

# Neighborhood Street Trees - DRAFT -

2024

## Overview

Street trees are an important force of both environmental, economic, and physical health. Street trees can reduce the impact of health conditions, reduce temperatures and pollution, and generate positive financial externalities.

## Findings

### What is a Neighborhood Street Tree/What is the Urban Forest?

- An urban forest is comprised of: the trees on street and public spaces, the plants in backyards and empty lots, the wooded areas by the side of the road, and any other vegetation growing in the urban space (Providence Neighborhood Planting Program, 2024).
- Over 140 million acres of American forests are located in urban spaces (American Forests).

### What is Tree Equity?

- There is a notable inequality in the placement of green space in the urban environment. Wealthier neighborhoods have not only less pollution but also have more trees (Daley, 2019).
- This can have a cascading effect on the local weather, with temperatures being increased by up to 22 degrees Fahrenheit in areas with low tree coverage (Anderson, Eckert, McMinn, 2019).
- Reduced tree canopy is also tied to further health complications, often tied to exacerbating existing health conditions (Daley, 2019).

### What are the Benefits of Urban Trees?

- Reduced temperatures.
  - Tree cover has shown potential to reduce death from extreme heat by over 20 percent (Daley, 2019).
  - Tree cover can also reduce local temperatures by up to 10 degrees Fahrenheit through shade and the release of water vapor (Arbor Day Foundation).
- Reduced Pollution.
  - American urban forests capture around 822,000 metric tons of pollution a year (Daley, 2019.)
  - Roadside trees can reduce indoor air pollution of nearby spaces by over 50% (Arbor Day Foundation).
- Trees save energy.
  - Trees can reduce air conditioning needs by up to 30% and save up to 50% in energy used for heating (Arbor Day Foundation).
  - Well-placed trees around a home can save between \$100-250 in energy costs a year (Arbor Day Foundation).

- Trees make money.
  - Not only do trees have runoff financial benefits, they also increase property value (Arbor Day Foundation).

## Case Studies

### [The Relationship Between Tree Canopy and Crime Rates Across an Urban-Rural Gradient in the Greater Baltimore Region: Baltimore, Maryland](#)

- This study looked into the relationship between tree coverage and crime rates in Baltimore, finding that a 10% increase in tree canopy correlated to a crime rate reduction of around 12%. Public green spaces had a notably higher magnitude of impact on crime reduction than private green spaces (Troy et al, 2012).

### [Indiana's Street Tree Benefits Summary: Indiana](#)

- Across Indiana, street trees provide around \$79 million of annual economic and environmental benefits. On average, street trees planted in Indiana yield a 1:5.55 return on economic benefits (Davey Resource Group).

## References

American Forests (n.d.). *Tree Equity Score*. <https://www.americanforests.org/tools-research-reports-and-guides/tree-equity-score/>

American Forests (2019, August 7). *What is Urban Forestry? A Quick 101*. <https://www.americanforests.org/blog/what-is-urban-forestry-a-quick-101/>

Anderson, M., Eckert, N., & McMinn, S. (2019, September 4). *Trees Are Key To Fighting Urban Heat — But Cities Keep Losing Them*. NPR. <https://www.npr.org/2019/09/04/755349748/trees-are-key-to-fighting-urban-heat-but-cities-keep-losing-them>

Arbor Day Foundation (n.d.). *Tree Facts*. <https://www.arborday.org/trees/treefacts/>

Daley, J. (2019, September 6). *Let's Commit to Tree Equity in American Cities*. <https://americanforests.medium.com/lets-commit-to-tree-equity-in-american-cities-2994db75b2e6>

Davey Resource Group (n.d.). *Indiana's Street Tree Benefits Summary*. Indiana.gov. <https://www.in.gov/dnr/forestry/files/fo-benefits.pdf>

Providence Neighborhood Planting Program (n.d.). *What is the Urban Forest?* <https://pnpp.org/uf/>

Troy, A., Grove, J. M., & O'Neil-Dunne, J. (2012, June 15). *The relationship between tree canopy and crime rates across an urban-rural gradient in the greater Baltimore region*. Science Direct. <https://www.sciencedirect.com/science/article/abs/pii/S0169204612000977>