



OFFICE OF
SUSTAINABILITY

Tree Canopy and Neighborhood Cooling

A Comprehensive Update on Urban Heat Mitigation,
Community Collaboration, and Tree Canopy Expansion



WHY IS TREE CANOPY VITAL?

Trees are one of the most powerful tools for city policymakers to improve quality of life and address climate change. While any increase in urban trees helps communities, strategic policy-driven planting and maintenance maximizes benefits and protects our most vulnerable communities.



PROVIDES
SHADE AND
COOLS AIR
TEMPERATURES



DECREASES HEAT-
RELATED AND
RESPIRATORY
ILLNESS/DEATHS



REDUCES STORM-
WATER RUNOFF



IMPROVES AIR
QUALITY



SEQUESTERS
CARBON



PROVIDES
CRITICAL HABITAT
FOR WILDLIFE

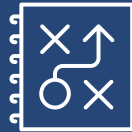


STRATEGIC APPROACH

Using a data-driven approach informed by best practices to reduce the urban heat island effect, the OOS is coordinating across city departments and partnering with community-based organizations to increase tree canopy and mitigate extreme heat impacts, with a priority focus on frontline communities.



MAPPING
EXTREME HEAT
AND FLOOD
INUNDATION



COOLING AND
GREENING
STRATEGIES



CBO LED
INITIATIVE
“COOL THE CITY”



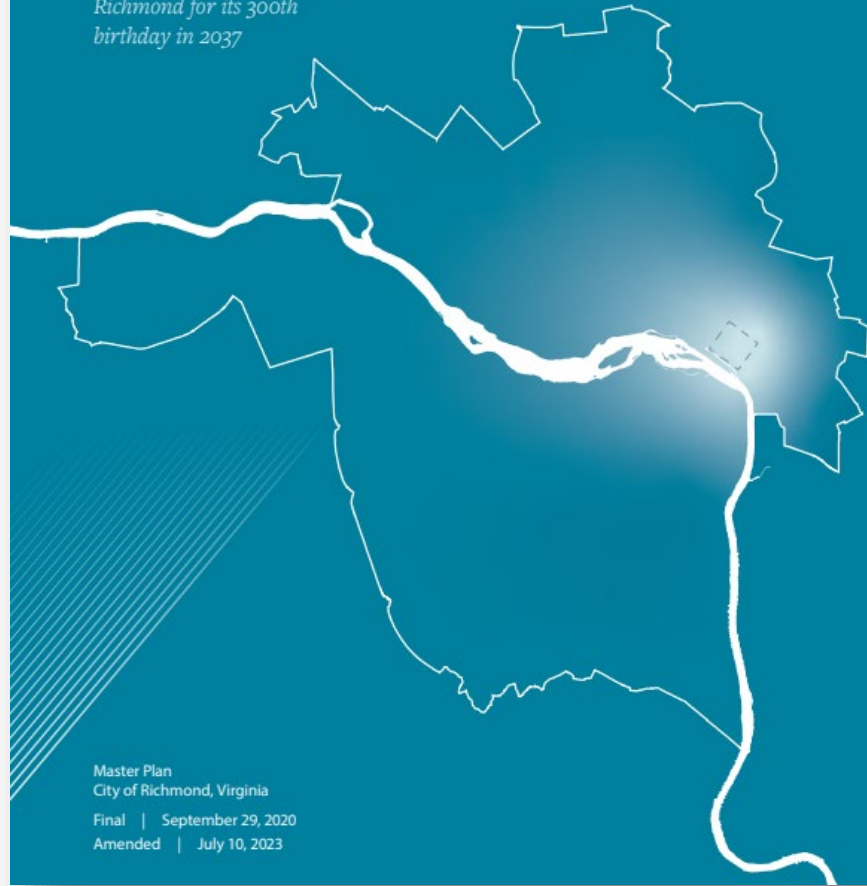
TREE CANOPY
REQUIREMENTS
FOR NEW
DEVELOPMENT



RICHMOND 300

A Guide for Growth

*Designing an equitable,
sustainable, and beautiful
Richmond for its 300th
birthday in 2037*



Master Plan
City of Richmond, Virginia
Final | September 29, 2020
Amended | July 10, 2023



City of Richmond
RVAgreen
2050

Climate Equity Action Plan 2030



*Equitable climate action for a
healthy and resilient Richmond*



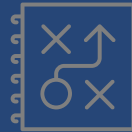
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RICHMOND RESILIENCE ASSESSMENT

The Richmond Resilience Assessment is a comprehensive assessment platform developed to evaluate and address the City's vulnerability to extreme heat and flood inundation. This assessment aims to support Richmond's decision makers by addressing critical questions related to climate change. As the city adapts to today's risks and prepares for the future, this tool ensures that investments and decisions are data-driven and equitable.



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RICHMOND RESILIENCE ASSESSMENT

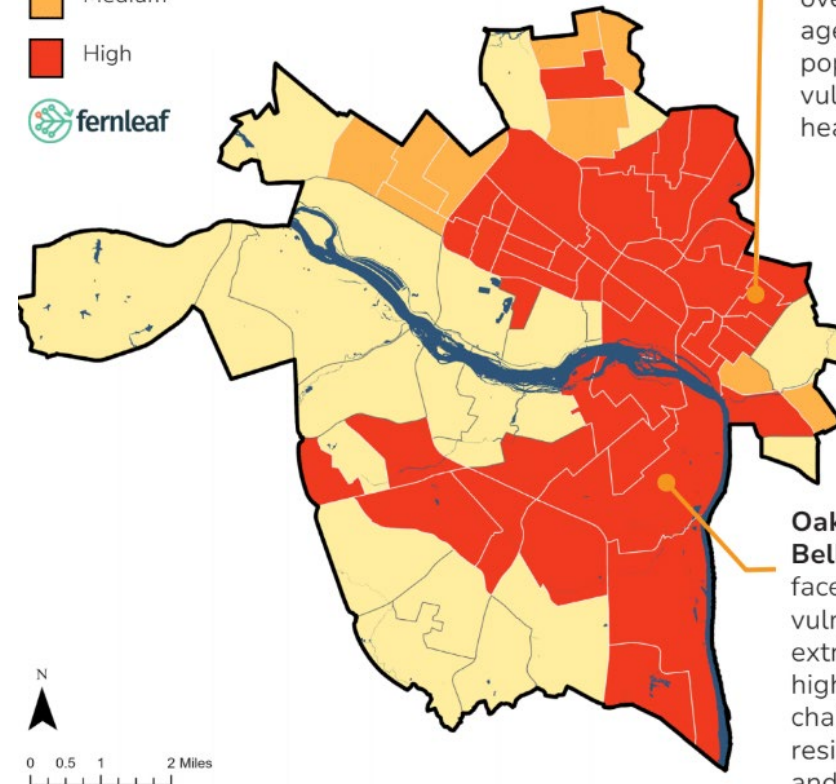
KEY FINDINGS

Vulnerability was assessed by evaluating potential impact and adaptive capacity.

Richmond faces significant heat vulnerability, with the **majority of its census tracts categorized as highly vulnerable.**

This is driven by a combination of high temperatures and extensive impervious surface cover, and limited adaptive capacity.

Extreme Heat Vulnerability



Fairfield is a residential neighborhood with over 30% of residents aged 65 or older, a population particularly vulnerable to extreme heat.

Oak Grove & Bellemeade area faces heightened vulnerability to extreme heat due to high socioeconomic challenges, with most residents being renters and many living below the poverty line.



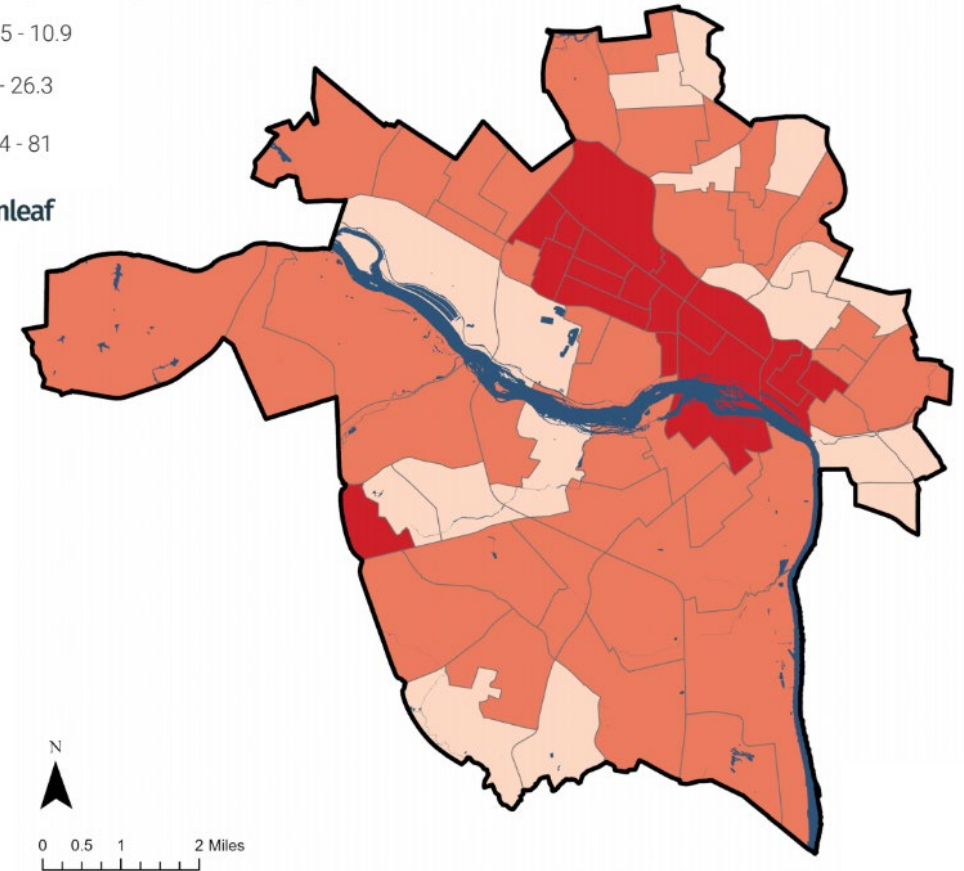
RICHMOND RESILIENCE ASSESSMENT

KEY FINDINGS

Residential properties across Richmond are highly vulnerable to flooding. A total of 10,448 residential properties, **17%** of all properties, are highly vulnerable.

- Many properties are exposed to low-depth flooding.
- 31% of highly vulnerable residential properties are multi-family properties, which may experience greater impacts due to a higher density of residents.

Residential Properties | Flooding
Percentage of Properties Highly Vulnerable

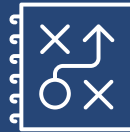


THE RICHMOND COOL BOOK

The Richmond Cool Book lays out 25 cooling strategies proven to reduce temperatures in urban and suburban neighborhoods. These cooling strategies can be applied to both public and private properties.



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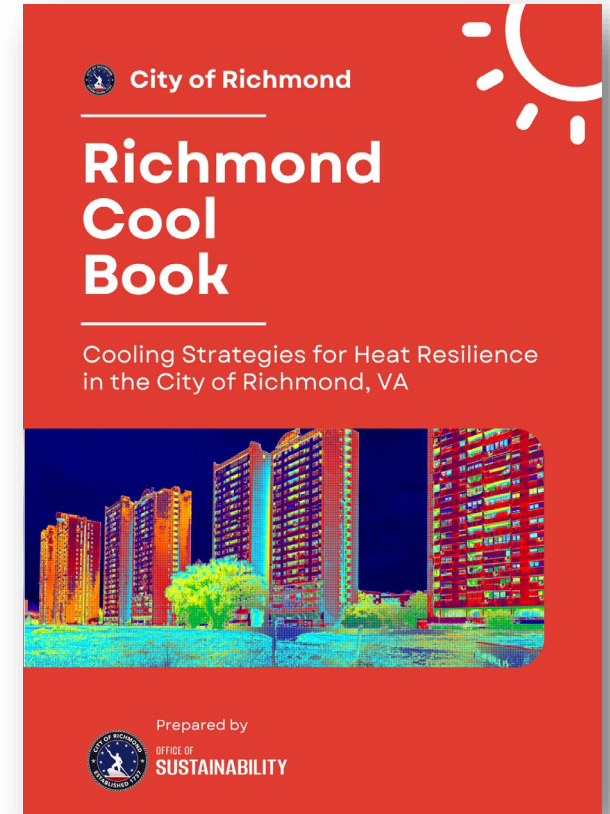
RICHMOND COOL BOOK

VISION

To establish a shared understanding of the causes and impacts of urban heat while outlining **cooling strategies** that reduce temperatures and **promote community resilience** to extreme heat and flooding.

KEY ELEMENTS

- ☐ Urban Greening
- ☐ Shade
- ☐ Smart Surfaces
- ☐ Depaving

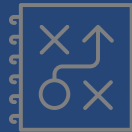


COOL THE CITY

In July 2024, the City of Richmond and four community-based organizations began a five-year collaborative project that invests in greening projects, workforce development, organizational capacity building, and public engagement in neighborhoods that need it most—primarily in the Southside and East End. Through this work, Cool the City will increase the City's tree canopy, lower temperatures, create healthier futures, build community wealth, and foster evergreen change.



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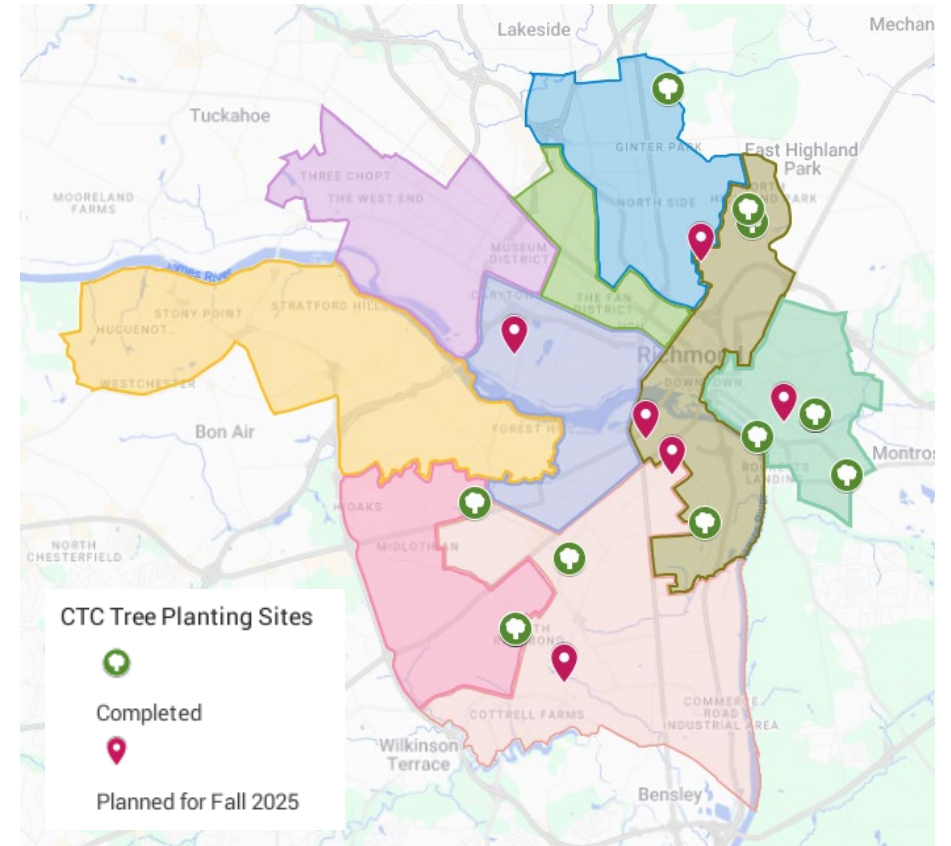
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COOL THE CITY

KEY OUTCOMES: URBAN GREENING PROJECTS

- 750 trees will be planted by PRCF
- 1,000 trees will be planted by CBOs
- 1 food forest
- 5 orchard plantings
- 5 Miyawaki forests
- 1,500+ trees will be given away to residents
- The City's first Urban Forest Master Plan: Richmond Tree Plan



COOL THE CITY

PROGRESS TO DATE

- 177 trees have been planted
- 18 green workforce certificates have been awarded
- 155+ community members engaged through educational and volunteer opportunities

CHALLENGES

- Shifting Federal landscape
- Evolving guidelines due to Trump Administration

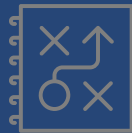


TREE CANOPY REQUIREMENTS FOR NEW DEVELOPMENT

HB 2630 built upon an existing law that allowed localities in Planning District 8 (Northern Virginia) to adopt higher tree canopy replacement percentages and establish tree canopy funds. Passed by Governor Youngkin in March 2025, this bill expanded that authority to all localities in Virginia.



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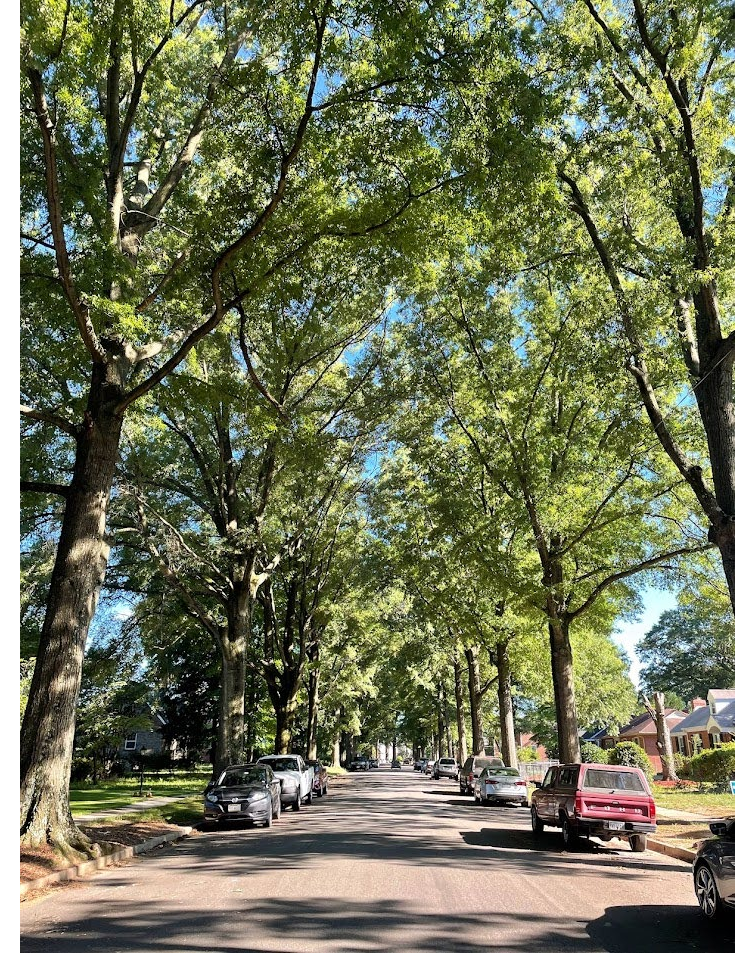
KEY POLICY REQUIREMENTS

Establishes requirements for minimum tree canopy coverage at 20-year maturity.

- Commercial/Industrial: 10%
- Residential: 10-20% depending on number of units per acre
- Mixed-Use: Percentage based on the predominant use of the site

Establishes a tree canopy fund for developments not able to meet onsite requirements.

- Funds to be used to plant and maintain trees on public or private property or;
- Disburse money to non-profits who missions include tree planting, stewardship, or community beautification.





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