

REVERSING VIRGINIA'S TREE CANOPY DECLINE

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WHY IT MATTERS

Virginia's trees are cost-effective, essential infrastructure underpinning healthy, climate-resilient communities, providing **ecosystem services** at a fraction of the cost of built infrastructure. Trees absorb carbon, improve air quality, reduce urban heat, and provide habitat for wildlife.¹ Their roots stabilize soil and reduce erosion, while their canopies intercept rainfall and help reduce flooding.² Trees lower stormwater management costs³ and keep pollution out of local waterways and the Chesapeake Bay. Despite replanting efforts, over 50,000 acres of tree canopy were lost to development between 2014 and 2021, reducing the benefits communities depend on.⁴

Tree canopy plays a critical role in public health by reducing heat exposure, improving respiratory health, and lowering energy costs by cooling homes, streets, and public spaces. These benefits are increasingly important as Virginia experiences more frequent heat waves and heavier rainfall events. Communities impacted by environmental racism are often disproportionately affected by the health and economic impacts of lower tree canopy.⁵

For every dollar invested in tree planting and maintenance, an estimated \$2–\$5 is generated in economic, environmental, and public health benefits.⁶

When mature trees are removed, localities lose infrastructure which must either be replaced through expensive engineered solutions or absorbed at higher costs by governments, residents, and businesses. Smaller replacement trees take decades to provide the same benefits. Meanwhile, communities suffer increased stormwater, **heat island** impacts, and loss of ecosystems. Historically underserved neighborhoods with limited green space are often on the frontlines of these impacts.⁷ While housing and tree canopy are often framed as competing priorities, thoughtful planning can support both community growth and the preservation of existing trees.

CURRENT LANDSCAPE

Virginia's approach to expanding and protecting tree canopy combines state forestry programs, local authority, development regulations, and community-based planting initiatives. The **Virginia Department of Forestry (DOF)** supports local governments, nonprofits, and landowners through urban and community forestry assistance, technical expertise, grants, and statewide canopy assessments.⁸ Some localities have adopted tree canopy goals,⁹ recognizing trees' important ecological, community, and public health benefits.

State law authorizes localities to establish tree replacement requirements when tree canopy is removed during development.¹⁰ However, replacement standards vary by zoning category and are generally designed to achieve modest canopy goals rather than preserve existing mature trees. Because mature trees provide more significant ecosystem services than newly planted trees, preservation is more effective and cost-efficient than replacement.

Local authority to preserve trees is inconsistent across Virginia. Northern Virginia's Planning District 8 has broader authority to conserve tree canopy during development,¹¹ however, most local governments must instead rely on tree replacement and voluntary conservation measures to meet tree canopy goals. Localities with tree replacement ordinances allow developers to contribute toward off-site tree planting when on-site requirements cannot be met. In 2026, the General Assembly established slightly higher tree canopy replacement percentages based on density per acre.¹² However, many localities do not have the forestry staff or technical expertise needed to support tree canopy goals.

DOF's Urban and Community Forestry program helps communities expand and manage tree canopy, providing technical assistance and securing millions of dollars in federal and private funding for tree planting projects. Threats to federal funding underscore the need for stable state investment in two critical DOF staff positions and the Trees for Clean Water grant program to support healthy, resilient communities.

OPPORTUNITIES

Based on legislation passed in 2026,¹³ a newly established workgroup, led by the Institute for Coastal Adaptation & Resilience, is examining existing policies and regulations around tree canopy conservation and replacement. Its work—exploring incentives for preserving mature trees, creating consistency across local governments, and finding cost-effective approaches for developers—could lay the groundwork for meaningful, balanced, and equity-focused improvements in future years. Findings are expected to reach the General Assembly by November 2026.

As localities consider increasing housing density to improve affordability, they must also protect and expand urban tree canopy to reduce flooding, extreme heat, and other climate impacts. Localities should encourage tree preservation through development standards that incorporate green space, narrower streets, and green infrastructure, while reducing any unnecessary parking requirements

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and incentivizing the conversion of excess pavement to trees.

Transportation projects should prioritize tree preservation and require robust replacement or mitigation through the Trees for Clean Water Fund when removal is unavoidable. Expanding opportunities to plant native, climate-resilient trees within suitable VDOT rights-of-way and other public lands, can turn underutilized transportation corridors into green infrastructure that improves stormwater management, reduces urban heat, and connects fragmented habitat while minimizing long-term maintenance needs.

DOF's Virginia Trees for Clean Water grant program and Urban and Community Forestry program¹⁴ provide critical opportunities to restore canopy on private property, but they require continued funding. Supporting local tree planting efforts, administering grants, and providing technical guidance to local governments can help reverse canopy loss.

Maintaining and growing Virginia's tree canopy is a critical component of fighting climate change impacts, especially as heat waves and intense rainfall become increasingly frequent.¹⁵ Virginia has the opportunity to better mitigate these impacts, particularly for marginalized communities who are often hit the hardest, through increasing tree canopy.

ENDNOTES

1. *Benefits of Trees and Vegetation*. (2026, May 15). U.S EPA. www.epa.gov/heatislands/benefits-trees-and-vegetation
2. Catrone, V. (2022). *How do trees reduce stormwater and flooding*. PennState Extension. <https://extension.psu.edu/how-do-trees-reduce-stormwater-and-flooding>
3. *Urban Forest Systems and Green Stormwater Infrastructure*. (2020, February). U.S. Department of Agriculture. https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/Urban-Forest-Systems-GSI-FS-1146.pdf
4. Visconti, E. (2025). *Watershed mapping project shows rapid loss of forests, offers new view of Va.'s changing landscapes*. Virginia Mercury. <https://virginiamercury.com/2025/09/29/watershed-mapping-project-shows-rapid-loss-of-forests-offers-new-view-of-va-s-changing-landscapes/>
5. Miller, Naseem S. (2023). *Tree equity and trees' impact on surface temperatures, human health: A research roundup*. The Journalist's Resource. <http://journalistsresource.org/home/tree-health-equity/>
6. *The value of trees*. (n.d.). Arbor Day Foundation. <https://www.arborday.org/value>
7. *Extreme heat & public health*. (n.d.). RVAgreen 2050. <https://www.rvagreen2050.com/extremeheat>
8. *Community Assistance for Urban and Community Forestry*. (2026). Virginia Department of Forestry. dof.virginia.gov/urban-community-forestry/urban-forestry-community-assistance/. Accessed 23 June 2026
9. *Tree Canopy Minimums*. (2026, April 8). City of Richmond Office of Sustainability. <https://rva.gov/sites/default/files/2026-04/Tree%20Canopy%20Minimums%20-%20Office%20of%20Sustainability.pdf>
10. *Replacement of Trees during Development Process in Localities, § 15.2-961.3*. (2024). law.lis.virginia.gov/vacode/title15.2/chapter9/section15.2-961.3/
11. *Introduction to PDCs*. (2025). Virginia Association of Planning District Commissions. <https://www.vapdc.org/introduction-to-pdcs>
12. *Replacement of Trees during Development Process in Localities, § 15.2-961.3*. (2024). law.lis.virginia.gov/vacode/title15.2/chapter9/section15.2-961.3/
13. *Trees; conservation and replacement during development process in certain localities, report: HB549*. (2026). <https://lis.virginia.gov/bill-details/2026/HB549>
14. *Virginia Trees for Clean Water Grant Program*. (2025). Department of Forestry. <https://dof.virginia.gov/urban-community-forestry/urban-forestry-community-assistance/virginia-trees-for-clean-water-grant-program>
15. Hafner, K. (2023). *How will climate change affect Virginia? Massive new report is a window into the future*. VPM News. <https://www.vpm.org/news/2023-11-16/climate-change-affect-virginia-new-report-is-a-window-into-the-future>

TOP TAKEAWAYS

Virginia's tree canopy delivers significant benefits for clean water, climate resilience, public health, wildlife habitat, and local economies, yet the Commonwealth continues to experience a net loss of tree cover.

Expanding local authority to preserve mature trees and strengthening tree canopy funds can deliver greater benefits than replacement planting alone.

Virginia should balance affordable housing goals with tree preservation through policies that expand green infrastructure, protect canopy, and build climate-resilient communities.