

# PRESERVING & EXPANDING TREE CANOPY

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## WHY IT MATTERS

Despite replanting efforts, Virginia continues to lose tree canopy<sup>1</sup> and the benefits trees provide to our environment, economy, and communities. From absorbing carbon emissions to producing the oxygen we breathe, trees sustain us. Trees filter pollutants from air and water, provide habitat, reduce energy use, and cool our landscapes. Trees also intercept rain and absorb water, which in turn reduces stormwater management costs and localized flooding.<sup>2</sup> Tree roots also hold soil in place, reducing erosion and sediment flowing into our creeks, streams, and the Chesapeake Bay. Trees also reduce healthcare costs by clearing the air of pollutants while cooling urban areas, which reduces emergency room visits due to heat-related and respiratory illnesses.

Unfortunately, trees are neither prioritized nor considered early enough in the design process during road construction, new developments, and redevelopments. With more thoughtful design, mature trees could be protected during construction and provide environmental and community benefits for years to come.

Ensuring that tree canopy preservation is considered early in the development process, particularly for dense housing, would ensure a holistic approach to livable communities and prevent the approval of lot line to lot line projects that remove mature trees. While developers are required to replant, the trees being planted today won't mature and provide the same benefits as lost trees for at least 15 years. Meanwhile, local ecosystems are disrupted by the removal of mature trees, and the negative health effects of heat islands are felt by those living in these areas, too often affecting marginalized communities.

## CURRENT LANDSCAPE

Virginia's tree replacement statutes regulate the percentage of canopy that developers must replace when trees are removed during construction. The percentages vary by zoning and the code establishes a maximum (note, not a minimum) percentage canopy that must be achieved in 20 years. For example, for a one-quarter-acre lot of single-family homes, the replacement percentage is 25%, so you'll see a single 2" caliper red maple planted in the front yard. In 20 years it should cover 25% of the lot. These percentages are inadequate to enable localities to achieve their stated goals. For example, the Metro Council of Governments signed a resolution that established a goal of having 50% tree canopy by 2050 in each of its localities.

But "replacement" is too late. Trees are free infrastructure and preserving them should be the priority instead of replacing them. If they are considered early in the design process, mature trees can be protected throughout the construction process. Currently, only localities within Planning District 8 of northern Virginia have the authority to conserve mature tree canopy during construction.<sup>3</sup>

Starting July 1st, 2025, local governments can now establish a tree canopy fund where developers can pay fees if they cannot fully meet on-site tree canopy requirements. The fund can be used to plant trees on public or private property or to provide grants to community-based organizations focused on tree planting, community beautification, and environmental education.

Tree planting in Virginia Department of Transportation (VDOT) rights-of-way offers opportunities to offset heat island effects and mitigate stormwater impacts along roads. However, the cost of doing so can quickly add up to hundreds of dollars per tree over and above the permitting fees, due to the application requirements, as experienced by Fairfax County in 2021, creating a cost-prohibitive situation despite the immense opportunity.

## OPPORTUNITIES

The Virginia Department of Forestry's Virginia Trees for Clean Water grant program<sup>4</sup> provides vital resources for local community tree planting efforts. Ensuring the program is sufficiently funded and expanding it to include maintenance of both young and mature trees would reduce homeowner burdens and preserve healthy trees on private property.

Virginia receives Federal funding for its Urban and Community Forestry program. Cuts at the federal level could mean that Virginia is at risk of losing staff within the Department of Forestry who review and administer grant applications, oversee plantings, and provide technical guidance to local governments.

As Virginia localities approve higher-density residential developments to make housing more attainable, the need to maintain urban trees cannot be underestimated, especially as heat waves and intense rainfall become increasingly frequent.<sup>5</sup> Higher-density development projects should include setbacks for green space, incentivize preservation of mature trees, and reduce road widths to accommodate tree lawns, tree wells, and bioswales.

Localities can update municipal codes to reduce or eliminate parking minimums that too often require large-capacity parking lots in retail shopping devel-

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opments. Creating incentives to depave and reforest parking lots would reduce stormwater runoff and urban heat island effects.

Designs for linear transportation projects, like roads and highways, should prioritize tree preservation and, when tree removal is unavoidable, incorporate robust tree replacement and native landscaping into design and budgeting processes. If replacement minimums are not feasible, the responsible agency should mitigate the loss by paying into the Trees for Clean Water Fund. Planting native tree species and disease-resistant cultivars will reduce maintenance

and maximize canopy potential. Prioritizing the removal of invasive plant species in our right-of-ways will protect the public and remove the seed source that's driving their spread.

Expanding local government authority to conserve trees and establish higher tree canopy replacement minimums are immediate opportunities for reducing tree canopy loss in Virginia. Localities can allocate funds to prioritize historically disinvested areas and known heat islands. Ensuring greenspace equity addresses several social determinants of health and supports a more resilient, healthy community.

## TOP TAKEAWAYS

Prioritizing the preservation of mature trees during the design process of all construction projects (roads, subdivisions, commercial and industrial centers) and adequately protecting their roots during the construction process will reduce stormwater management costs.

Preserving adequate space for trees in higher-density areas, especially when upzoning, ensures affordable and healthy communities.

Losses of federal funding from the U.S. Forest Service to states for their urban and community forestry programs will require Virginia to find new funding streams to continue investing in communities' tree canopy restoration.

## ENDNOTES

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