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# The Benefits of Tennessee's Urban Forests

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## **URBAN TREE CANOPY**

The average urban tree canopy cover in Tennessee was about 23% (Bridges 2008). Tennessee had about 284 million trees in urban areas (Nowak et al., 2011). However, the urban tree canopy is not evenly distributed. Take Davidson County as an example, urban tree canopy ranged from 8% to 75% in different community planning areas (PlanIT Geo, Inc, 2023).





### CARBON SEQUESTRATION AND CLIMATE CHANGE MITIGATION

Tennessee's urban forests store about 16.9 million tons of carbon and remove about 890,000 tons of carbon per year



(Nowak et al., 2011). In Knoxville, the urban tree canopy's carbon sequestration benefits offset more than 1% of the city-wide greenhouse gas emissions and the number is projected to increase to about 3% by 2050 (Hounshell 2020). As a result, urban forests can help with climate change mitigation.

#### **HEAT MITIGATION AND ENERGY SAVINGS**

Urban forests can provide cooling, mitigate urban heat islands, and reduce energy costs. For example, urban tree canopy cover can help negate daytime heat with up to 1.2°C lower maximum temperature in Knoxville (Ellis et al., 2017). In Tennessee, urban forests help reduce residential energy costs by \$66 million per year (Nowak et al., 2011).

#### **INCREASING PROPERTY VALUES**

Although urban tree canopy cover has not been found as a significant contributor to property values in Tennessee, a study conducted in Lakeland (Bridges et al., 2020) found that a 1.0% increase in tree canopy surrounding the lot resulted in up to 0.2% increase in home sales prices.



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