0	0.00 ± 0.00	0.00 ± 0.00
IR	Impervious Road		3	60.00 ± 34.64	39412.10 ± 22754.59
S	Soil/Bare Ground		0	0.00 ± 0.00	0.00 ± 0.00
T	Tree/Shrub		0	0.00 ± 0.00	0.00 ± 0.00
W	Water		0	0.00 ± 0.00	0.00 ± 0.00
Total			**5**	**100.00**	**65686.83**

Tree Benefit Estimates: Carbon (English units)

Description	Carbon (oz)	±SE	CO_2 Equiv. (oz)	±SE	Value (USD)	±SE
Sequestered annually in trees	0.00	±0.00	0.00	±0.00	$0	±0
Stored in trees (Note: this benefit is not an annual rate)	0.00	±0.00	0.00	±0.00	$0	±0

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 1.006 oz of Carbon, or 3.690 oz of CO_2 per ft²/yr and rounded. Amount stored is based on 25.273 oz of Carbon, or 92.667 oz of CO_2 per ft² and rounded. Value (USD) is based on $0.01/oz of Carbon, or $0.00/oz of CO_2 and rounded. (English units: oz = ounces, ft² = square feet)

Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (oz)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	0.00	±0.00	$0	±0
NO2	Nitrogen Dioxide removed annually	0.00	±0.00	$0	±0
O3	Ozone removed annually	0.00	±0.00	$0	±0
SO2	Sulfur Dioxide removed annually	0.00	±0.00	$0	±0
PM2.5	Particulate Matter less than 2.5 microns removed annually	0.00	±0.00	$0	±0
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	0.00	±0.00	$0	±0
Total		**0.00**	**±0.00**	**$0**	**±0**

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in oz/ft²/yr @ $/oz/yr and rounded: CO 0.000 @ $0.01 | NO2 0.002 @ $0.00 | O3 0.018 @ $0.00 | SO2 0.002 @ $0.00 | PM2.5 0.001 @ $0.15 | PM10* 0.006 @ $0.06 (English units: oz = ounces, ft² = square feet)

Tree Benefit Estimates: Hydrological (English units)

Abbr.	Benefit	Amount (oz)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	0.00	±0.00	$0	±0
E	Evaporation	0.00	±0.00	N/A	N/A
I	Interception	0.00	±0.00	N/A	N/A
T	Transpiration	0.00	±0.00	N/A	N/A
PE	Potential Evaporation	0.00	±0.00	N/A	N/A
PET	Potential Evapotranspiration	0.00	±0.00	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in oz/ft²/yr @ $/oz/yr and rounded: AVRO 2.638 @ $0.00 | E 217.689 @ N/A | I 218.775 @ N/A | T 337.326 @ N/A | PE 1,655.167 @ N/A | PET 1,655.167 @ N/A (English units: oz = ounces, ft² = square feet)

About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.

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

DAVEY | Arbor Day Foundation | UCFS | ISA | CaseyTrees | ESF | American Forests

I-TREE SOFTWARE LINK