

Lynchburg, VA

Background

Urban communities throughout the Chesapeake Basin are facing especially difficult and costly financial obligations related to Chesapeake Bay restoration efforts. Though Chesapeake Bay restoration obligations will require significant financial investment from all levels of government, the burden on local communities struggling to address stormwater management will be particularly significant. And, the complexity and costs associated with water quality restoration and protection—primarily as a result of stormwater management—is in direct contrast to the economic and financial capacity limitations within many of these communities.

Lynchburg, Virginia offers an interesting case study in how stormwater management must be integrated into other pressing and expensive infrastructure priorities. Lynchburg is an independent City in the Commonwealth of Virginia, with a 2010 population of 75,568. The City is located in the foothills of the Blue Ridge Mountains and is bounded on one side by the James River. The City is one of three communities in the state with a combined sewer system (CSO), which services approximately six square miles of the 50 square miles within the City limits.

The City has been under a Consent Order since 1994 for their CSO system, and their current Long Term Control Plan focuses on completing separation of the combined sewer system.

The CSO retrofits represent Lynchburg's largest capital program, with over \$180,000,000 spent to date and an estimated \$325,000,000 remaining. The City also operates a regional wastewater treatment plant, which may require up to \$80,000,000 in upgrades. On top of those significant investments, the City estimates that stormwater management costs required to achieve Chesapeake Bay water quality obligations, as well as to meet the City's stormwater permit obligations, will likely exceed \$100,000,000. Given the size of the community, the expected costs associated with water resource protection and restoration is daunting. Using this background as a starting point, the EFC's strategy was to identify ways for the community to reduce its stormwater program costs while at the same time ensuring that investments into stormwater management have the greatest benefit and impact possible.

Approach

The EFC began by assessing the implications of various regulatory issues that were driving the stormwater program in Lynchburg, as well as conducting a thorough assessment of costs and the expected obligations facing the City. This included the costs to meet their Watershed Implementation Plan (WIP) requirements and MS4 permit pollution reduction obligations, as well ongoing operations and maintenance costs.

Next, the EFC assessed Lynchburg's existing capacity to address implementation costs, including an evaluation of how well the City was engaging ratepayers and the private sector. Lynchburg was

HIGHLIGHTS

Location: Virginia

Jurisdiction Type: City

Population: 75,568 (2010)

MS4 Permit: Phase II

Project Period: 2012-2013

Funder: National Fish and Wildlife Foundation

unique among cities in which the EFC has worked in that the City has a highly sophisticated existing program that is innovative, efficient, and effective. While stormwater program managers have budgeted sufficient resources to finance water quality improvements and control measures throughout the existing permit cycle, a recent audit by EPA Region III identified three permit violations related to three of the six minimum control measures. Therefore, the EFC worked to determine ways to remedy any existing shortcomings in the program.

Then, EFC performed an economic impact assessment of the proposed stormwater program, including the construction of capital projects, operations, and maintenance. Finally, the EFC developed recommendations based on the results of the program evaluation and the economic impact assessment.

Key Findings and Recommendations

The expected costs associated with achieving the City's stormwater management obligations do not appear to be as high as previously estimated.

Perhaps the most significant outcome of this study was the development of a much better understanding of the costs associated with implementing stormwater management programs in Lynchburg. Specifically, our analysis indicates that when maximizing for efficiency and performance, and then allocating resources accordingly, the City of Lynchburg is in an ideal position to dramatically reduce the costs of achieving very aspirational stormwater management goals associated with the Chesapeake Bay TMDL and the Watershed Implementation Plans.



Riverfront Park rain garden

Source: [City of Lynchburg](#)

The City's decision to implement a stormwater utility was a major step towards program sustainability. Lynchburg's decision to implement a fee-based stormwater utility was forward thinking and a major step towards program sustainability in the long-term. By ensuring the existence of dedicated and sustainable revenue, the City has positioned itself to take advantage of innovative financing approaches and programs. What is most striking about the City's efforts to establish the fee is how it contrasts with the other two communities that were part of this project study, Anne Arundel County and the City of Baltimore. The debate in Maryland over a state law requiring fee-based stormwater utilities in large urban jurisdictions has been contentious, often visceral, and at many points misinformed. Though the process for establishing the fee in Lynchburg was certainly arduous and at times difficult, the community was self-motivated to establish their enterprise program and as a result have been able to focus their efforts on improving program performance and efficiency. The next step will be to establish processes that effectively engage the private sector thereby reducing risks and implementation costs.

There has been a major shift in how the Commonwealth is addressing MS4 permits. The establishment of the stormwater utility came at a very important time for Lynchburg given the recent focus at the state-level on strengthening stormwater management permits and regulations. In the future, communities like Lynchburg will be required to implement stormwater programs that go beyond

traditional permit requirements, with more of a focus being given to achieving water quality goals. This will require long-term revenue and financing commitments, the basis of which Lynchburg has already established.

There will be significant positive economic impacts in the City related to stormwater investments. Part of the EFC's work on this project consisted of an economic impact study related to stormwater investments. Our analysis indicates that Lynchburg is well positioned to maximize this economic impact in the future. This means that stormwater investments the City makes not only deliver clean water benefits, but will also be an important part of supporting the City's economy.

There are opportunities to leverage the private sector to reduce program costs. Finally, we believe that Lynchburg is in a position to redefine how the City implements its stormwater financing system in the future. Through the use of performance and market-based financing structures the City can ensure that costs stay low without sacrificing program effectiveness. This type of approach will require establishing processes that effectively leverage the unique resources and abilities that the private sector can offer.

For more information, please visit the [MOST Knowledge Center](#).



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