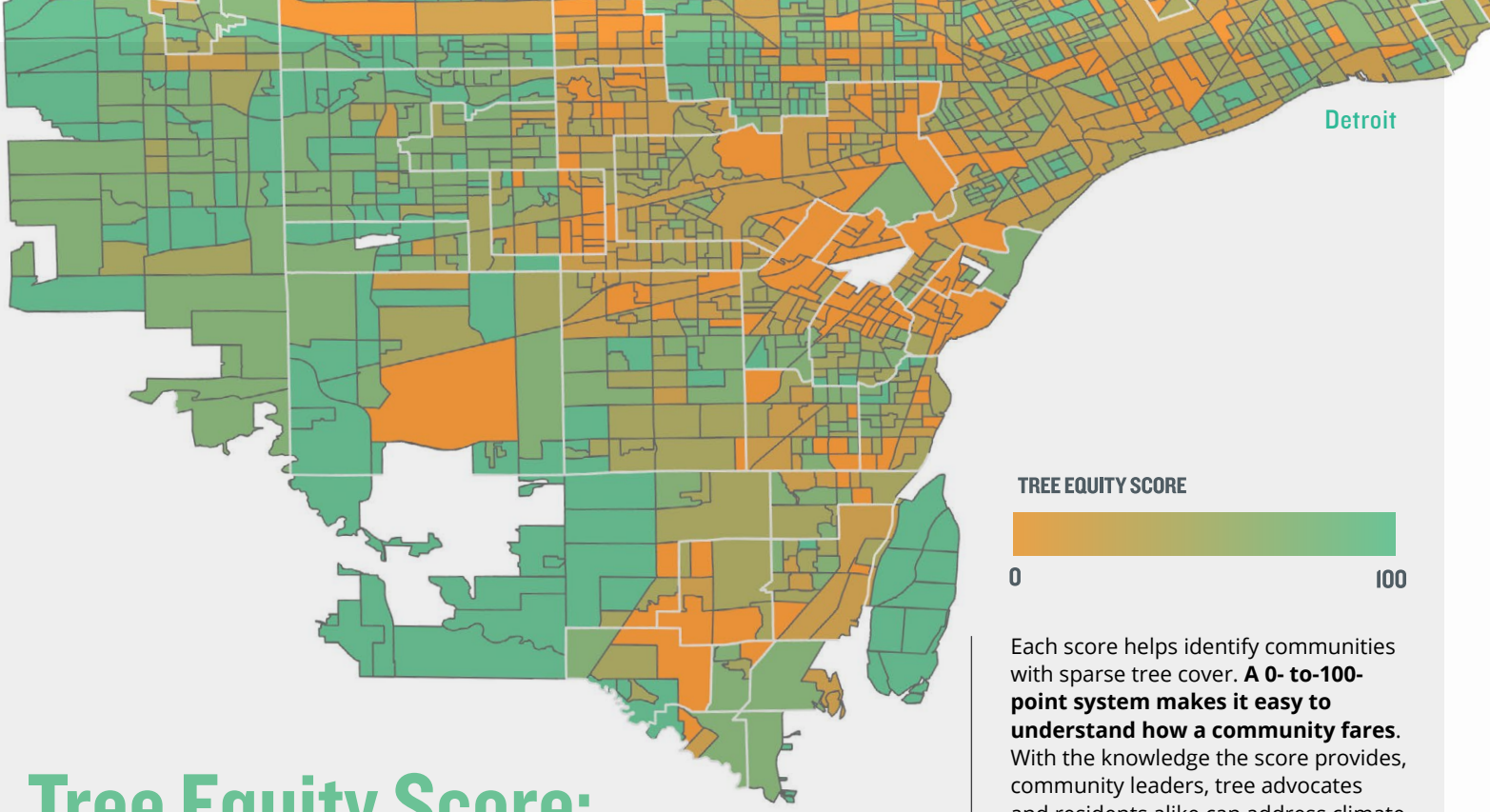
TREE EQUITY SCORE

The silver seed for cities across America

The story is the same in nearly every city across the United States. With few exceptions, trees are sparse in neighborhoods with fewer resources and more prominent in wealthier ones. Communities of color versus white neighborhoods continue to suffer from redlining policies dating back to the 1930s, which laid the groundwork for this inequity.

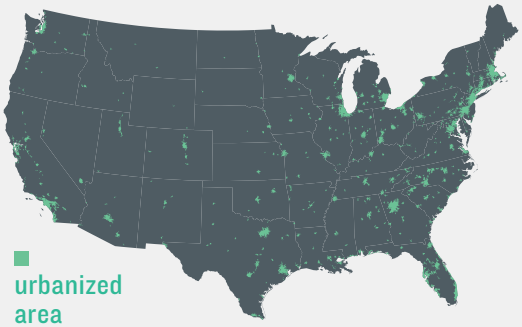
American Forests sees tremendous opportunity for greening all urban neighborhoods. There are innumerable life-saving and quality-of-life benefits that come with more trees, including reducing heat-related illnesses and adding more jobs. Well-maintained trees are essential infrastructure for urban areas, much like streetlights, schools and sewer lines. Tree Equity is about ensuring that all people experience the benefits of trees.

But how do we know if there are enough trees in a neighborhood for everyone to reap those benefits? American Forests' Tree Equity Score (TES) tool answers this question.



Tree Equity Score: A Gamechanger for Urban Neighborhoods

Each score helps identify communities with sparse tree cover. **A 0- to-100-point system makes it easy to understand how a community fares**. With the knowledge the score provides, community leaders, tree advocates and residents alike can address climate change and public health through the lens of social equity, attract new resources, factor the scores into technical decisions and track progress toward achieving Tree Equity. A score of 100 represents Tree Equity.



TES calculates scores based on how much tree canopy and surface temperature align with income, employment, race, age and health factors in the U.S. **Scores are available for 150,000 neighborhoods and 486 urbanized areas (places with at least 50,000 residents).** More than 70% of people in the U.S. live in one of these places. Each score indicates whether there are enough trees in specific neighborhoods or municipalities for everyone to experience the health, economic and climate benefits that trees provide.

TES uses **eight layers of data** to create scores:

- tree canopy
- population density
- income
- employment
- race
- age
- health
- surface temperature

The U.S. Census Bureau, U.S. Department of Agriculture, U.S. Geological Survey and EarthDefine were among the sources for data that contributed to the scores.

This metric may be a long-awaited "silver seed" for all who want to green cities equitably, such as urban forestry planners, urban designers, community tree-planting organizations, public health agencies, mayors and residents. Urban foresters have long recognized data layers to identify areas of high-equity need linked to trees. The Tree Equity Score builds on that work. It provides national scale, free access for neighborhoods of all sizes, the numeric metric and the interactive platform. Advocates can use the scores to plant trees in the communities that need them most and allocate funding to ensure their long-term care.

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2021 Findings: There is Much to Gain

Planting 522 million trees would allow for **every urbanized area to reach a score of 100**, benefiting the U.S. in the following ways:

The tree planting effort would support

3.8 million jobs.

56,613 tons

of particulate pollution in the atmosphere would be mitigated annually.

These forms of matter can originate from traffic, agriculture and industry, and organic root causes, like volcanic eruptions, soil erosions and sea salt.

9.3 million tons

of carbon would be sequestered annually.

*This is the equivalent of taking **92 million cars** off the road.*

Our country would save over

$5 billion

in a variety of climate, air and water services annually.

We would avoid stormwater runoff at a rate of approximately

478 million cubic meters

annually.

The 20 large-scale cities

(populations of 500,000+) with the most benefits to gain include:

- Chicago
- Columbus, Ohio
- Detroit
- Fresno, Calif.
- Hempstead & New York, N.Y.
- Houston, Fort Worth & El Paso, Texas
- Jacksonville, Fla.
- Los Angeles
- Memphis, Tenn.
- Milwaukee
- Oklahoma City
- Philadelphia
- Phoenix
- Portland, Ore.
- Sacramento, San Diego & San Jose, Calif.

The Tree Equity Score is a groundbreaking tool for a variety of reasons, including:

It provides a social-equity-focused narrative, goals and a guide path for building understanding, commitment and action about Tree Equity

It moves beyond planting trees only. It incorporates the value of maintaining and protecting existing trees so that new trees are additive

The rich, location-specific data is free and easy to access, addressing a significant issue between cities with varying resources. Anyone can use the tool to understand better how well their neighborhood and urbanized area fare in providing adequate tree canopy

The data provides an unprecedented level of tree canopy detail at a national scale, thanks to a robust data layer supplied by EarthDefine. Additional local data layers can be incorporated through the Tree Equity Score Analyzer

It is user-friendly. It provides detailed information on the neighborhoods and individual parcels of land where planting trees can result in Tree Equity. The tool also estimates and compares numerous tree planting scenarios' climate and health impact, essenti for planning, fundraising and policy action.

Additional Findings

income and race-related discrepancies

TES highlights inequities within an urbanized area by examining tree canopy in one neighborhood compared to another. The findings show correlations between a neighborhood's racial or ethnic makeup, average income and tree canopy amount.

The large-scale cities with the most significant discrepancies of tree canopy in high-income neighborhoods compared to low-income neighborhoods are:

- Austin, Texas (20% difference)
- Portland, Ore. (15%difference)
- San Antonio (12% difference)
- Los Angeles (10% difference)
- Baltimore and Houston (9% difference)
- Columbus, Ohio; Raleigh, N.C., and Dallas (8% difference)
- Seattle, Denver, San Diego, San Francisco and Charlotte (7% difference)

heat-related discrepancies

Since trees play a vital role in keeping neighborhoods cooler during heat season, urbanized areas are likely to have some neighborhoods with higher temperatures than others.

Large-scale cities that feature the biggest disparity between the hottest neighborhood and the city-wide average (in degrees and percentage) include:

- Memphis, Tenn. (10.6 degrees/12%)
- Boston (10.5 degrees/12%)
- Columbus, Ohio (10.1 degrees/12%)
- Charlotte, N.C. (10.1 degrees/12%)
- Hempstead, N.Y. (9.5 degrees/12%)
- New York City (8.1 degrees/10%)
- Atlanta (7.4 degrees/10%)
- Houston (7.9 degrees/9%)
- Baltimore (8.3 degrees/9%)
- Detroit (7.1 degrees/8%)
- Chicago (6.4 degrees/8%)

How To Use Tree Equity Scores

Neighborhood organizations, U.S. federal, state and local leaders, and everyone in between can benefit from the knowledge and information the Tree Equity Scores provide. And they can be used by a variety of sectors, such as urban forestry and public health, given the role trees play in slowing climate change and advancing social equity. Some of the uses are:

Advocate

Use the scores to make a case for federal, state and local policies, programs, and funding related to protecting existing trees and planting new trees. For example, in Arizona, scores were used to help convince the Phoenix City Council to pledge in April 2021 to create Tree Equity — a first for any city in the U.S. Scores also are being used to educate Congressional leaders about the Climate Stewardship Act, proposed legislation that would result in 100 million new trees in urban areas of the U.S. by 2030, with an emphasis on trees in underserved neighborhoods. It would be the most considerable boost ever to the federal urban forestry program.

Plan

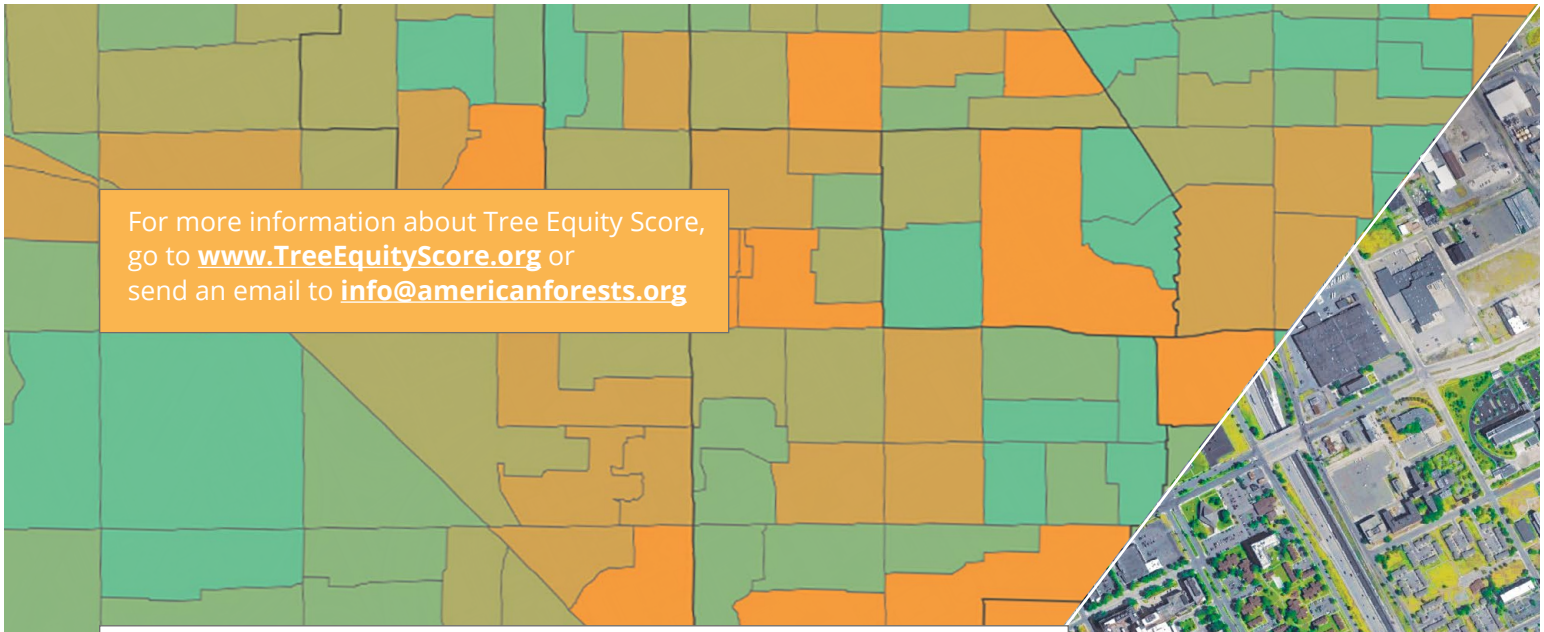
Urban land-use planners and others can use the scores to decide where and how to invest in forestry and infrastructure. The Tucson City Council and Tucson Mayor Regina Romero agreed in April 2021 to adopt the Tucson Tree Equity Score as the primary tool to prioritize investments for the city's urban forestry initiative and infrastructure projects related to stormwater runoff. The Tucson tool is based on the American Forests TES methodology.

Improve

Use the scores to take a fresh look at an existing urban forestry program. Does the program prioritize planting trees in low-scoring neighborhoods? Scores can help track progress related to urban forestry programs and initiatives.

Inspire

The scores can inspire people to work in the urban forestry field, where the need for people to plant, trim and prune trees is expected to grow 10% by 2028.



For more information about Tree Equity Score, go to **www.TreeEquityScore.org** or send an email to **info@americanforests.org**

Resources

TREE EQUITY SCORE

Vibrant Cities Lab
The preeminent online resource for case studies, tools, action guides and other resources related to urban forestry.

Climate and Health Action Guide
A technical resource for how trees can be a pathway to improving public health and slowing climate change.

Urban Forest Climate and Health Menu and Species Selection Guide
This document outlines a process for, and provides a menu of, climate change adaptation strategies that can be used to design projects related to climate, health and urban forestry and select species that optimize climate and public health outcomes. This species selection guide is currently only available for Rhode Island.

Community Assessment & Goal-Setting Tool
For people who are already somewhat familiar with their community's urban forestry programs, this tool helps measure program effectiveness against industry best practices.

Career Pathways Action Guide
An explanation of the 12 best practices for designing inclusive job training programs that help retain diverse talent and support people moving up the career ladder.

Career Exploration Guide
Geared toward high school and post-secondary students, this guide provides a snapshot of the qualifications needed for various urban forestry jobs.

Urban Wood Reuse Action Guide
Using Baltimore as an example, this guide walks you through creating a city program to collect, salvage, make and sell products from urban wood waste.

Urban Forestry Funding Action Guide
To help urban foresters and advocates attract diverse funding to achieve their goals.