

PREVENTING POLLUTED STORMWATER RUNOFF

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WHY IT MATTERS

Virginia is facing more frequent high-intensity rainfall events due to climate change¹ and the increasing percentage of impervious surfaces exponentially increases the negative impact on land and water. Developed areas are the fastest-growing source of pollution to our waterways.² Significant development pressures result in the expansion of impervious surfaces – parking lots, roofs, and roads – in suburban and urban areas. Impervious surfaces transport water and pollution rapidly to storm sewers and streams; this rapidly moving runoff erodes streams, harms aquatic ecosystems, and contributes to the decline of streams and the Chesapeake Bay.

Stormwater runoff from sites under construction also contributes large amounts of pollution to Virginia's waters. Construction sites with currently required erosion and sediment control (ESC) measures contribute the highest annual sediment pollution loads per acre of any land use in the Chesapeake Bay watershed³ and Virginia currently permits more than 4,000 construction site discharges across the state under its **Virginia Pollutant Discharge Elimination System (VPDES)**.⁴ Experts have concluded that many sites, even with required ESC measures, will be moderately or extremely “functionally deficient,” in sediment removal efficiency.⁵

Conversion of land from agricultural to urban highly developed and low-density residential land uses is increasing rapidly, with new development from 2017-2022 exceeding totals from the previous 15 years,⁶ thus exacerbating runoff problems.

Managing construction stormwater and post-development runoff with low impact development (LID) methods and wider use of green infrastructure, as opposed to engineered installations, will reduce pollution to our waterways, ameliorate flooding impacts, and be more cost-efficient in the long term. Virginia can implement these solutions through municipal permits (**Municipal Separate Stormwater Systems, MS4**), construction stormwater (**CSW**) permits, and flexible planning and zoning rules.

CURRENT LANDSCAPE

For decades, Virginia has issued VPDES permits for discharges from construction projects.⁷ These permits⁸ require controls to meet **water quality standards (WQS)**. The **Department of Environmental Quality (DEQ)** has yet to require monitoring of discharges or receiving streams to assess whether waters are protected. This data is necessary for proper

enforcement and to enable sound permitting decisions in the future.

Stormwater permits for Virginia's largest localities, called Phase I Municipal Separate Storm Sewer System (MS4) permits, were reissued in 2024 after a significant delay. The related stormwater permits for medium-sized localities (those with populations between 10,000 and 100,000), called Phase II Small MS4s, are covered by a General Permit that was reissued in November 2023. These permits will require an additional 60 percent reduction in nitrogen and phosphorus pollution discharges over the next five years. The current biennial budget did not include any additional stormwater funding to meet these significant obligations. To meet the requirements, the Commonwealth must ensure sufficient and consistent funding of the **Stormwater Local Assistance Fund (SLAF)**, a state and local matching grant program that protects and improves the health of our waterways by funding localities' stormwater projects.

The **Virginia Conservation Assistance Program (VCAP)** helps fund residential-scale stormwater management installations. VCAP reimburses homeowners, homeowner associations (HOAs), businesses, schools, and places of worship to reduce stormwater volume and pollutant loads entering our rivers. Eligible practices include rainwater harvesting, rain gardens, conservation landscaping, permeable pavers, living shorelines, green roofs, and more. Since 2016 the VCAP as administered by the Soil and Water Conservation Districts has protected local waterways by funding thousands of practices across Virginia.

Nearly 25% of Virginians live in HOAs.⁹ Many HOAs restrict opportunities for residents to manage their runoff using native plantings (“conservation landscaping”). These restrictions prevent property owners from reducing stormwater impacts on their properties. Moreover, restrictions on landscaping limit these Virginians from accessing state-funded programs like VCAP.

OPPORTUNITIES

Meeting the stated SLAF needs assessment is critical as Virginia continues to face more frequent and intense storms. The current FY25 needs assessment is approximately \$28M with cumulative needs through FY28 of \$131M. These funds will allow communities to address increased needs as they face more frequent and intense storms.

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VCAP was fully funded at \$4M in the FY25-26 budget. Consistent funding for VCAP, with an emphasis on level funding in 2026, is another important component of managing stormwater.

With almost 25% of Virginians living in a community association, it is also important to ensure that these homeowners have the option to install conservation landscaping on private property to help mitigate runoff. Limitations to the installation of conservation landscaping also limit constituents' ability to access state-sponsored programs such as VCAP.

Sampling of discharges and of receiving waters under the CSW general permit and individual CSW permits is necessary to understand the true impacts of construction activities on water quality.

Funding opportunities are needed for smaller localities (those with fewer than 10,000 residents) that are not subject to MS4 permitting requirements to implement stormwater best management practices. Localities across the Commonwealth rely on state funding to reduce pollution discharges and effectively manage stormwater.

TOP TAKEAWAYS

Developed areas are the fastest-growing source of pollution to our waterways and HOA restrictions too often prevent private property owners from installing “conservation landscaping” to reduce stormwater runoff.

Managing stormwater runoff with low-impact development (LID) methods and green infrastructure is more cost-effective than engineered installations in the long term.

Sustained funding supports the implementation of practices by localities to reduce stormwater runoff.

Richmond Waterfront |
Photo by Isaiah Ramadane

