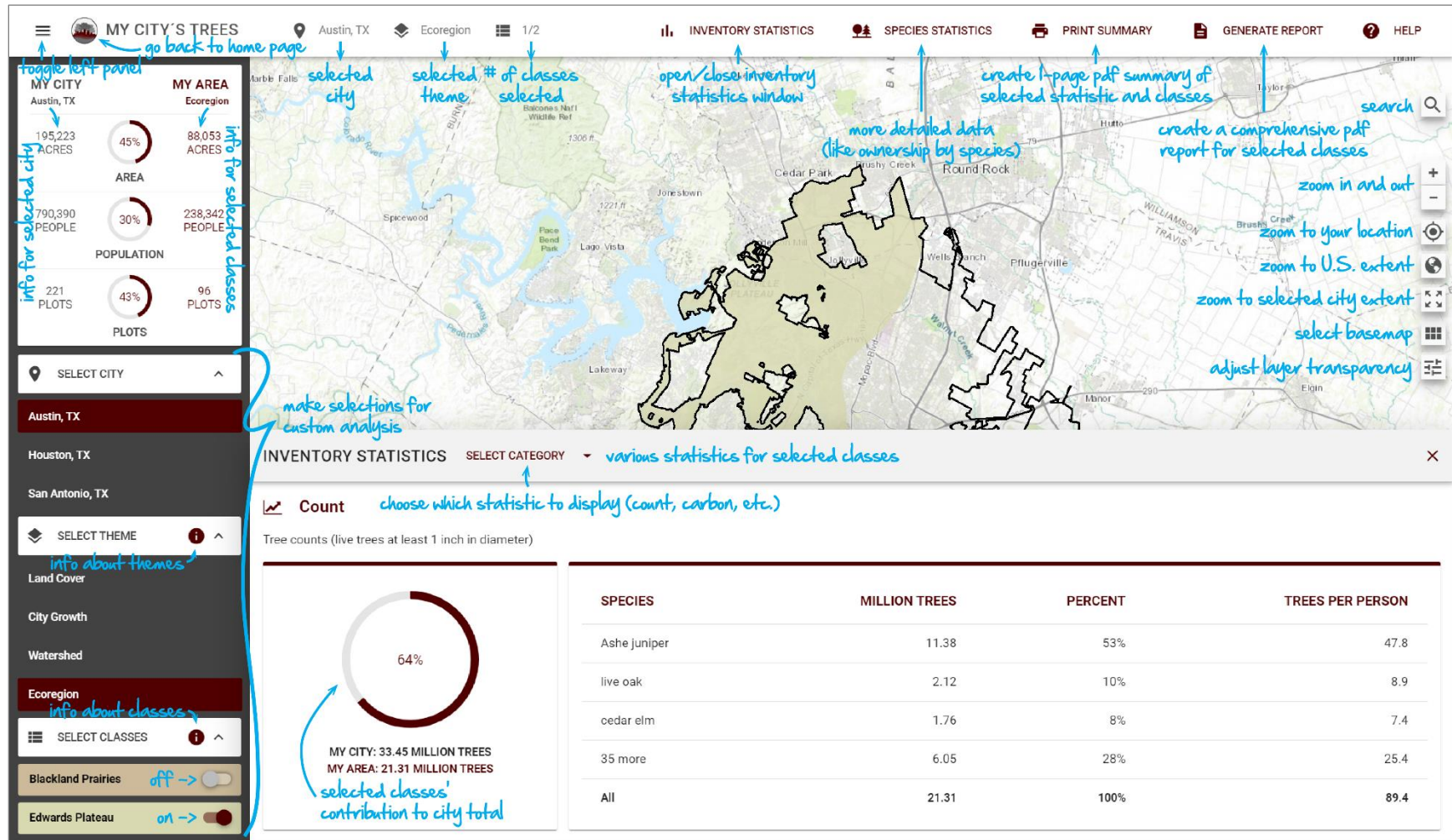


# An Introduction to My City's Trees

26 July 2023

## Quickstart



## Introduction

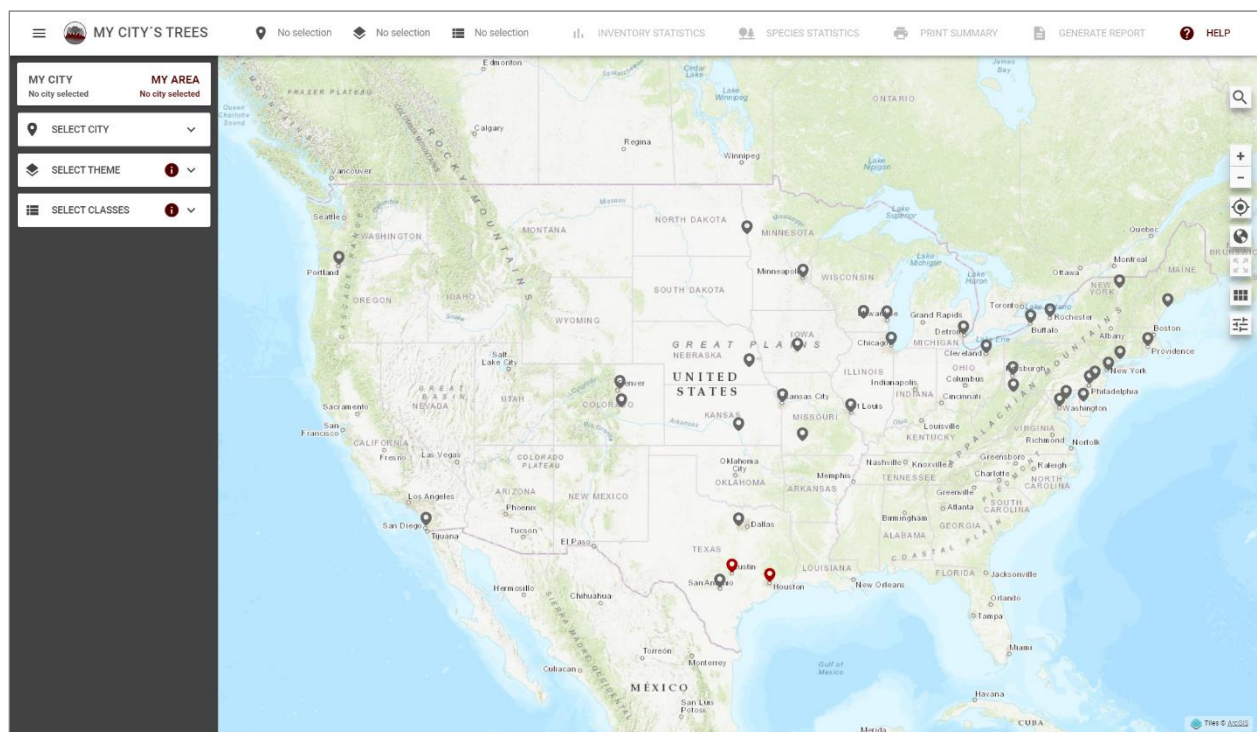
This document will introduce you to the basic operation of My City's Trees, an online application that enables anyone to access Urban Forest Inventory and Analysis (Urban FIA) data and produce custom analyses and reports.

## Report

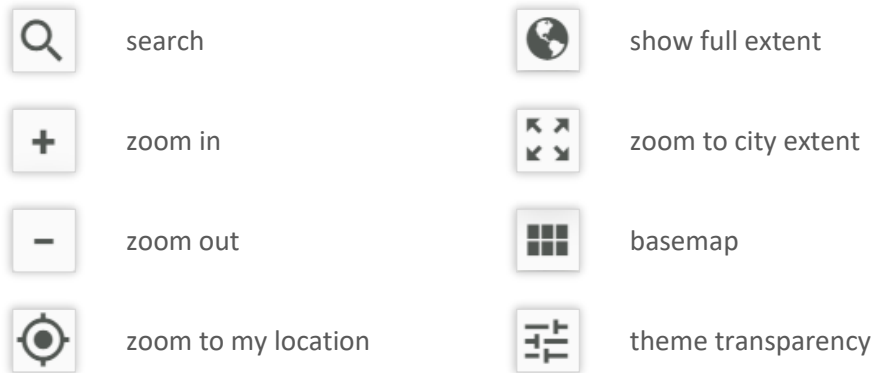
Users of the application are encouraged to review the Urban FIA report for the city, when it is available. The report contains important information about field protocols and analysis methods. The report and other information regarding the sample design, field methods, and analytical techniques important to understanding and interpreting estimates from this application can be viewed at the Urban FIA website (<http://www.nrs.fs.fed.us/fia/urban>).

## Map Features

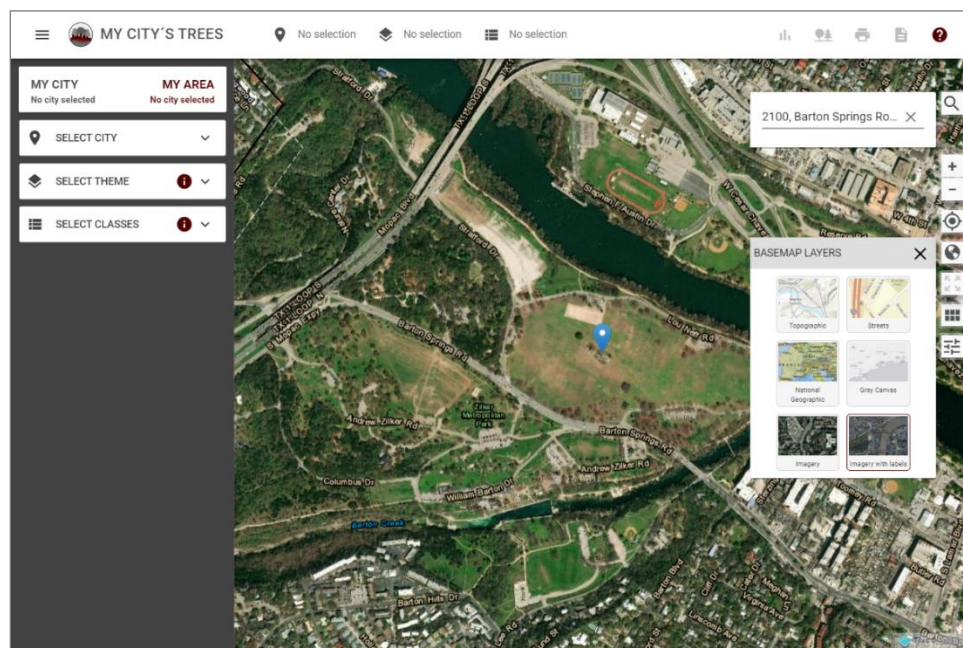
Upon launching My City's Trees, you should see a screen similar to the image below. Teardrop symbols show the locations of cities participating in Urban FIA. Maroon signifies that data for the city is in My City's Trees. Gray signifies that Urban FIA is in process but that data is not yet in the application. Additional status information, such as when data is expected to be available in My City's Trees, can be accessed by clicking on a city's point.



In the upper right of the map are a series of map tools that enable searching, zooming, adjusting layer appearance, and changing basemaps.



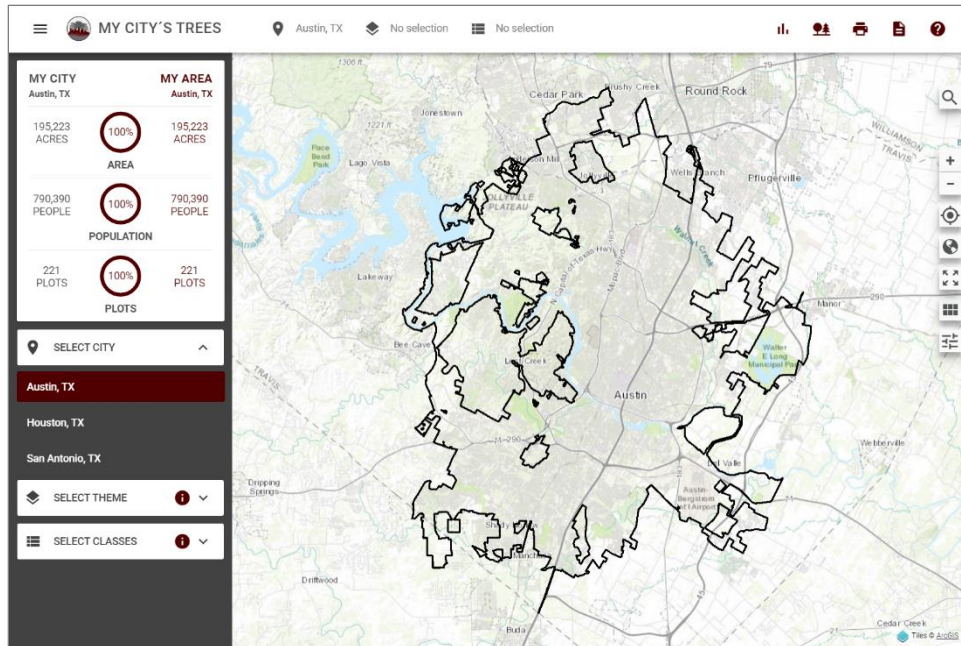
In the image below, the address for Zilker Park in Austin, TX, has been entered into the search box. The basemap has been changed from Topographic (the default) to imagery with labels.



## Selecting a City

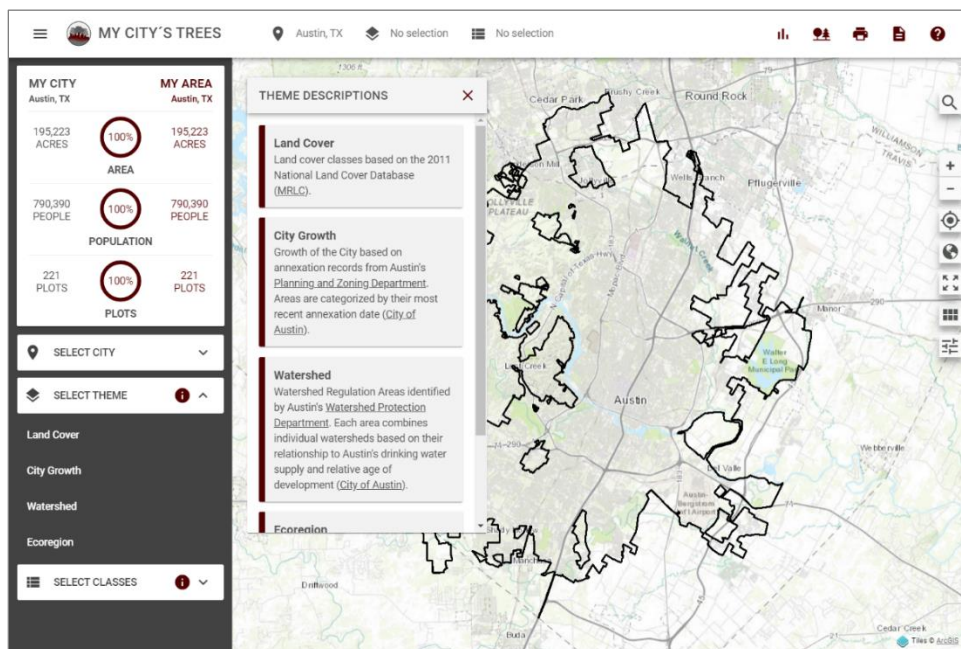
The first step in an analysis is selecting a city. A list of available cities is displayed by clicking Select City on the left panel. In the image below, Austin has been selected. The map has automatically adjusted, zooming in on the city boundary (black line) of the city. (Please see the Urban FIA report for information on the city boundary used in the inventory.) Also, “Austin, TX” is displayed in the horizontal bar towards the top of the application. You can also select a city by clicking on its maroon pin on the map.





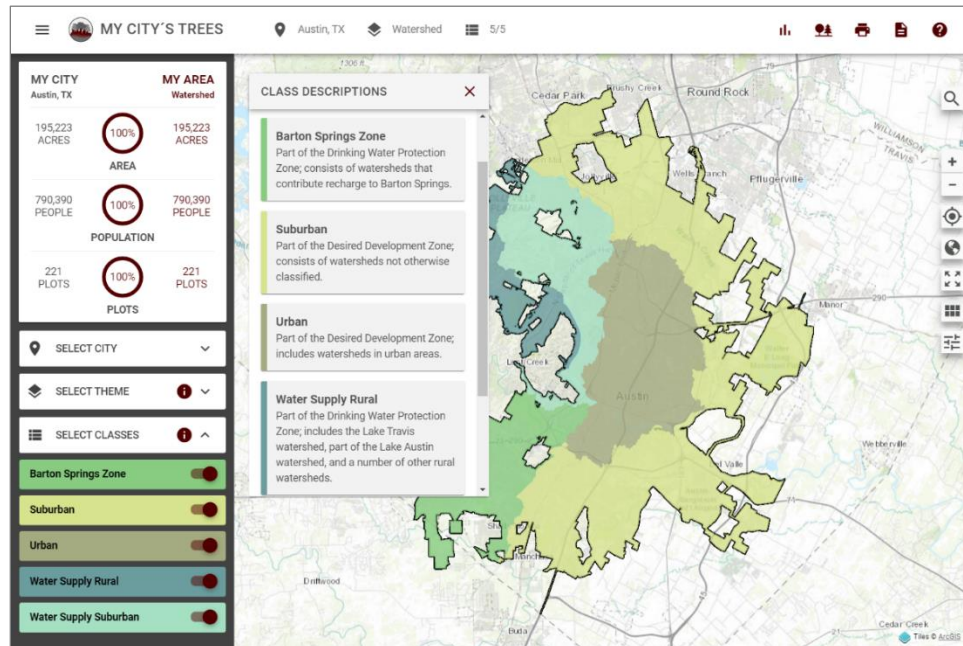
## Selecting a Theme

Themes are geospatial layers that divide the city into different areas. Themes can vary depending on the city to reflect local resource issues. The list of themes for a city can be viewed by clicking Select Theme on the left panel once the city is selected. In the following image, four themes are listed for Austin: Land Cover, City Growth, Watershed, and Ecoregion. Information on themes can be viewed by clicking on the information symbol immediately to the right of Select Theme.



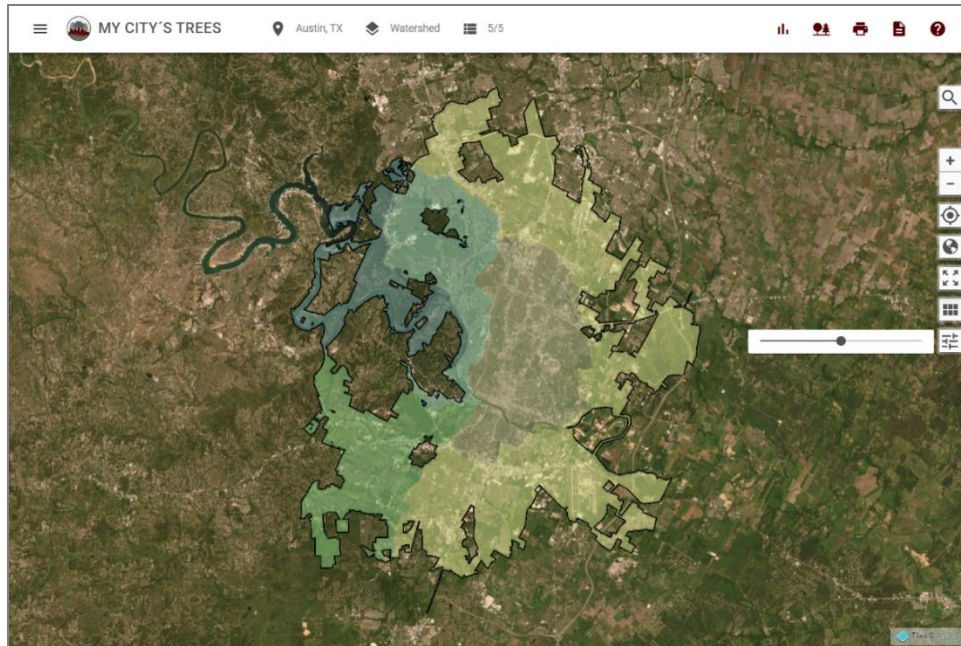
In the following image, Watershed has been selected as the theme. Selecting the information icon immediately to the right of Select Classes will display a window describing the classes in the theme.

Clicking on Select Classes will alternately display and hide the list of classes for the selected theme. The Watershed theme includes five classes: Barton Springs Zone, Suburban, Urban, Water Supply Rural, and Water Supply Suburban. Each class has a unique color that allows for quick comparison of information on the map with the class descriptions.



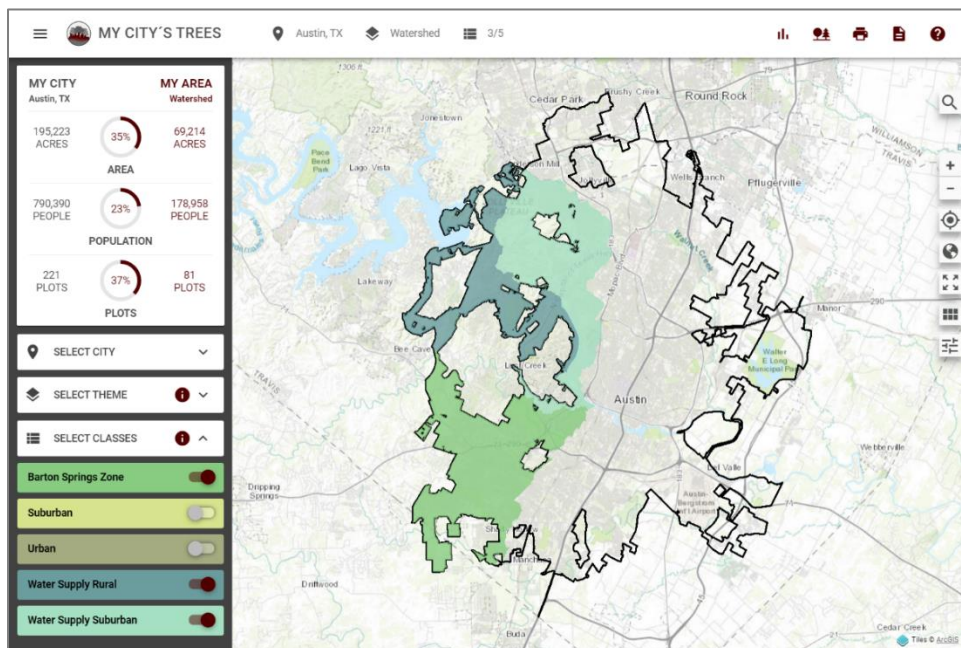
Map features are accessible when viewing themes. In the following image, the left panel has been hidden using the menu icon in the upper left of the application. The basemap has been changed from Topographic to Imagery. Transparency has been used to show the base map underlying the theme classes. Summary information on the city, themes, and classes is always available on the horizontal bar towards the top of the application. Clicking the menu button in the upper left of the application will reopen the left side panel where city, theme, and class selections can be changed.





## Selecting Classes

With a theme selected, clicking Select Classes in the left panel will alternately display and hide the list of classes. Classes can be toggled off and on using the selector to right of the class name. In the following figure, classes Barton Springs Zone, Water Supply Rural, and Water Supply Suburban are toggled on and displayed on the map and classes Suburban and Urban are toggled off and not displayed on the map. The horizontal bar towards the top of the application displays 3/5 for classes, meaning 3 of the 5 classes in the Watershed theme are toggled on and displayed on the map.



The panel on the left side of the application provides information about the size, population, and inventory for the selected city and the selected area in the city. Gray text is information for the city; maroon text is information for the area that has been selected. Austin is 195,223 acres, has a population of 790,390, and includes 221 Urban FIA plots. My Area is the area encompassed by Barton Springs Zone, Water Supply Rural, and Water Supply Suburban classes. These three classes encompass 69,214 acres or 35% of the total area in the city. The population of these three classes is 178,958 people, which is 23% of the total city population. Of the 221 plots in the city, 81 (37%) occur in these three classes.

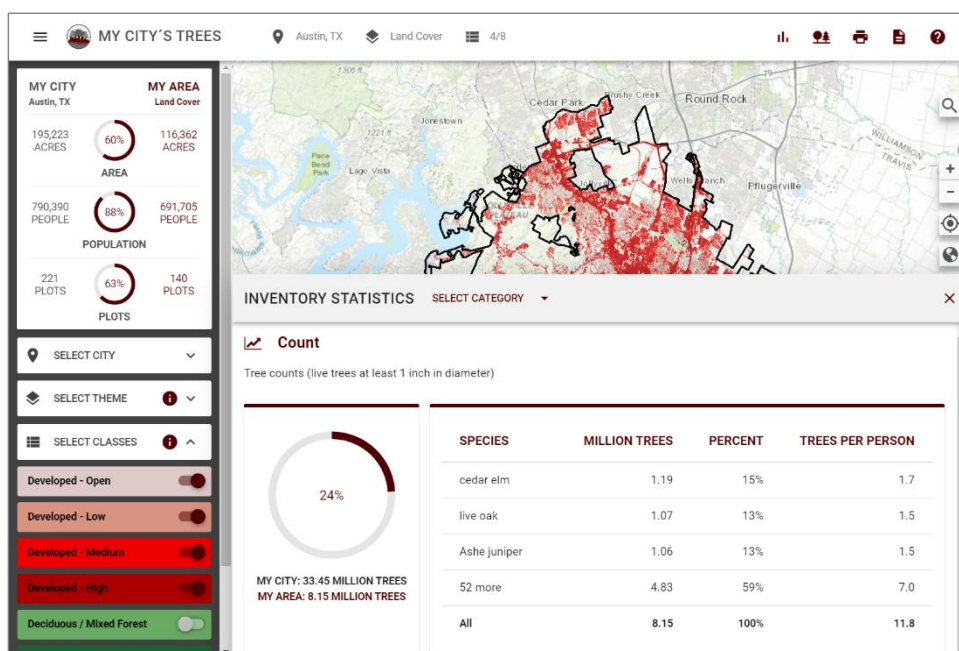
The application is designed to enable the user to explore the data. Theme and class selections can easily be changed, and the application responds quickly by adjusting the map and producing revised numbers of area, population, and plots.

## Inventory Statistics

Inventory statistics are available by clicking the Inventory Statistics button located in the horizontal bar across the top of the application. Estimates presented in the Inventory Statistics panel are for the area defined by city, theme, and class input. In the image below, Austin is the city; Land Cover the theme; and Developed – Open, Developed – Low, Developed – Medium, and Developed – High the classes.

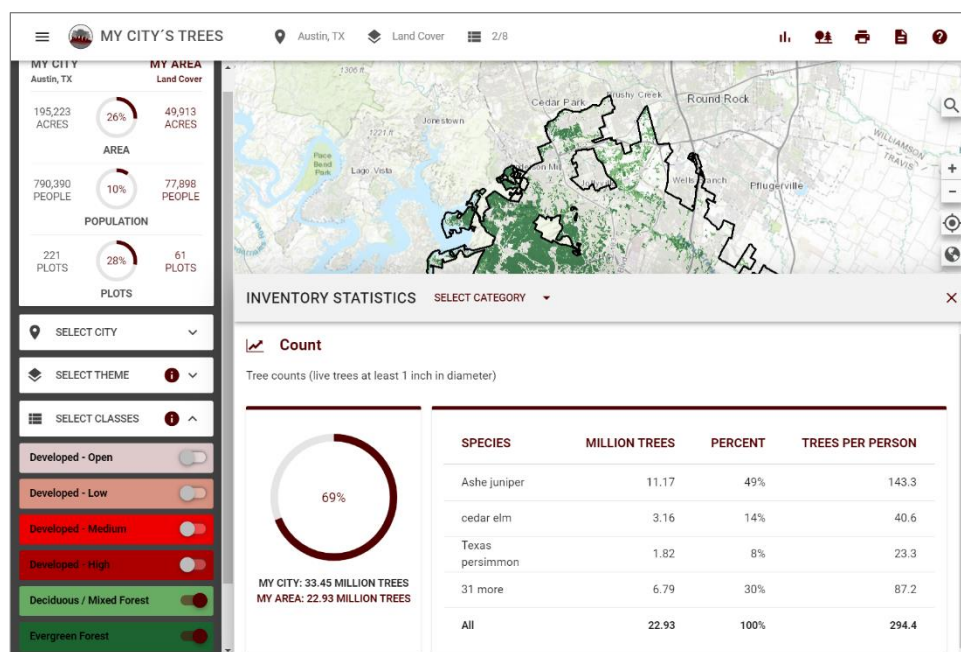
In the image below, Count is selected and estimates of numbers of trees are presented. On the left of the Inventory Statistics panel, the number of trees in the city is reported as 33.45 million trees and the number of trees in the selected area is reported as 8.15 million trees.

Information on the top three species is reported in the table. Cedar elm, live oak, and Ashe juniper have the highest estimated counts. There is an estimated 1.19 million cedar elm trees, which is 15% of the 8.15 million trees in the selected area. Considering all species, there are 11.8 trees per person in the area.



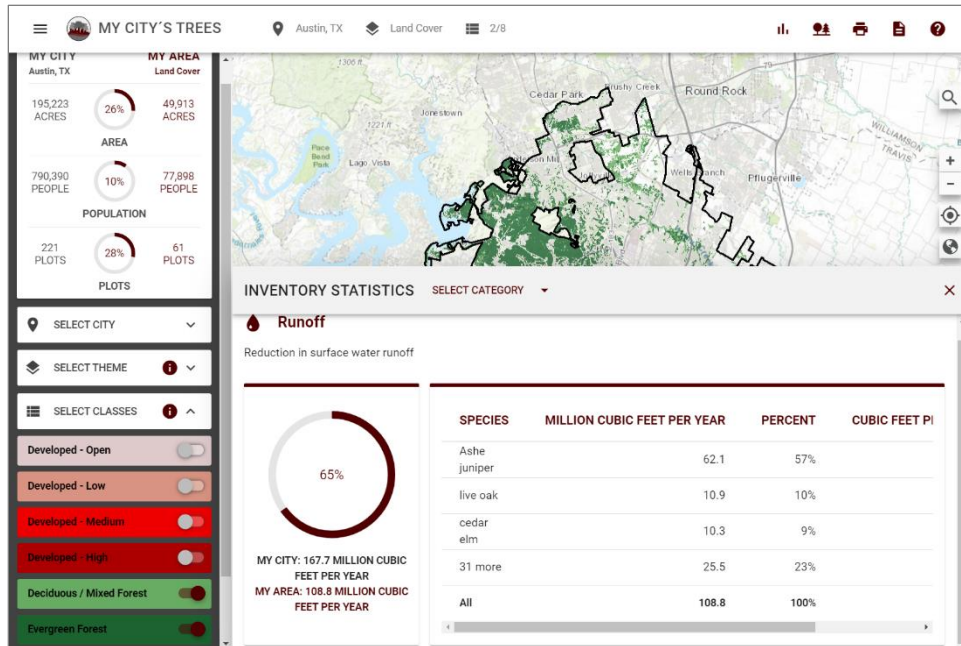
Developed areas (i.e. the four Developed Land Cover classes) cover 60% of the city but account for just 24% of the city's trees. The average tree density for the area is about 70 trees per acre (8,150,000/116,362) compared to a city-wide average density of about 171 trees per acre (33,450,000/195,223).

In the following image, Deciduous/Mixed Forest and Evergreen Forest have been toggled on and all other classes toggled off. Exploring the map shows contiguous areas of these two classes towards the outer portions of the city, with Evergreen Forest more prevalent on the west side of the city. These two classes cover just 26% of the city but account for 69% of the trees. Ashe juniper accounts for slightly under half of the estimated 22.93 million trees in the area. Average tree density is approximately 459 (22,930,000/49,913) trees per acre, which is considerably higher than the 70 trees per acre calculated on the four developed classes and the city-wide average of 171 trees per acre. This area isn't as heavily populated as other parts of the city and there are 294.4 trees per person.



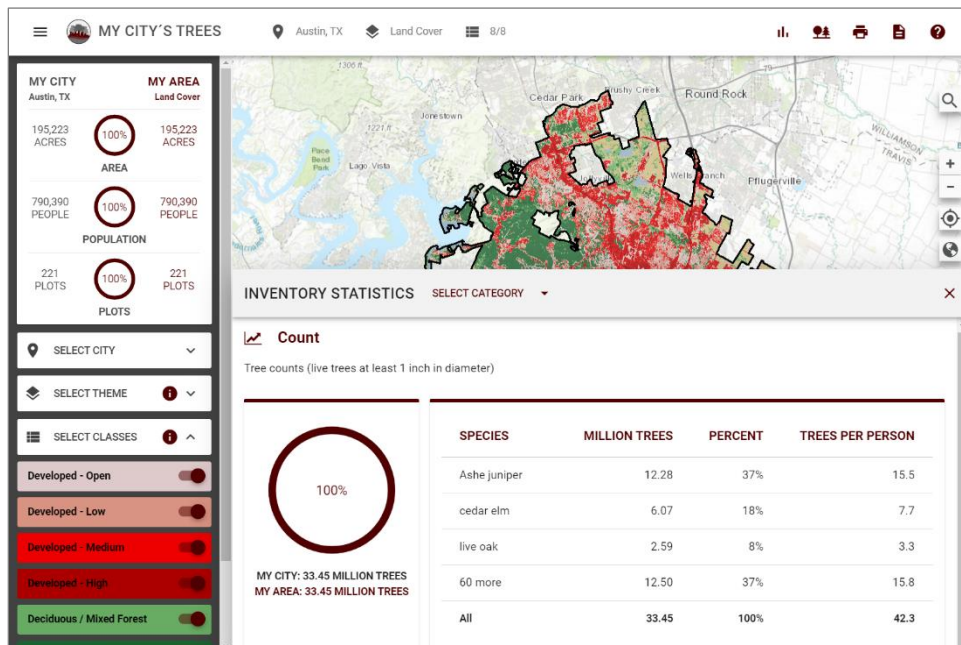
The application can display estimates for nine different inventory attributes: Count, Volume, Carbon, Value, Leaves, Energy, Runoff, Pollution, and Health. The user can switch to any of these by clicking the Select Category drop-down menu. In the following image, Runoff has been selected as the attribute. Across the city, trees reduce surface water runoff by 168 million cubic feet per year. Trees in the Evergreen Forest and Deciduous/Mixed Forest classes reduce surface water runoff by 109 million cubic feet per year. These forested classes cover 26% of the city area but account for 65% of the city's surface water runoff reduction that is attributed to trees.



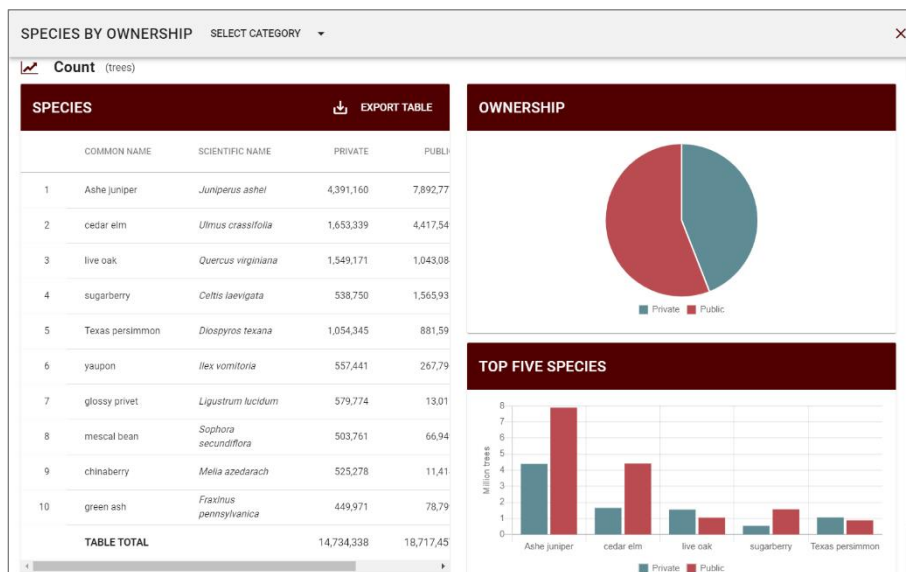


## Estimates for the Entire City

Estimates for the entire city can be generated by selecting all the classes in a theme. (The application will also produce estimates for the entire city if a city is selected but no theme has been selected.) In the following image, all eight classes in the Land Cover theme have been toggled on. In the upper left, estimates reported for My City and My Area are the same, implying that the entire city has been selected. Also, in the horizontal gray bar towards the top, it is reported that 8/8 classes are selected. Looking at the Inventory Statistics panel, 33.45 million trees are reported for My City and 33.45 million trees are reported for My Area. The most common species are Ashe juniper, cedar elm, and live oak. The table reports that 60 more species were observed in the sample.

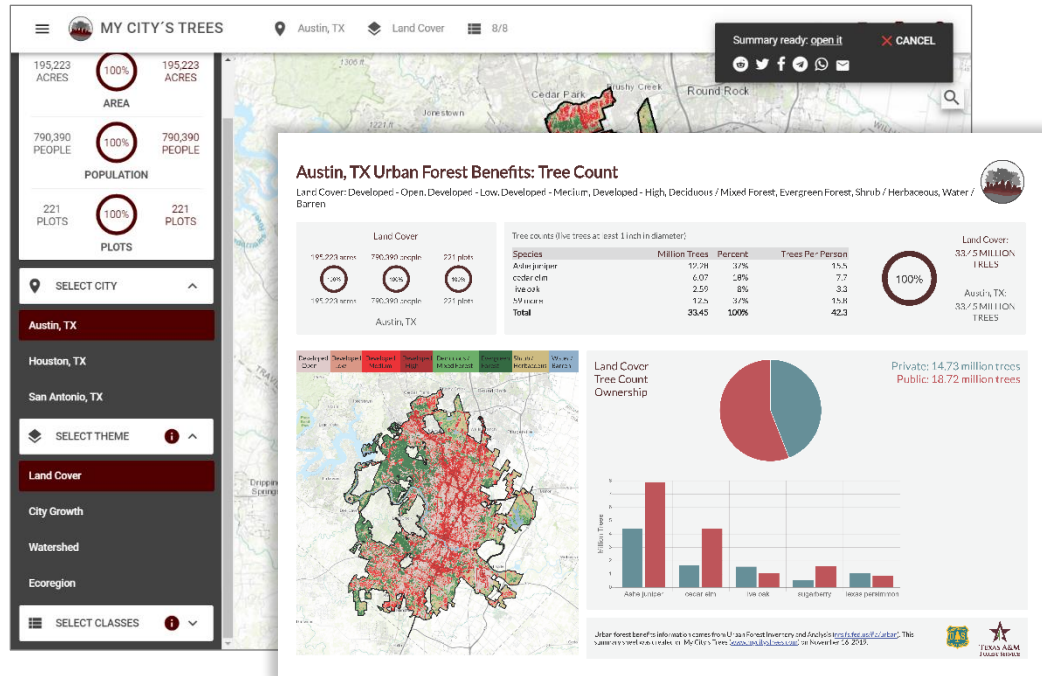


A full listing of the species and data broken out by ownership can be accessed by clicking the Species Statistics button located in the horizontal bar across the top of the application. A new window (see following image) titled Species by Ownership will appear. The table lists all the species sampled and includes the common name and the scientific name. Columns are sortable. In the upper right a pie chart gives the breakdown of counts by major ownership group, land use, or diameter class. In the lower right is a bar chart showing the counts for the top five species. Estimates by species and ownership, land use, or diameter class should be used cautiously as sampling errors are likely very high, especially for less prevalent species. The statistic can be changed by clicking the Select Category drop-down menu.



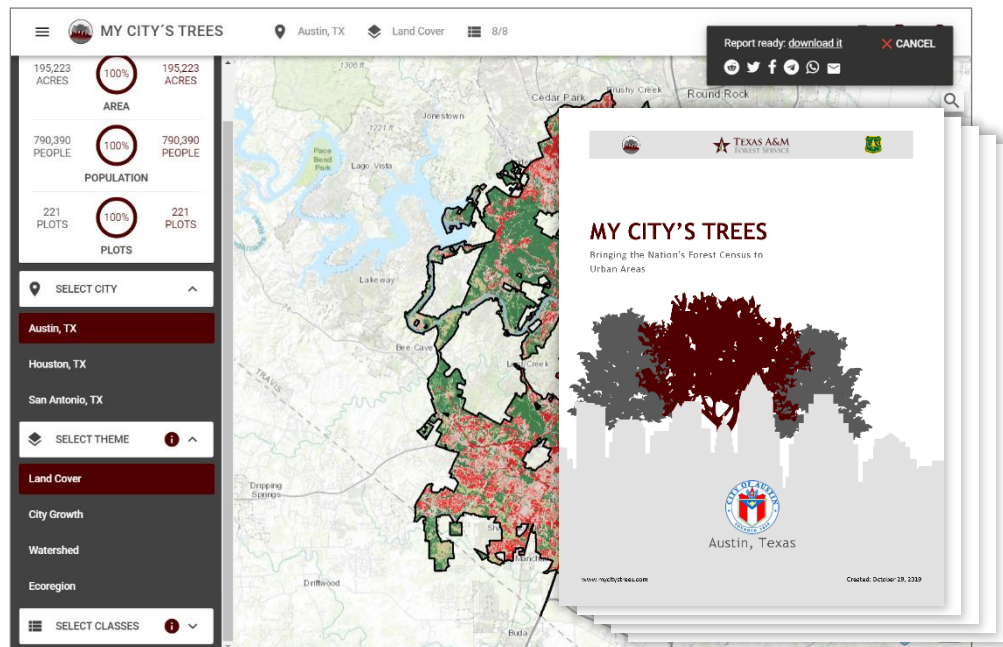
## Print Summary

A summary of the selected inventory statistics category with the selected city, theme, and class information can be generated by clicking the Print Summary button located in the horizontal bar across the top of the application. Position the map as you want it to appear and then click the check mark. The summary is generated as a PDF, so you can easily print, save, or share it. Common sharing tools, including an option to email the document, are provided when the summary is generated.



## Generate Report

Reports can be produced by clicking the Generate Report button located in the horizontal bar across the top of the application. Position the map as you want it to appear and then click the check mark. The report will summarize estimates for all the inventory statistics. Estimates will apply to the area selected (City/Theme/Classes) when Generate Report was clicked. For a given city, theme, and class selection, the same report will be generated regardless of the urban forest attribute (count, carbon, value, etc.) displayed in the Inventory Statistics panel. The report is generated as a PDF, so you can easily print, save, or share it. Common sharing tools, including an option to email the document, are provided when the report is generated.





## Limitations, Data Uses, and Contact Information

It is important to keep in mind that the inventory is a sample rather than a complete census. The estimates are subject to sampling error. For reference, the estimated total number of trees in Austin is 33.45 million, the standard error of the estimate is 3.6 million, and the sampling error is 10.8 percent. Sampling errors can be high for estimates and results may not be statistically significant. Users of the estimates from this application should contact Texas A&M Forest Service or the US Forest Service or for assistance evaluating the reliability of the estimates or other questions about uses of the data.

For Texas A&M Forest Service, contact Rebekah Zehnder at [mct@tfs.tamu.edu](mailto:mct@tfs.tamu.edu) or (979) 458-6630.

For a list of US Forest Service contacts by region, see <https://www.fia.fs.usda.gov/tools-data/customer-service/index.php>.

Visit the Urban FIA website (<https://www.fia.fs.usda.gov/program-features/urban>) for information on a city's specific inventory and additional information on inventory and analysis protocols and methods.

To cite information from My City's Trees, use the format for a website for the style you are using or follow the following format:

Texas A&M Forest Service; U.S Department of Agriculture, Forest Service. (Year). *My City's Trees*. Retrieved Month Date, Year, from <https://mct.tfs.tamu.edu>

Example:

Texas A&M Forest Service; U.S Department of Agriculture, Forest Service. (2023). *My City's Trees*. Retrieved July 26, 2023, from <https://mct.tfs.tamu.edu>

