

# The Detroit News

**DETROIT**

## Detroit's shadiest neighborhoods, tree inequity and its effects

**Hannah Mackay**

The Detroit News

Published 5:58 p.m. ET Aug. 21, 2022

Precious Johnson-Arabitg lives in Pilgrim Village in Detroit, and temperatures in her neighborhood often reach 90 on a summer's day, according to American Forests, a nonprofit dedicated to restoring and protecting forests.

Just 26% of the land area in the blocks surrounding Johnson-Arabitg's home is shaded by tree cover.

This year, Johnson-Arabitg, 39, turned an empty lot near her home, acquired from the Detroit Land Bank Authority by the Lakeridge Village nonprofit, into an orchard.

"In a neighborhood like this in Detroit, I think it's really vital for us to start to find ways to see each other again and to have space to convene publicly," she said. "Not only is that important just in terms of our health, but overall environmental health."

A lack of trees heightens the effects of severe weather such as flooding and heat waves, and is correlated with lower health outcomes and poorer air quality, experts say.

According to Lionel Bradford, president of the Greening of Detroit, a nonprofit dedicated to planting more trees in Detroit, a city its size should be at 40% in terms of tree canopy coverage. The city is currently at 24% and about 400,000 more trees are needed to get to 40%.

Johnson-Arabitg said her neighborhood has seen better days, but she's noticed an uptick in foot traffic around the orchard, which has become a place for neighbors to chat or bring their children.

## **Why do trees matter?**

Robert McDonald, lead scientist for the Nature Conservancy, said tree shade prevents impervious surfaces like pavement and concrete from absorbing energy from the sun and radiating thermal heat.

"Excessive heat ... is a big health problem. Most years, it's the biggest cause of mortality that's weather-related," McDonald said. "People with pre-existing health conditions, often elderly people, who, then the heat makes those conditions worse ... Heat kills because somebody who also has cardiac disease will then have a heart attack or a stroke."

Tree equity is a measure of tree canopy coverage in relation to population density, income, employment status, race, age, temperature and health in a given land area. Maisie Hughes, senior director of urban forestry at American Forests, said tree equity is a more nuanced way to measure where more trees are needed in urban areas.

"It is an often touted statistic, that low-income people of color have economic and health disparities," Hughes said. "But what the tree equity score does is it digs down into the why of it."

Hughes said it is glaringly when a neighborhood lacks trees and that the lack makes it a more arduous place to live.

"Those places don't get as many resources and then that's where you get the disproportionate impacts from climate change," she said. "And that impacts your mental and physical health as well, because you're less likely to walk down a street that doesn't have trees in the summer, you're gonna get less exercise there... and your respiratory illness will increase."

The rate of adult asthma in Detroit is 46% higher than the rest of the state and the rate of asthma-related hospitalizations is four times greater, a Michigan Department of Health & Human Services report found in 2021.

"Trees, filter and sequester pollutants and particulate matters from the air, which will obviously help to reduce asthma events," said Eric Candela, director of American Forests.

There are economic benefits to tree planting, as well, Bradford said. "To me, trees equals jobs. The more trees and plant the more people that we can train and we can place into jobs and maintain those trees."

## **Tree inequity**

Bradford said Detroit lost most of its trees between the 1950s and 1990s to disease, urbanization and neglect.

"The city hasn't had the resources in the past to plant trees ... Most major municipalities, they had that huge forestry department. And the city of Detroit just didn't have the resources to allocate to that," he said. "Now, with this administration, they've taken back a lot of city services."

The growth of suburbs in Oakland and Macomb counties also redirected investment into trees and green spaces away from Detroit, said Christine Carmichael, the founder of Fair Forests Consulting. "A lot of White people moved to the suburbs and reinvested money there, and then there was a very low priority placed on caring for trees in the city itself."

Dimitris Gounaridis, a researcher at the University of Michigan School for Environment and Sustainability, found that most Metro Detroit development between 1985 and 2015 occurred in suburbs and urban sprawl increased around the city.

"New neighborhoods, new suburban homes, also plant trees around their homes to increase their value," Gounaridis said. "You cannot dissect the nice parts of forest with a four-lane road and then build a few trees around your house — that's not the same quality of landscape."

Candela noted there is also a huge correlation between inequity and a lack of trees in most cities. "The patterns that you observe in Detroit are near universal," he said. "There's almost an inverse relationship between tree cover and wealth and race."

The discriminatory lending practice of redlining, carried out by banks, governments and private interest groups in cities across the country from the 1930s to the 1970s, is one well-known example of government policy steering investment away from places where people of color lived, Hughes said.. Formerly redlined neighborhoods still experience fallout from these policies, including a significant lack of trees, researchers have found.

## **Efforts to plant more trees**

Through an initiative called the Detroit tree equity partnership, the city is working with American Forests, the Greening of Detroit, Detroit Future Cities and other stakeholders to plant 75,000 trees in the next five years, Bradford said.

"The initiative will prioritize plantings in areas where the tree canopy is most vulnerable," said Jeremy Thomas, a spokesperson for the Detroit parks and recreation department. "The initiative is also focused on training and creating career opportunities for Detroit residents in the tree care industry."

The Greening of Detroit, founded in 1989 to rebuild the city's tree infrastructure, has worked in tandem with city officials to reforest urban neighborhoods, Bradford said. In recent years, however, the group's tree planting initiatives have been met with resistance from locals. About 25% of residents declined to have trees planted near their homes between 2011 and 2014, according to research published by Carmichael in 2019.

Carmichael said many residents had bad experiences with tree roots breaking pipes and trees that were poorly maintained, causing damage when limbs fell.

The lack of tree diversity leaves Detroit's tree population vulnerable to species-specific insects and diseases, such as the emerald ash borer, which decimated Detroit's ash tree population in the early 2000s, Carmichael said.

Bradford said the Greening of Detroit plants 64 different species of trees. He said they have active community engagement and outreach programs to give residents a say in what goes on in their neighborhoods.

Some 6% of Detroit's land also is dedicated to parks and green spaces, according to Thomas. He said the distribution of parks and greenspaces is highly equitable -- 80% of Detroit residents can walk to a park in 10 minutes or less, and the city aims to increase this to 94% in the next 10 years.

"The city intentionally focuses on access to walkable park spaces versus the overall amount of parks and green spaces so we can ensure equitable access to parks and be most efficient with our available budget," Thomas said in an email. "Residents in low-income communities have 58% more access per person to green space than high-income communities. However, access in black communities is somewhat lower than the overall city median."

Locals like Johnson-Arabitg also have started public gardens and orchards, creating community within their neighborhoods.

"This year, we have six pear trees, four apple trees, some elderberry and we have a blackberry patch. So it's gonna take awhile for all that to really grow and get established," she said. "But I'm really excited because just in getting those trees out there has attracted so much energy. You see people standing, having conversations, bringing their kids, where we didn't usually have that kind of foot traffic in the neighborhood."

*hmackay@detroitnews.com*

*Twitter: @hmackay\_DN*