

Neighborhood Street Trees

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.

What is a Neighborhood Tree?

- 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).
- Tree canopy can impact 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).

Benefits of Street Trees

- 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).
- 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 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).
- Not only do trees have runoff financial benefits, they also **increase property value** (Arbor Day Foundation).
- Trees may **reduce crime rates**, as areas with higher tree canopy were found to have fewer crimes reported (Troy et. al, 2012).
- Trees are connected to **reduced traffic speeds**, seeing **speed reductions between 3-15 mph** on average (Burden, 2006).

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).

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