



OFFICE OF  
**SUSTAINABILITY**

# **Tree Canopy Minimums**

Zoning Advisory Council

*Tara Worden, AICP*

April 8, 2026

# Urban Trees as Infrastructure

## Heat Island Reduction

Urban tree canopy can lower surface temperatures by 5–10°F. Redlined neighborhoods with less canopy run measurably hotter — directly increasing heat-related illness and mortality.

## Public Health

Residents of tree-lined neighborhoods show lower rates of cardiovascular disease, respiratory illness, stress, and depression. Access to canopy is a health equity issue.

## Stormwater Management

Tree canopy intercepts rainfall before it reaches impervious surfaces, reducing runoff volume. In 2025, Richmond's tree canopy reduced 270.5 million gallons of stormwater runoff.

## Air Quality

Trees filter particulate matter, ozone, and nitrogen dioxide. In 2025, Richmond's urban tree canopy removed 822,000 lbs of air pollution.

## Property Value

Neighborhood tree canopy is consistently associated with higher residential property values across dozens of studies. Trees are a return on investment for developers too.

## Bird & Insect Habitat

Native canopy trees support hundreds of insect species and the birds that depend on them. Oaks alone host 557 caterpillar species critical to migratory bird breeding success (Tallamy).

# Richmond's Urban Tree Canopy Status

**32%**

Citywide canopy coverage in 2021  
(down from **42%** in 2014)

**-199**

Acres of canopy lost  
2014 – 2021

**60%**

Tree Canopy Coverage goal in  
Richmond 300 by 2037

***The City cannot meet this goal without more trees on private land.***

Richmond 300 calls for 60% citywide tree canopy by 2037 — with at least 30% in every neighborhood. In 2021, overall coverage stood at 32% and is on a downward trajectory. Canopy loss is concentrated in the same neighborhoods identified in RVAgreen 2050 as most vulnerable to extreme heat.

# Tree Canopy Minimum Standards are not new

*9 Virginia localities already require tree canopy minimums in their zoning or site plan review.*

Locality	Authority	Since	Commercial Min.	Low-Density Residential Min.
<b>Arlington County</b>	§ 15.2-961.1	2003	10%	20–30%
<b>Ashland</b>	§ 15.2-961	2004	10%	20%
<b>Blacksburg</b>	§ 15.2-961	~1999	10%	20%
<b>Charlottesville</b>	§ 15.2-961	1990 / rewritten 2024	10%	20%
<b>Chesapeake</b>	§ 15.2-961	1997	10%	20%
<b>Fairfax County</b>	§ 15.2-961.1	2009	10%	20–25%
<b>Falls Church</b>	§ 15.2-961 + 15.2-961.3	2023 / expanded 2026	10% (new)	20%
<b>Portsmouth</b>	§ 15.2-961	~2009	10%	20%
<b>Suffolk</b>	§ 15.2-961	~2009	10%	20%

# Policy Spotlight

## City of Falls Church, VA

**Canopy decline:** 46% (2014) → 41% (2021) — lost 10 acres in 7 years

**Residential:** 20% minimum (longstanding)

**Transition Zone (2023):** 10% - but street trees counted, resulting in few trees planted on parcels

**Commercial (Jan 2026):** NEW 10% on-site only, excluding ROW trees - closing the loophole

**Lesson:** How you define 'on-site' canopy - and whether street trees count - determines whether the standard enhances overall tree canopy.

## City of Charlottesville, VA

**Canopy decline:** 45% (2014) → 38% (2023)

**New Development Code Standards (Div. 4.9):** 10% commercial/mixed-use; 15% medium-density; 20% low-density residential

**Key innovation:** Tree removal permit required for any tree >8" DBH citywide — including on private property. Removal triggering canopy drop requires replacement plan.

# Fairfax County: Impact After 12 Years

**2009**

Year adopted — one of Virginia's most active development markets

**80%**

of developed parcels met their canopy requirements in the first decade

**+16%**

average measured canopy exceeded the required minimum

*Source: Virginia Tech / Fairfax County study, Wiseman & Keightley — examining all 7,162 parcels developed 2009–2021*

**Fairfax County's Tree Conservation Ordinance** requires 10% to 25% canopy depending on residential density — measured at *10-year maturity*. Compliance monitoring shows the standard works in a jurisdiction processing thousands of development applications annually.

Fairfax also operates a Tree Preservation and Planting Fund (TPPF) — an in-lieu mechanism that **collects developer fees where on-site compliance is infeasible and deploys them for canopy planting on public land and through nonprofit partners.**

# State Standards Applied in Code Refresh

## Virginia Code § 15.2-961.3

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**20%:** Low-density residential ( $\leq 10$  u/ac)

**15%:** Medium-density residential (10–20 u/ac)

**10%:** Commercial, Industrial, High-density residential (20+ u/ac)

**Measured at 20-year maturity** using published reference texts (e.g. VNLA, VA State Forester, Chesapeake Bay canopy worksheets)

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## Zoning Code Draft Tree Canopy Standards

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**20%:** Residential Detached Low (RD-A)

**18%:** *Preservation incentive*

**15%:** Residential Detached-Medium (RD-B)

**13%:** *Preservation incentive*

**10%:** All other districts

**8% canopy:** *Preservation incentive*

# Draft Policy Approach

## Preservation Incentive Details

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**To qualify for the preservation incentive,** existing trees must be at least 6-inch DBH, free of disease or insect infestation, and not pose a threat to persons or property.

**A tree conservation plan** prepared by an *ISA Certified Arborist* must be provided with measures to protect existing trees during construction.

If existing trees do not meet the canopy minimums, **new trees must be planted to fill in the gap.**

## In-Lieu Fee Tree Canopy Bank

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**To use the in-lieu fee option,** development must demonstrate that meeting the on-site requirement would (one or more):

- 1. Restrict the development intensity** otherwise allowed by the zoning district.
- 2. Option to preserve existing trees on-site** would not meet the standards for health, structural condition, and risk management requirements.
- 3. Construction activities would impact existing trees** or forested areas used to meet the tree canopy requirements to the extent they would not likely survive in a healthy and structurally sound manner for a minimum of 20 years.

# Draft Policy Recommendations

*Peer city research identified these components are important to consider as part of the Development Standards.*

## 1. Define and credit canopy precisely.

Specify that ROW trees do not count toward on-site minimums for commercial lots. Require canopy to be measured on the development parcel itself. (Falls Church lesson.)

## 2. Name reference texts in the ordinance.

Publish an accessible tree maturity reference guide (e.g., VNLA, VA State Forester standards, or Chesapeake Bay 20-year worksheets). State law requires this explicitly.

## 3. Establish the Tree Canopy Fund.

Create the in-lieu mechanism on day one. Direct funds to canopy in high heat-risk, low-canopy neighborhoods, with CBOs as partners eligible for disbursements.

## 4. Prohibit invasive and problem species.

Maintain a staff-updated approved species list that excludes invasive species. Prioritize native, climate-resilient trees appropriate to Richmond.

## 5. Build in an existing tree preservation bonus.

Credit preserved healthy on-site trees at 1.25x or higher canopy value to incentivize retention over removal. (Arlington, Charlottesville, Fairfax all do this.)

## 6. Plan for enforcement mechanism.

Charlottesville's Tree Commission is calling for a second urban forester specifically for code enforcement.



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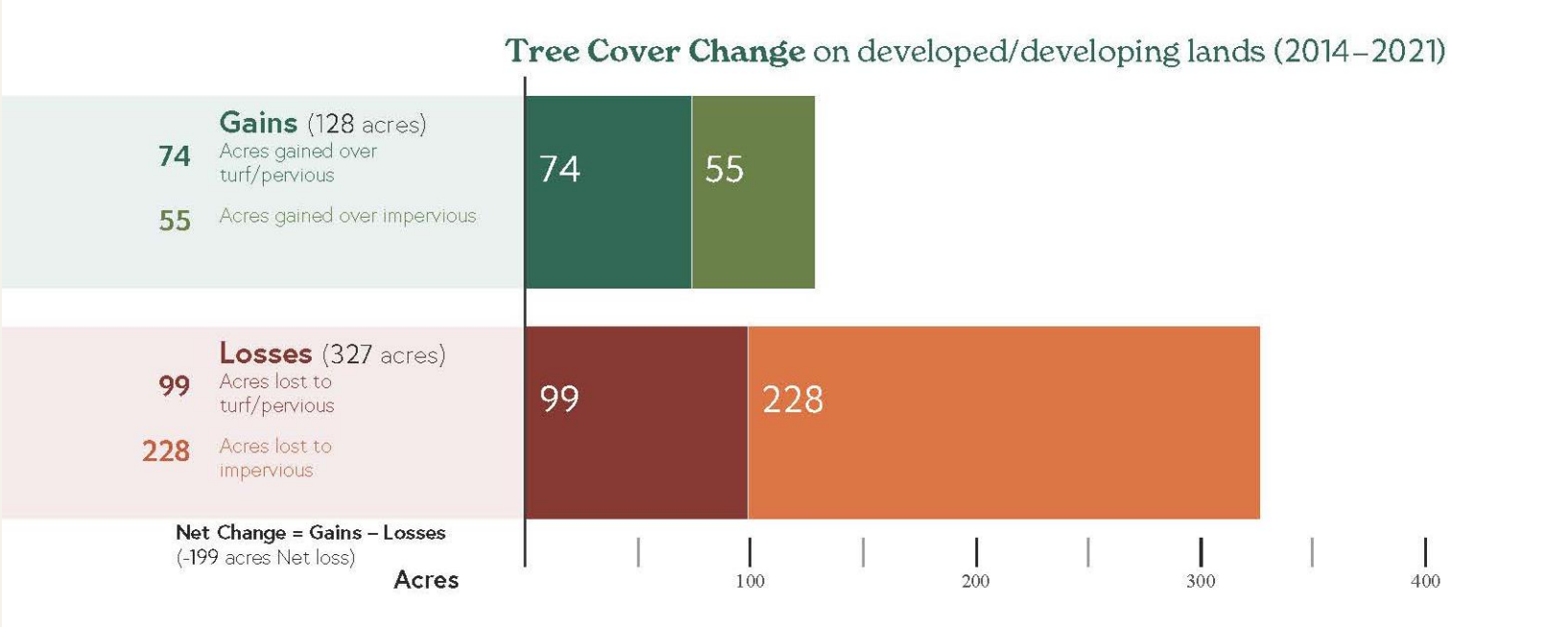
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