



HARRISONBURG | VA
FRIENDLY BY NATURE



May 26, 2026, City Council Meeting

Title

Stormwater Program Updates – Keith Thomas, Public Works

Summary

The Public Works Department will present an update on the Stormwater Program. No action is needed by Council.

Recommendation

N/A

Fiscal Impact

N/A

Context & Analysis

Blacks Run and Cooks Creek TMDL

Since the early 2000s, Blacks Run and Cooks Creek had a Total Maximum Daily Load (TMDL), or pollution diet, in place. In 2019 the Virginia Department of Environmental Quality (DEQ) revised the Blacks Run and Cooks Creek TMDL to assign a Waste Load Allocation (WLA) to the City. As part of our MS4 permit, we are required to develop an Action Plan to tell DEQ how we plan to meet the WLA. Pursuant to Part II.B.3 of the MS4 General Permit, the City proposes to implement the TMDL Action Plan in phases over multiple permit cycles using an adaptive iterative approach, with progress tracked annually through the MS4 Annual Report and BMPs adjusted as needed to meet applicable WLAs. Based on Tetra Tech’s 2024 evaluation, full implementation would take over 300 years and is well beyond a practicable timeframe to create an actionable plan with any degree of certainty. The plan developed uses a rolling 15-year schedule with achievable 5-year targets consistent with the Maximum Extent Practicable (MEP) standard. Several practical constraints shaped the proposed implementation timeline. First, stormwater projects in the Shenandoah Valley are more difficult and expensive to build because of karst conditions and shallow bedrock. In recent years, the City has found that these projects can cost between \$83,000 and \$150,000 per pound of phosphorus removed, well above the typical upper range of \$15,000 to \$20,000 per pound considered cost-effective. Second, finding suitable locations for projects in

developed urban areas is challenging because vacant land is limited, often needed for other priorities such as housing, and can be too costly or competitive to acquire.

Harrisonburg City Public Schools Stormwater Agreement

The City of Harrisonburg is required under the General VPDES Permit for Small Municipal Separate Storm Sewer Systems (MS4) to inspect and maintain post-construction stormwater management facilities in satisfactory operational condition. This requirement also applies to Harrisonburg City Public Schools (HCPS) and Harrisonburg Electric Commission (HEC), as they are included under the City’s MS4 permit.

Public Works stormwater staff conduct inspections of all City-owned BMPs, typically from November to January, and also after significant rain events. While Public Works staff handles inspections, the responsibility for completing any necessary maintenance traditionally lies with the respective departments and operators.

| Department/Operator | # of BMPs |
|----------------------------|------------------|
| Public Works | 46 |
| City Schools | 20 |
| Parks and Recreation | 8 |
| Public Utilities | 5 |
| Fire Department | 3 |
| HDPT | 3 |
| HEC | 2 |

In the 2023 – 2028 permit cycle, the Virginia Department of Environmental Quality (DEQ) established new definitions and expectations related to BMP maintenance such that failure to address maintenance items within a specified timeframe identified by Public Works stormwater staff could result in the City becoming non-compliant with our permit. During this transition to the new requirements, it became apparent to staff that the stormwater practices located on Harrisonburg City Public School property would be the most challenging. Most of the BMPs on HCPS property were constructed in the 1990s and early 2000s, and historically these facilities received little to no maintenance. As a result, after 20 to 30 years, many now require major renovation.

HCPS staff have already begun some maintenance activities, but the larger repairs needed for these BMPs are beyond the scope of their typical work. Public Works also identified an opportunity to evaluate whether these repairs could be combined with BMP expansions or upgrades that would help the City meet its local TMDL requirements. For that reason, Public Works recommends assuming responsibility for non-routine BMP maintenance on HCPS property. Under the proposed

Memorandum of Understanding, HCPS would remain responsible for routine maintenance, such as mowing, and would contribute funding toward the City's non-routine maintenance costs. This approach would also allow Public Works to pursue future BMP improvements on school property, where such improvement would not interfere with school operations.

Options

N/A

Attachments

1. Presentation