INCREASING INVESTMENT IN TREES

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EXECUTIVE SUMMARY

The Chesapeake Bay watershed portions of Virginia replaced 184,665 acres of forest with other land uses between 2014 and 2018; approximately 72 square miles of canopy were lost each year at a time when tree canopy is critically needed to capture stormwater, reduce flooding, create more heat resilient communities, sequester carbon, and lower energy consumption to mitigate the impacts of climate change. Virginia must invest in programs that expand tree canopy and continue updating policies to enable localities to establish conservation and replacement strategies to help them achieve their tree canopy goals.

CHALLENGE

Virginia continues to lose forests and urban tree canopy at an alarming rate due to construction, road expansion, tree removal by homeowners, and poorly sited utility scale solar projects (see GETTING IT RIGHT WITH UTILITY SCALE SOLAR, page 85). Canopy losses negatively impact the quality of life for Virginia residents,[1] particularly Black communities, and biodiversity needed to support wildlife populations.[2,3]

Due to climate change, the mid-Atlantic states will be warmer and wetter.[4] A warmer climate increases the likelihood of short, high-intensity rain events that cause flash flooding, overwhelm existing stormwater management systems, and cause combined sewer overflow (CSOs) systems to discharge untreated sewage into the James and Potomac rivers. Urban trees can reduce stormwater runoff, mitigate the risk of flood, and improve water quality in developed areas.[5] According to the US Forest Service, America's forests sequester 866 million tons of carbon a year, which is roughly 16% of the US annual emissions.[6]

Formerly redlined areas in Richmond that have more heat-absorbing asphalt and less tree canopy were found to be up to 16 degrees Fahrenheit hotter in the summer than the more treed sections of the city. These urban areas that are hotter than outlying areas are referred to as "heat islands."[7] The increased temperatures also correlate to more heat-related emergency room visits.[8] Localities need financial assistance to address urban heat islands and tree canopy inequities.

Localities, many of which have adopted tree canopy goals of 40% or higher, currently don't have the authority to offset tree loss. Legislation intended to grant additional authority to local governments to offset the loss of tree canopy with tree funds and tree banks must be reenacted during the 2023 General Assembly session.

SOLUTION

Fewer trees would be lost during construction activities if DEQ would establish an existing tree canopy that is not deemed forest/open space as a fourth land-use category. Many smaller sites could gain the nutrient reduction credits required if tree planting is adopted as an approved stormwater best management practice (BMP). As a result, developers have no incentive to preserve trees on site and sometimes must remove trees to make room for an approved stormwater BMP. In 2022, a Virginia Department of Environmental Quality (DEQ) stakeholder group reviewed the issue and concluded that they should "continue to study the preservation/conservation of existing tree canopy that is not already deemed forest/open space as a fourth land-cover category" and develop a stormwater credit for new tree plantings.

To replace the loss of trees to road expansion, Virginia Department of Transportation (VDOT) should provide tree planting grants to adjacent localities impacted and/or expand plantings in the VDOT right-of-way. VDOT should include acres of canopy lost to road expansion and mitigation measures in its annual MS4 report.

To offset canopy loss while working towards the goal of no net canopy loss in rural and urban areas, legislators must invest in Department of Forestry (VDOF) Urban and Community Forestry grants and the Trees for Clean Water grants. The Urban and Community Forestry grants help localities address urban heat island effects, conduct tree canopy assessments, and update urban forestry master plans. The Trees for Clean Water grants help localities, faith institutions, civic organizations, and NGOs replace lost canopy by funding tree giveaways, tree planting events, maintenance, and homeowner education.

POLICY RECOMMENDATIONS

Reenact SB537, which would provide additional authority to localities to replace lost canopy.

$4 million per year for Virginia Department of Forestry Trees for Clean Water and $3 million per year for Urban and Community Forestry grants, with 25% of funds prioritized for low-income communities.

Accelerate DEQ's efforts to establish a 4th land cover tree planting to enable developers to preserve trees onsite and receive stormwater credits for trees beyond the minimum required by state code.

Direct VDOT to offset tree canopy losses due to road expansion projects by providing tree planting grants to communities adjacent to construction activities, and to replace lost tree canopy in the VDOT right-of-way.