



Tree Equity Handbook

A Practical Guide to Closing the Canopy Gap Between Neighborhoods

ACTIVITY 1.1

→ Basic Data Gathering

Toolkit 1: Collect Baseline Data

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Activity 1.1: Basic Data Gathering

Toolkit 1

Collect Baseline Data

Trees are essential to public health and well-being. You probably recognize the need for more tree infrastructure in your community — maybe you've even explored Tree Equity Score — and now you're ready to chart a course of action that leads to greener, safer and more resilient neighborhoods. So where do you start?

Begin by establishing a strong data foundation. In this toolkit, you'll use Tree Equity Score to gather data about trees in your community, identify areas with the greatest need and set priorities for the future. At every step, you'll gather robust data that can help you make the case for investment, policy change and strategic action in pursuit of Tree Equity.

Let's get started!

Activity Map

Basic Data Gathering

→ [Priority Area Mapping](#)

→ [In-Person Observation](#)

Basic Data Gathering



Overview & Basic Steps

Data can be a powerful tool to communicate urgent issues and advocate for change — whether you're talking with the media, elected officials or your neighbors. Use Tree Equity Score data to paint a broad picture of the tree canopy in your community and illustrate how investing in tree infrastructure intersects with important issues like climate and equity. Highlight disparities in tree cover, explain the benefits of adding more trees to priority areas and start to build a case for Tree Equity — all with the help of robust data that adds credibility and urgency to your message.

We recommend taking some time to explore the [Tree Equity Score National Explorer](#) before getting started. This interactive tool puts powerful data into your hands, and it will help to be familiar with it as you gather baseline information about your community.

Suggested Time: 2–3 days

Level of Difficulty: Low

Participants: Anyone can do it!

Instructions

- 1 Explore and save maps from the Tree Equity Score National Explorer. Different map views will help you visualize the tree canopy in your community alongside key demographic, climate and health metrics.
- 2 Continuing to use the National Explorer, compile top-level metrics about the people and trees in your community.
- 3 Calculate the benefits that the existing tree canopy has brought to your community.
- 4 Explore how differences in tree cover may correlate to social inequities, such as poverty or heat disparity.
- 5 Set a long-term vision. Illustrate what it will take to significantly expand the tree canopy in your community — and the potential benefits of meeting this goal.
- 6 Compile all your findings in the **Basic Data Gathering Worksheet** → [page 12](#)

After you complete this activity:

- Decide where to prioritize initial efforts in your community. → [Activity 1.2](#)
- Visit to gather in-person observations about the effect of tree canopy on the lived environment. → [Activity 1.3](#)

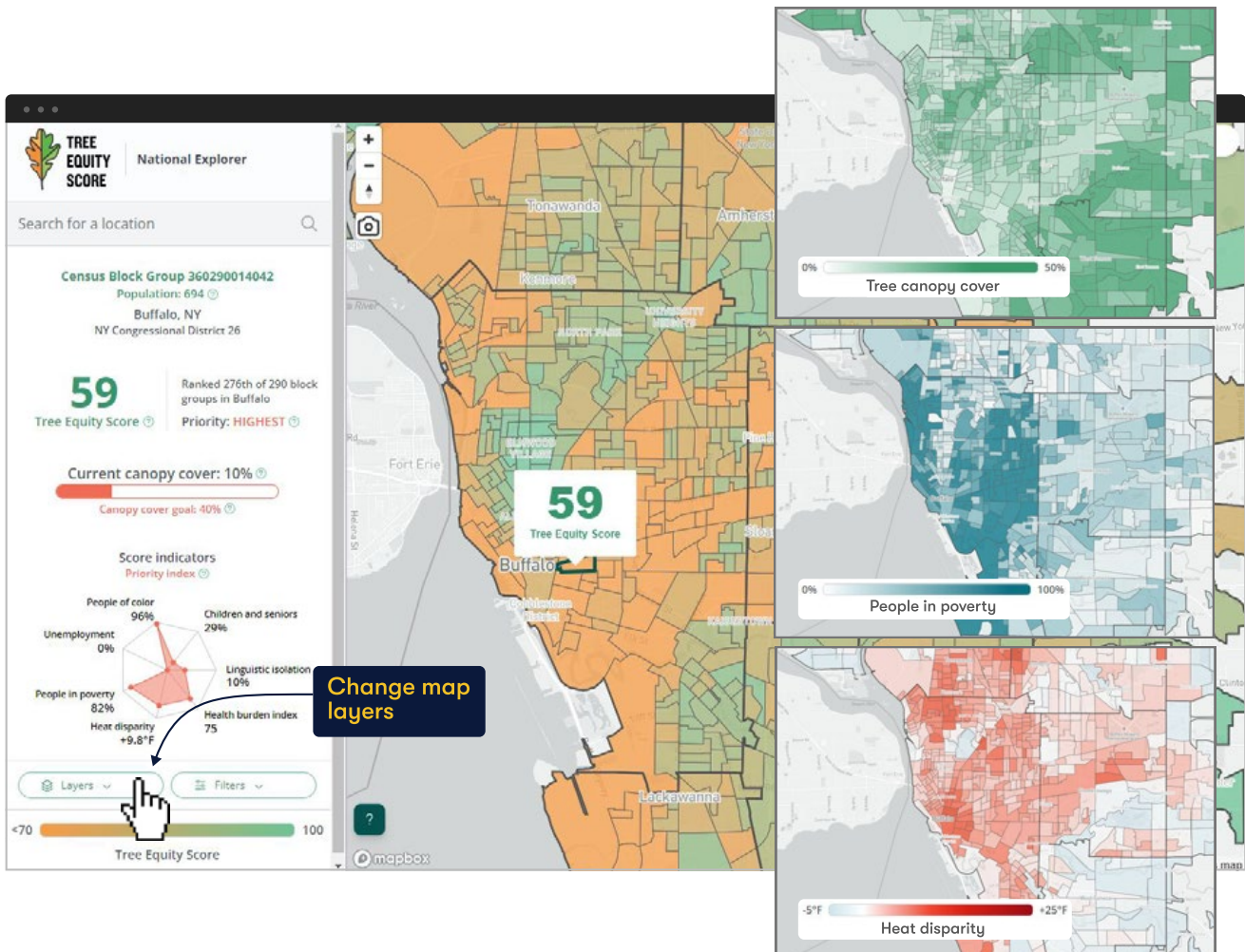
TOOLKIT 1: Basic Data Gathering | Activity 1 – WORKSHEET

Create Maps

Maps will help your audiences better understand Tree Equity issues. Visual references help shift the narrative away from specific neighborhoods and instead highlight larger patterns – and often disparities – in tree cover. Maps are versatile tools for grant applications, town board presentations, communications materials and for guiding conversations with community members and other stakeholders.

Create a series of maps to show how different thematic patterns interconnect.

1. Open the [Tree Equity Score National Explorer](#) and locate your geographic area on the map— this may be a city/town, county, congressional district or state depending on the scale of your focus.
2. The default map view displays Tree Equity Scores. Click on “Layers” (lower left) to change the data displayed on the map. Think of map layers as sheets of paper in a stack; each layer contains different information. Explore all the layers – toggling between them will reveal relationships, such as where tree cover overlaps with temperature hotspots. What do these layers tell you about your community? Which indicators correlate strongly to tree canopy cover? (You may need to zoom out to observe broader geographic patterns.)



3. Mark the layers that tell the strongest story, alone or in relation to each other:



- | | |
|--|---|
| <input type="checkbox"/> Tree Equity Score | <input type="checkbox"/> Children and seniors |
| <input type="checkbox"/> Tree canopy cover | <input type="checkbox"/> Unemployment |
| <input type="checkbox"/> Tree canopy gap | <input type="checkbox"/> Linguistic isolation |
| <input type="checkbox"/> Priority index | <input type="checkbox"/> Health burden index |
| <input type="checkbox"/> People of color | <input type="checkbox"/> Heat disparity |
| <input type="checkbox"/> People in poverty | <input type="checkbox"/> Redlining |

4. Now, save the layers you selected above as images to use later. Center the map to make sure you can see the whole area on the screen. Right-click on the map and either save the image or copy it to your clipboard. Save multiple layer views to the same folder on your computer, or copy them into one document.

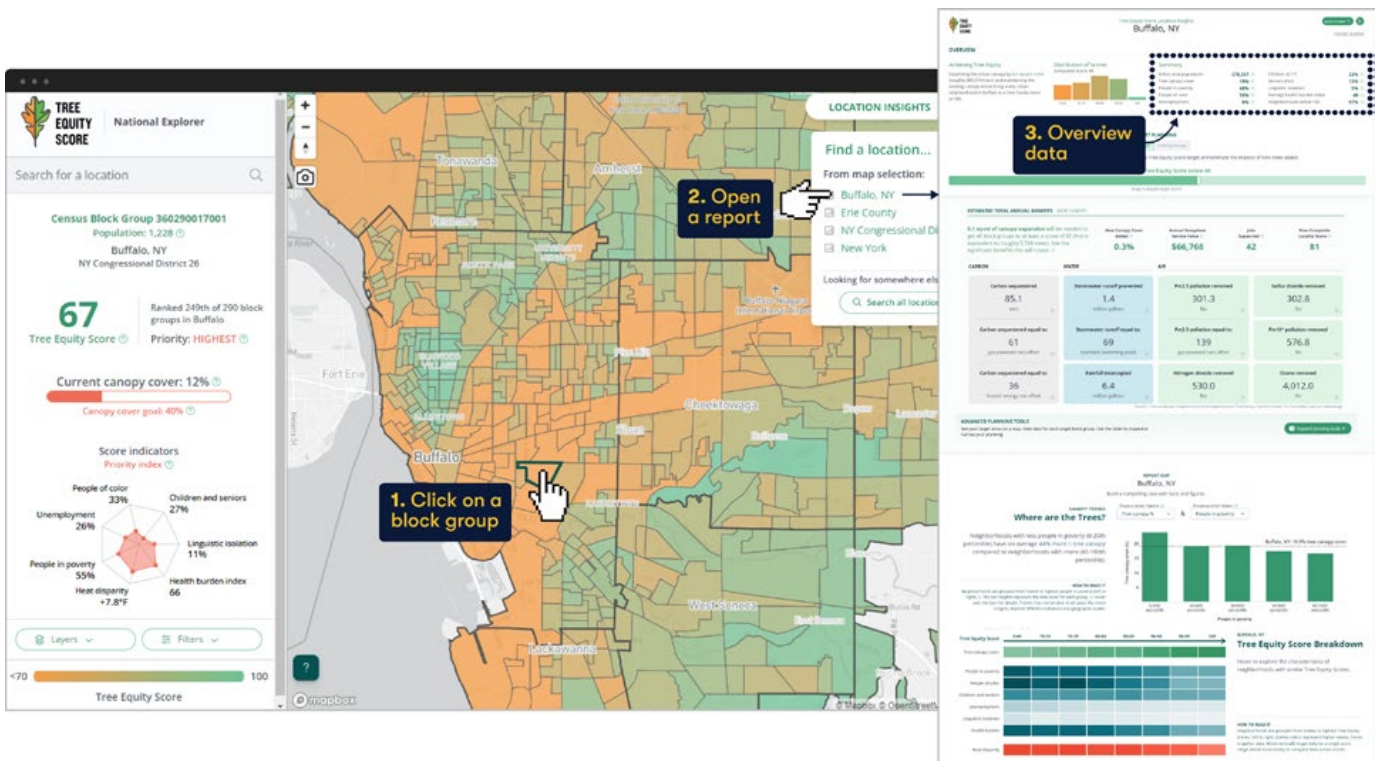


Tip: Take a screenshot of the legend (bottom left) for each map layer that you save. Always include legends alongside maps when you present them so that your audience understands what they're looking at. You can use a free design tool like Canva, or presentation tools like PowerPoint, to place a legend over a map so that it's inset (see example below). You can also add text boxes to label important locations or points of interest.

Gather Overview Metrics

The overview metrics in Tree Equity Score Location Insights reports provide valuable data on overall community characteristics. These metrics will be useful in grant proposals, project reports, presentations and various other contexts as foundational information.

1. Click on any block group within your geographic area to generate a list of related reports. These will appear in the top right, under “Find a location...” (top right).
2. Select the report appropriate for the scale you work at – city/town, county, congressional district or state. This will open a Location Insights report.
3. Gather metrics from the “Summary” section at the top of the report. Enter the summary metrics into the **Basic Data Gathering Worksheet** ([page 12](#)).



Sample Overview Metrics

Location Name: **Buffalo, NY**

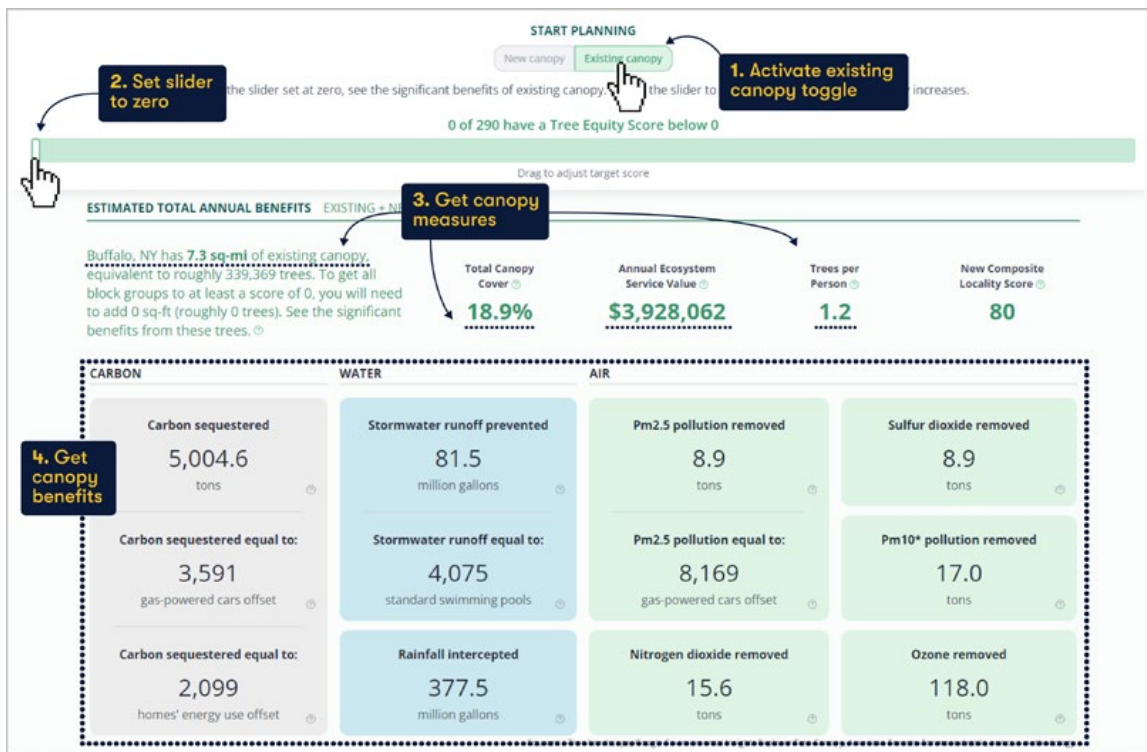
Urban area population: 278,337	Children (0–17): 22%
Tree canopy cover: 19%	Seniors (65+): 13%
People in poverty: 48%	Linguistic isolation: 5%
People of color: 55%	Average health burden index: 49
Unemployment: 8%	Neighborhoods below 100: 97%

See fillable worksheet on page 12

Describe Existing Canopy

The slider tool under “Start Planning” can not only help you understand the potential benefits of adding urban trees to your area, it can also illustrate what the existing canopy is already doing for your community. With this data on hand, you can make a stronger case for the protection and care of urban forests and street trees. As these trees grow and mature, their benefits to the community will continue to increase.

1. In the “Start Planning” section, toggle to “Existing canopy.”
2. With the slider at zero (no new trees added), record the top-level metrics as well as the ecosystem services, categorized by carbon, water and air.



Existing Canopy: Estimated Annual Benefits Sample

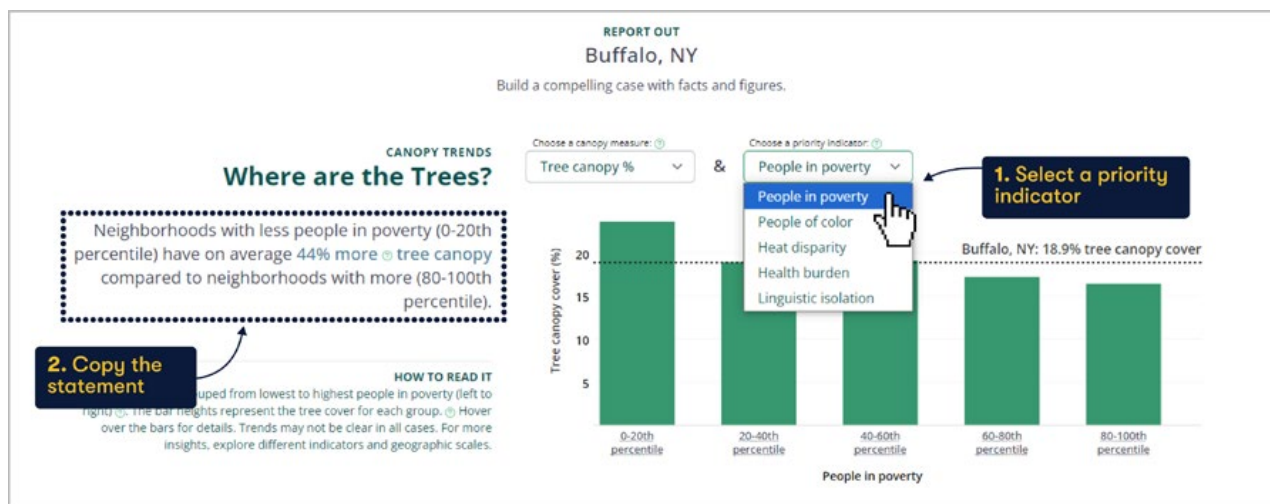
Total canopy area (sq-mi): 7.3	Total canopy cover (%): 18.9%
Trees per person: 1.2	Annual ecosystem service value (\$): 3,928,062
CARBON	Carbon sequestered: 5,004.6
	Gas-powered cars CO2 emissions offset: 3,591
	Homes' energy use offset: 2,099
WATER	Stormwater runoff prevented (gallons): 81.5 million
	Stormwater runoff prevented (standard swimming pools): 4,075
AIR	Pm2.5 pollution removed: 8.9 tons
	Gas-powered cars pm2.5 emissions offset: 8,169

See fillable worksheet on page 12

Describe Disparities in Tree Cover

The “Report Out” section allows you to explore relationships between tree cover and community factors, such as people living in poverty or heat disparities from neighborhood to neighborhood. This can reveal who benefits most from trees and who may be disadvantaged by the effects of limited tree cover — helping you build a compelling case for Tree Equity based on data.

1. Locate the “Canopy Trends” section, which includes a summary statement and a green bar chart.
2. In the first of two drop-down menus above the bar chart, choose between “tree canopy %” and “trees per person.” These options offer two ways to describe how much tree canopy there is.
3. In the second drop-down, select a priority indicator. These are measures of different community factors like poverty rate and health burden. As you select different items, the statement on the left will update.
4. Flip through all the charts to view the statements that characterize potential disparities in tree cover — for example, how tree canopy % relates to heat disparities. Choose the statements that present the most compelling case for Tree Equity. Copy these statements into the **Basic Data Gathering Worksheet** ([page 12](#)).



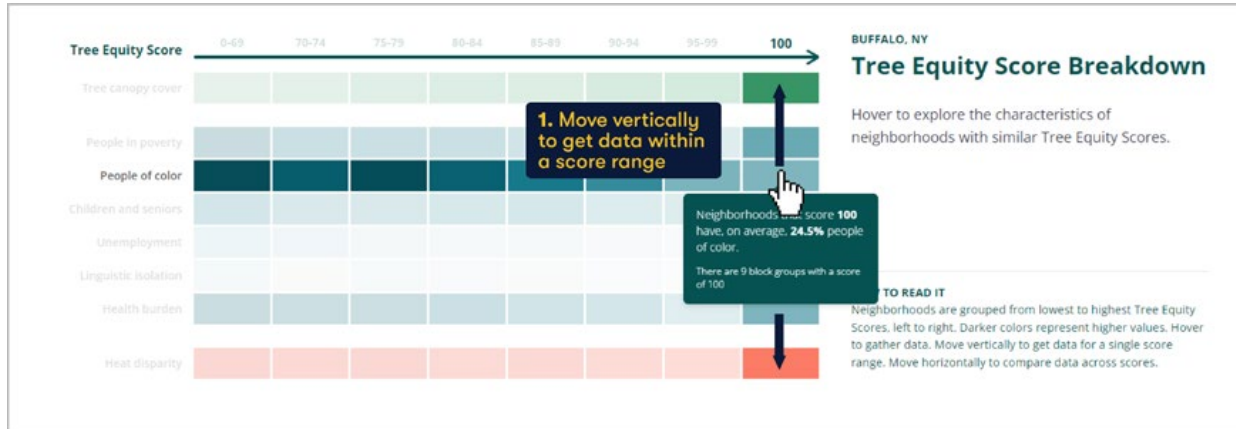
Sample Canopy Trend Statements

Trees & people in poverty	Neighborhoods with less people in poverty (0-20th percentile) have on average 44% more tree canopy compared to neighborhoods with more (80-100th percentile).
Trees & people of color	Neighborhoods with less people of color (0-20th percentile) have on average 31% more tree canopy compared to neighborhoods with more (80-100th percentile).

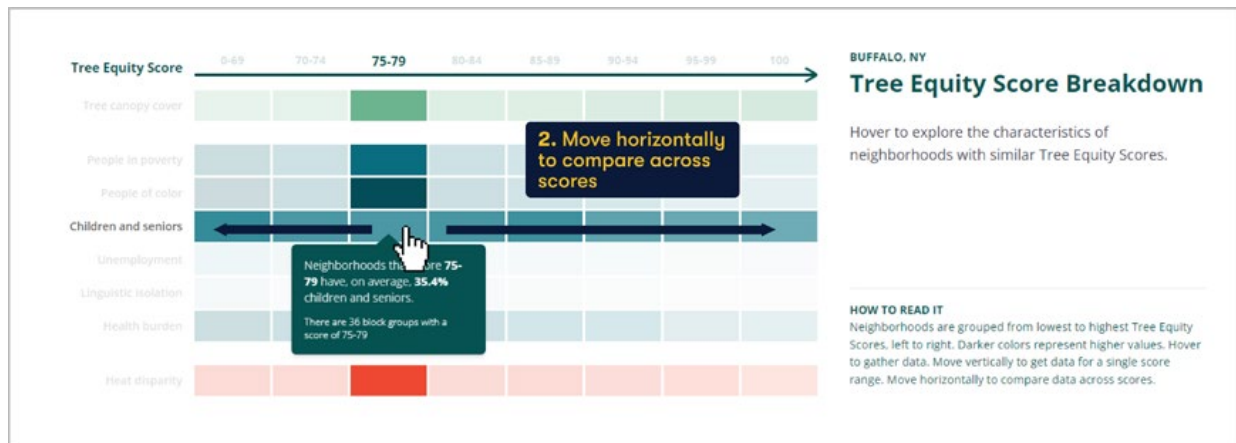
[Rows continue with more variables in fillable worksheet]

See fillable worksheet on [page 13](#)

- Next, locate the “Tree Equity Score Breakdown.” This allows you to compare data points from neighborhoods with different Tree Equity Scores.
- Start by capturing data from the right-most column — neighborhoods with Tree Equity Scores of 100. Hover over each cell in this column and copy statements into the **Basic Data Gathering Worksheet** ([page 12](#)).



- Next, choose a column with a lower score range and capture data from every cell in the column, copying statements as you did previously. This exercise will help you characterize neighborhoods with high Tree Equity Scores relative to lower Tree Equity Scores. Take note of any comparisons that are particularly surprising or illuminating.



Sample Tree Equity Score Breakdown

Indicator	Lower Score Range: 0–69	Tree Equity Score: 100
Tree canopy cover	Neighborhoods that score 0–69 have, on average, 14.7% tree canopy cover.	Neighborhoods that score 100 have, on average, 31.5% tree canopy cover.
People in poverty	Neighborhoods that score 0–69 have, on average, 68.3% people in poverty.	Neighborhoods that score 100 have, on average, 28.9% people in poverty.
People of color	Neighborhoods that score 0–69 have, on average, 78.2% people of color.	Neighborhoods that score 100 have, on average, 24.5% people of color.

[Rows continue with more variables in fillable worksheet]

Illustrate the Benefits of Added Tree Cover

Tree Equity is only achieved when all neighborhoods have enough tree canopy to deliver a minimum standard of tree-related benefits to residents – this is no easy feat and can take decades. Tree Equity Score can help you communicate the scale of canopy expansion needed, as well as the significant benefits to the community once those trees reach maturity.

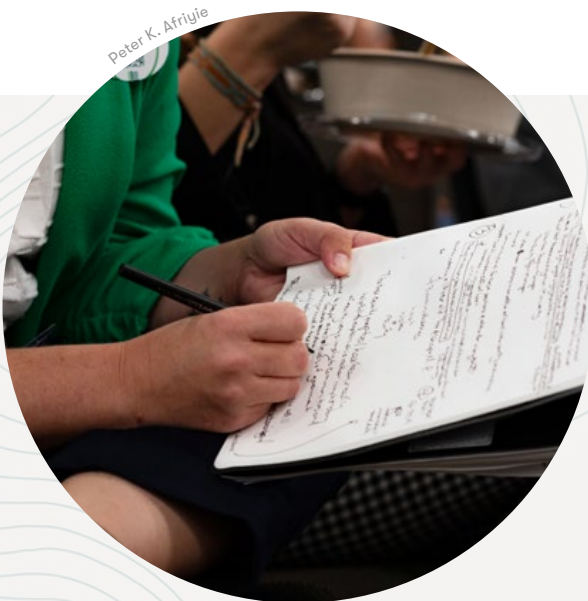
At the top of your Location Insights report, find the “Overview” section and record the statement on achieving Tree Equity in your location:



Sample: Achieving Tree Equity

Expanding the urban canopy by 8.4 square miles (roughly 389,214 trees) and maintaining the existing canopy would bring every urban neighborhood in Buffalo to a Tree Equity Score of 100.

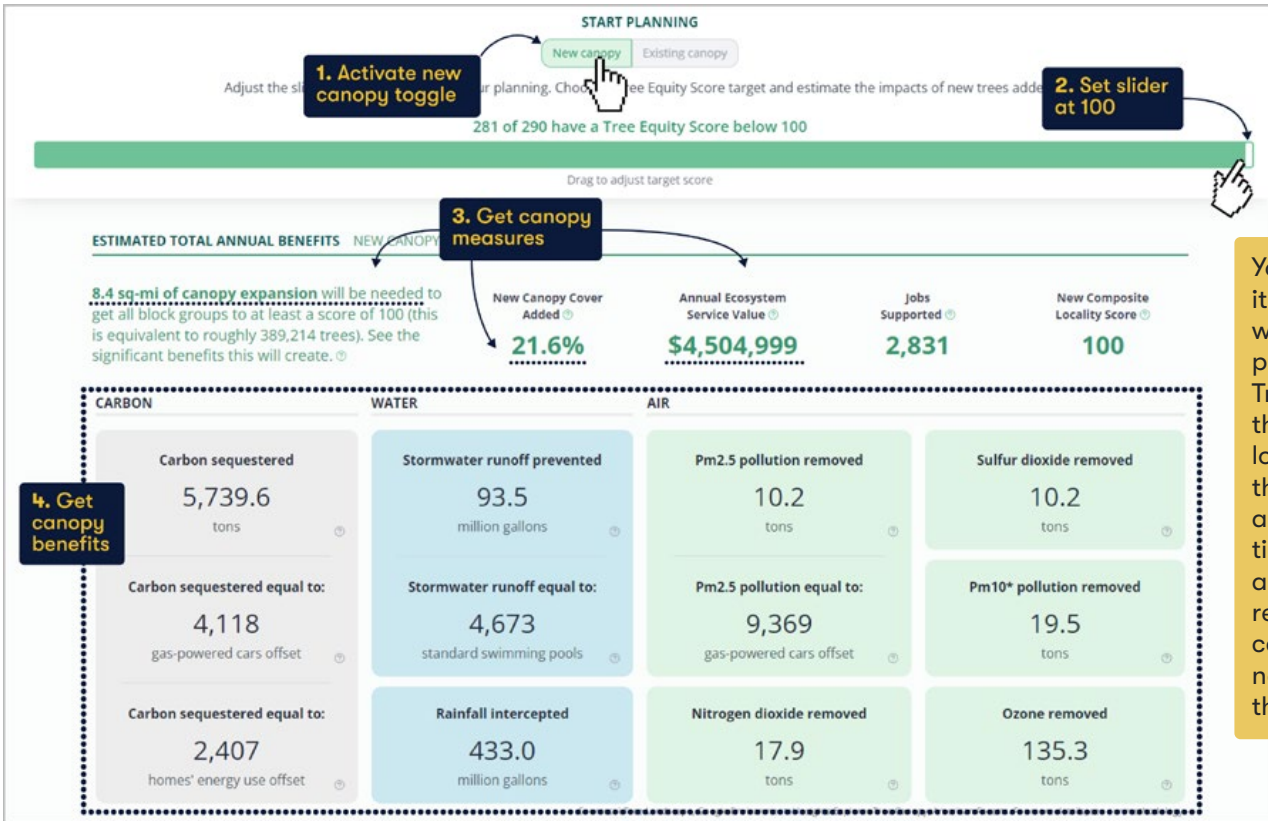
See fillable worksheet on [page 14](#)



Attendees take notes during the workshop “How to make the Most of Tree Equity Score” in Washington, D.C.

Now that you have a broad sense of what it will take to achieve Tree Equity in your community, record the benefits that would result from meeting this long-term goal.

1. In the “Start Planning” section below, toggle to “New canopy” and move the green slider all the way to the right. This sets your Tree Equity Score target to 100.
2. Record the top-level canopy metrics as well as the ecosystem services, categorized by carbon, water and air.



You may find it helpful to set waypoints on the path to achieving Tree Equity. Move the slider to explore lower score targets that are more achievable for your timeline, capacity and budget. Then record the tree canopy expansion needed to achieve that target.

Sample Estimated Annual Benefits: New Canopy

Canopy expansion needed (sq-mi): 8.4		New canopy cover added (%): 21.6	
Annual ecosystem service value (\$): 4,504,999		Jobs supported: 2,831	
CARBON	Carbon sequestered: 5,739.6 tons		
	Gas-powered cars CO2 emissions offset: 4,118		
	Homes' energy use offset: 2,407		
WATER	Stormwater runoff prevented (gallons): 93.5 million		
	Stormwater runoff prevented (standard swimming pools): 4,673		
AIR	Pm2.5 pollution removed: 10.2 tons		
	Gas-powered cars pm2.5 emissions offset: 9,369		

See fillable worksheet on page 14

Basic Data Gathering Worksheet

Data strengthens storytelling. The metrics you’ve gathered from your community’s Tree Equity Score can help you build a strong case for investment, policy change and other actions that lead to positive change.

Use this worksheet as a space to compile all the data from the previous exercises so that it’s easy to reference as you communicate the importance of Tree Equity to leaders, stakeholders and peers.

Overview Metrics | Instructions on [page 6](#)



Location Name:	
Urban area population:	Children (0–17):
Tree canopy cover:	Seniors (65+):
People in poverty:	Linguistic isolation:
People of color:	Average health burden index:
Unemployment:	Neighborhoods below 100:

Existing Canopy: Estimated Annual Benefits | Instructions on [page 7](#)

Total canopy area (sq-mi):		Total canopy cover (%):
Trees per person:		Annual ecosystem service value (\$):
CARBON	Carbon sequestered:	
	Gas-powered cars CO2 emissions offset:	
	Homes’ energy use offset:	
WATER	Stormwater runoff prevented (gallons):	
	Stormwater runoff prevented (standard swimming pools):	
AIR	Pm2.5 pollution removed:	
	Gas-powered cars pm2.5 emissions offset:	

Worksheet continues on next page



Canopy Trend Statements | Instructions on [page 8](#)

Trees & people in poverty	
Trees & people of color	
Trees & heat disparity	
Trees & health burden	
Trees & linguistic isolation	

Tree Equity Score Breakdown | Instructions on [page 9](#)

Indicator	Lower Score Range: _____	Tree Equity Score: 100
Tree canopy cover		
People in poverty		
People of color		
Children and seniors		
Unemployment		
Linguistic isolation		
Health burden		
Heat disparity		

Worksheet continues on next page



Achieving Tree Equity | Instructions on [page 10](#)

Expanding the urban canopy by _____ square miles (roughly _____ trees) and protecting the existing canopy would bring every urban neighborhood in _____ to a Tree Equity Score of 100.

New Canopy: Estimated Annual Benefits | Instructions on [page 11](#)

Canopy expansion needed (sq-mi):		New canopy cover added (%):	
Annual ecosystem service value (\$):		Jobs supported:	
CARBON	Carbon sequestered:		
	Gas-powered cars CO2 emissions offset:		
	Homes' energy use offset:		
WATER	Stormwater runoff prevented (gallons):		
	Stormwater runoff prevented (standard swimming pools):		
AIR	Pm2.5 pollution removed:		
	Gas-powered cars pm2.5 emissions offset:		

An interactive Tree Equity Score presentation at Upward Ground Southern University in Baton Rouge, Louisiana.





Activity 1.1: Basic Data Gathering

Toolkit 1: Collect Baseline Data

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