



# Cool Green Trees

## 2023 YEAR-END REPORT

Our vision: planting trees to mitigate the negative effects of urban heat islands, stormwater runoff, and air pollution to uplift the community, economy, and health of Jefferson County, Alabama.



This years impact could not have been accomplished without collaboration from our advisory council, technical committee, local governments, neighborhood associations, local businesses, and other non-profits and community organizations.



# FORECASTED\* EFFECTS OF 2023 COOL GREEN TREES OVER THE NEXT 20 YEARS

## AIR QUALITY CHANGES

**232 pounds of particulate matter 2.5 removed**

Particulate matter 2.5 is an air particle less than 2.5 micrometers in diameter - 30 times smaller than one strand of hair! PM 2.5 particles include organic chemicals, dust, soot, and metals. Exposure can affect both your lungs and your heart and is linked to asthma, irregular heartbeat, and premature death in people with heart or lung disease.\*\*

**518 pounds of ground-level ozone reduction**

Ground-level ozone (O<sub>3</sub>) formed by chemical reactions between nitrogen oxides and volatile organic compounds in the presence of sunlight, creates 'smog'. Ozone in the air we breathe can harm our health, especially on hot sunny days when ozone can reach unhealthy levels. Even relatively low levels of ozone can cause health risks to people with asthma, children, and older adults. \*\*

**47,941 square feet of expanded tree canopy cover**

Expanding our tree canopy contributes to improved air quality, biodiversity, and climate resilience. Tree canopy offers shade, reduces heat, and enhances the experience of enjoying nature in the city.

## WATER-CYCLE CHANGES



Evapotranspiration of **222,085 gallons of water**

Through evapotranspiration, trees act like a straw, pulling water from the soil and releasing the water vapor through their leaves. The cycle of water moving from the ground into the air cools summer air temperatures.

Avoided stormwater runoff of **48,428 gallons of water**

Avoiding stormwater runoff helps keep our waterways clean from dirt, prevents floods, and protects plants and animals that live in our rivers. Trees act like a sponge, storing water in woody layers and roots. During a drought instead of losing water to evaporation, this stored water makes us more resilient to drought.



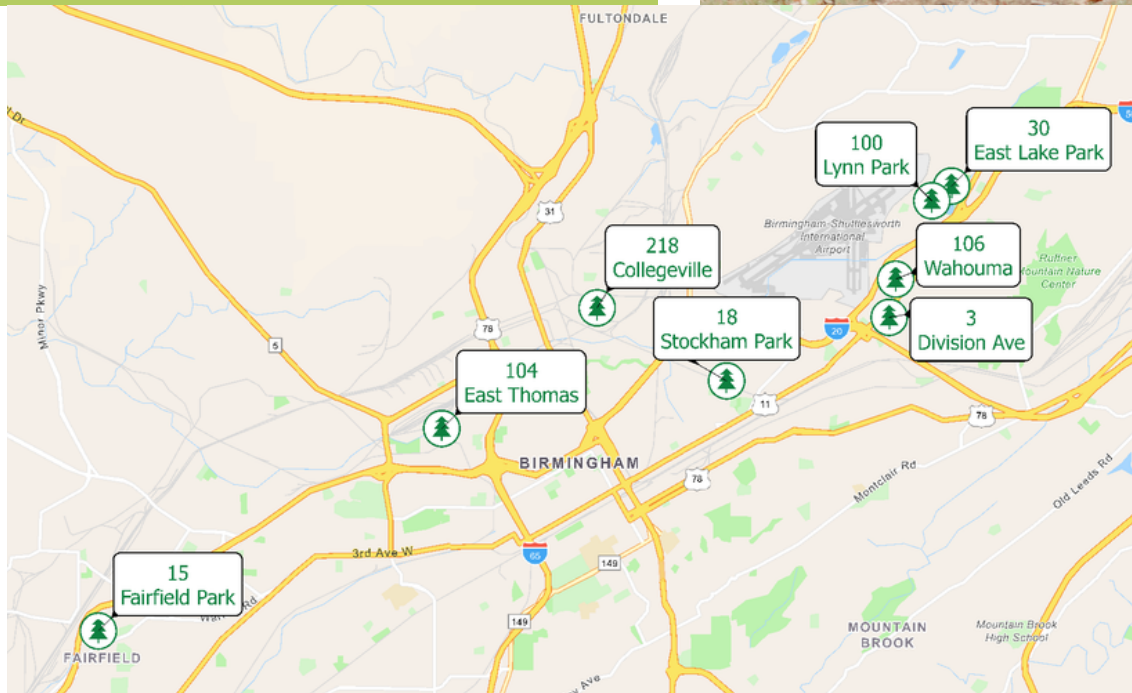
Leaf interception of **840,242 gallons of water**

Trees function like natural umbrellas through leaf interception. When it rains, tree canopies catch raindrops on their leaves, slowing down the water's descent to the ground and reducing the impact of rainfall and flooding on the soil below.

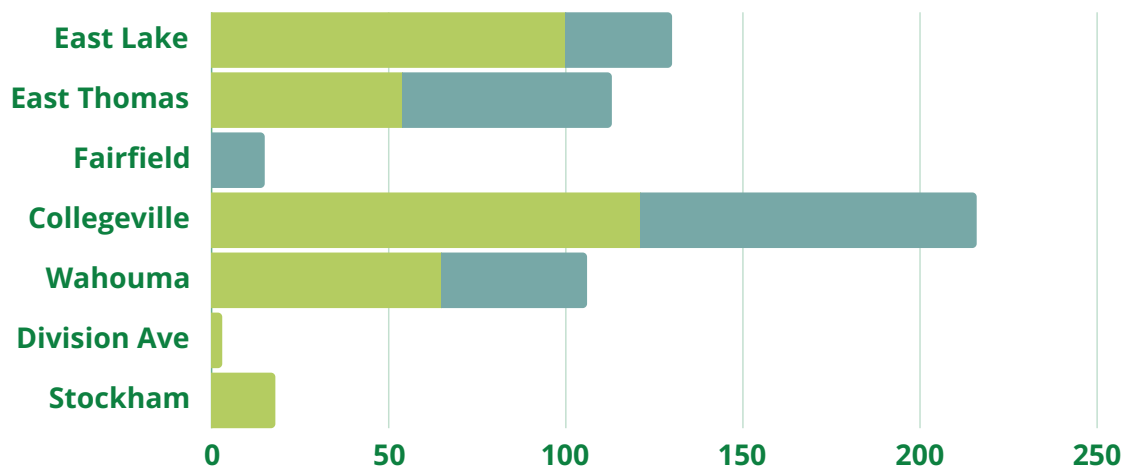
\*Source: USFS i-Tree Eco Forecast \*\* <https://www.epa.gov/report-environment/outdoor-air-quality>



# **TREE PLANTING** **Location & Numbers**



■ Small trees planted by volunteers  
■ 1-2 inch caliper trees planted



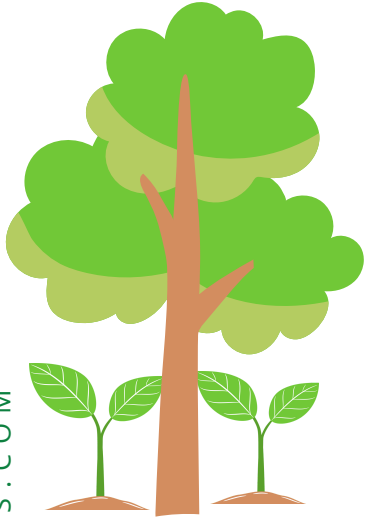
Our main area of focus this year was in the Collegeville Neighborhood. We reforested 4 acres of land in between New Bethel Baptist Church and Maclin Park. 66 neighbors and volunteers helped plant 115 small trees in one day.





## GOALS FOR 2024

### Our tree promise



We received a U.S. Urban and Community Forestry grant in November of 2023. Through this grant, we have promised Jefferson County 400 trees a year for the next 5 years along with creating local green workforce development.

at least  
**400**  
trees to be  
planted in  
2024

We aim to have another successful year full of community events that encourage healthy, thriving green spaces for all to enjoy! A big part of our planning strategy is ensuring we garner trust and provide tree knowledge with the neighborhoods where we work. In 2024, we plan to further those relationships while also expanding our reach to new areas of the county.

Help us nurture the environment by donating or getting involved in upcoming events through our visiting our website. Any action, big or small, brings us one step closer to a greener, healthier future!

## ACKNOWLEDGEMENTS

CGT Advisory Council, CGT Technical Committee, Jefferson County Department of Health, Campfire Woodfuel, Vulcan Materials, Brasfield & Gorrie, East Thomas Neighborhood, Birmingham Veterans Administration- Whole Health Program, Collegeville Neighborhood, Nucor Steel, Councilman J.T. Moore District 4, YouthServe, Wahouma Neighborhood, Birmingham Zoo, Councilman Darrell O'Quinn District 5

