



UNDERSTANDING STORMWATER REGIONALIZATION

WVSA Stormwater Management Strategy

Aging stormwater infrastructure and increasing regulatory obligations are becoming burdensome for municipalities in the Wyoming Valley region. A stormwater authority through Wyoming Valley Sanitary Authority (WVSA) provides opportunities for streamlined regulations, economies of scale, strategic partnerships, and a more equitable distribution of costs among property owners benefiting from stormwater services.

Initially, WVSA will serve as the **MS4 (Municipal Separate Storm Sewer System) Permit Administrator** for municipalities within its service area—providing regulatory support through the following services:

- Preparation of a Regional Chesapeake Bay Pollution Reduction Plan (PRP) and Watershed Based PRPs for submission by municipalities to Department of Environmental Protection (DEP) — (due September 2017).
- Design, implementation and ownership of Best Management Practices (BMPs) outlined in the PRP (implementation of BMPs must be completed by March 2023).
- Operation and maintenance of BMPs installed by WVSA.
- System-wide mapping of separate stormwater infrastructure (including Pollution Control Measures (PCMs) included as part of Appendix A and Appendix C of various MS4 permits held by individual municipalities).
- Completion of all efforts necessary for municipalities to comply with Minimum Control Measures (MCM) #1 (Public Education), #2 (Public Involvement) and #6 (Pollution Prevention/Good House-keeping).
- Completion of mapping activities and regional training for municipal staff related to MCM #3 (Illicit Discharge Detection).
- Development of standard ordinances relative to MCM #5 (Post-Construction Runoff Control).
- Provision of emergency operation and maintenance (O&M) support to municipalities relative to separate storm sewer system operations.
 - Provision of funding to municipalities to support repairs, rehabilitation and replacement of existing stormwater infrastructure, or the implementation of local BMPs (projected to be \$10/year/ERU).
 - Development of two to four regional stormwater parks in the Wyoming Valley.
 - Providing documentation relative to completed BMPs and MCMs for use by municipalities in submitting annual MS4 Status Update Reports.
 - Providing additional guidance to municipalities relative to annual MS4 reporting requirements.

Increasing Regulatory Requirements

As a result of The Chesapeake Bay Agreement of 1983, the United States Environmental Protection Agency (EPA) has mandated the governance of stormwater and reduction of pollutants entering the Chesapeake Bay. The Pennsylvania Department of Environmental Protection (DEP) ensures affected municipalities satisfy these mandates through the imposition of MS4 permits, first issued in 2003. **New requirements of the 2018 MS4 Permit** include the following:

1. Implementation of BMPs by 2023 to reduce sediment pollution from each municipality by 10%, phosphorus by 5% and nitrogen by 3%.
2. Implementation of BMPs by 2023 to reduce pollution in the drainage area of impaired waterways in each municipality.
3. Complete Chesapeake Bay PRP and impaired water pollution reduction planning by September 2017.
4. Complete mapping of stormwater infrastructure for use in developing PRPs.
5. Complete PCM mapping and analysis (related to acid mine drainage and priority organic compounds).
6. Develop adequate staffing and funding to complete the above items while continuing to implement the six MCMs, and submit annual status update reports.

MS4 permits are renewed in five-year cycles. It is assumed that permit requirements will continue to increase in future years and will be supported via WWSA. Current permit requirements are an unfunded mandate, which places significant strains on municipal budgets.

Benefits of Regionalization

Regional stormwater management enables watershed-based planning and implementation: a more holistic solution to stormwater management problems at a fraction of the cost.

- Under a “per municipal” approach to MS4 permit compliance, each municipality would bear the cost of developing their own PRPs and siting BMPs within their municipality—and within the drainage area of impaired waterways, in order to ensure the required pollutant load reductions (10% sediment, 5% phosphorus and 3% nitrogen) are met.
- Under a regional approach in the Wyoming Valley, DEP will accept a single Chesapeake Bay PRP for all 36 municipalities and six watershed-based plans for the region.

If a municipality were to complete PRP and implementation on their own, they are limited to the available land in their municipality and, in many cases, in the drainage area of an impaired stream. A regional plan provides significant flexibility, as the BMPs may be located anywhere within the watershed. This provides the opportunity to site and select BMPs in ways that provide the greatest pollutant reduction at the lowest cost. For example, in the Wyoming Valley, **regional Pollution Reduction Planning results in a reduced number of required BMPs for permit compliance, which cuts the average cost per municipality by more than half.**

The region will experience additional savings as economies of scale are realized via execution of MCMs, and fixed administrative costs are spread over a larger number of property owners. In future years, a regional approach to existing infrastructure operation, maintenance and improvements will yield even more cost savings.

Cost Effective Stormwater Management Solutions

The initial cost for a municipality in the Wyoming Valley to implement the proposed stormwater management program on their own is at least **double**, and in some cases significantly more than the cost of a regional approach. In consideration of stormwater operations, maintenance, and improvement costs during the next 20 years, municipal leaders can save their community more than **1/2** the cost by opting into WVSA's regional approach.

Relying on general tax revenue for stormwater improvements isn't practical for most communities. WVSA's stormwater management fee will provide a steady, dedicated revenue stream for stormwater improvements, allowing municipal leaders to redirect tax revenue for other municipal needs.

Equitable Funding of Stormwater Needs

Stormwater fees charged directly to property owners fairly apportion the cost of stormwater service to properties benefitting from it. Fees are based on a property's impervious area, which better correlates the quantity or quality of stormwater runoff leaving a property, as compared to assessed property value. Fees are charged to all property owners of developed parcels, even tax-exempt users. **Payment of a regional fee to WVSA rather than a local municipality tax is expected to yield 55-75% in cost savings.**

WVSA's stormwater fee billing is expected to begin in the first quarter of 2019. **The fee for an average residential property is estimated to be \$4.80 per month.** Fees will be set through a rate study upon development of impervious area estimates.

Strategic Partnerships

WVSA is partnering with key stakeholders in the region to implement stormwater solutions at a reduced cost. Initial stakeholders include:

- **Luzerne County Flood Prevention Authority (LCFPA)** - Collaborating with the LCFPA to implement BMPs is a strategic opportunity to treat stormwater runoff in a centralized location, and yields significant cost savings compared to implementing small BMPs throughout the municipalities.
- **United States Army Corps of Engineers (USACE)** - WVSA is entering into a partnership with the USACE to provide long-term, multi-year grant financing for technical assistance related to storm sewer mapping, infrastructure analysis, and condition assessment. The partnership includes a 50/50 cost share, enabling the WVSA to perform services at a reduced cost as compared to an independent municipal approach.
- **Pennsylvania Department of Environmental Protection (PADEP)** - PADEP views WVSA's approach to regional stormwater management as a strategic, forward-thinking solution to improve water quality at a fraction of the cost, while reducing the strain placed on individual municipalities. For a municipality to participate in WVSA's regional PRP, PADEP requires executing an Intermunicipal Cooperation Agreement with WVSA and sharing in plan preparation costs (set at \$3,000 per municipality by the WVSA).



Frequently Asked Questions

1. Why is there a new cost for stormwater management?

In the United States, the Environmental Protection Agency (EPA) is charged with regulating stormwater pursuant to the Clean Water Act (CWA). A number of the CWA's stormwater requirements are administered under the Pennsylvania Department of Environmental Protection's (DEP) MS4 (Municipal Separate Storm Sewer System) program. As part of their 2018 MS4 permit, municipalities in the Wyoming Valley are faced with new unfunded mandates, requiring them to spend considerably more money over the five-year permit cycle to improve water quality and all local waterways feeding the Chesapeake Bay.

2. Which aspects of stormwater have to be addressed to meet these new regulations?

Municipalities are required to complete pollutant reduction planning (PRP) and implement Best Management Practices (BMPs) to reduce pollution entering local waterways and eventually the Chesapeake Bay. Over the 2018 MS4 Permit term (2018-2022), municipalities will be required to reduce sediment by 10%, phosphorus by 5% and nitrogen by 3%. In order to complete the PRP, municipalities must have the separate storm sewer systems mapped. Mapping, testing and analysis related to acid mine drainage and priority organic compounds must also be completed.

3. What are Best Management Practices?

BMPs are used to protect water quality, enhance water availability, and reduce flooding potential through effective stormwater management. Examples of structural BMPs include system mapping, wet ponds, constructed wetlands, permeable pavement, riparian buffers, street sweeping and stream restoration.



4. Who is responsible for managing these projects?

Municipalities designated as MS4 permit holders are required to meet all permit requirements, unless delegated to another responsible entity, such as a municipal authority.

5. Why is WVSA involved?

As regulatory requirements and the cost of compliance increase, finding ways to reduce costs through regional collaboration, sharing of resources, and economies of scale becomes essential. WVSA will relieve municipalities of the time and expense relative to:

- Pollution Reduction Planning (PRP)
- Best Management Practices (BMP) implementation, operation and maintenance
- System mapping
- Impervious area development
- Pollution Control Measures (PCMs)
- Minimum Control Measures (MCMs)

WVSA's role as the regional stormwater authority allows the municipalities to garner efficiencies in the use of a trained staff, equipment, and knowledge of how to operate and manage a regional authority. WVSA has a working relationship with the municipalities, DEP, and state legislators. The Authority also has a proven track record for meeting permit limits and implementing large scale capital improvements driven by regulatory requirements. Looking ahead, WVSA may assume an expanded role to meet additional regulatory requirements.

6. How will costs be reduced by undertaking a regional approach to stormwater management?

DEP will streamline regulatory requirements for a regional approach, allowing WVSA to site BMPs over a larger geographical area, which would not be the case for independent municipalities and their pollution reduction planning.

Frequently Asked Questions, *continued...*

This will provide more flexibility for WVSA to site projects on publically available land, and choose BMPs that will provide the most amount of pollutant reduction at the lowest cost.

WVSA will also enable the region to benefit from economies of scale and strategic partnerships with entities such as the Luzerne County Flood Protection Authority (LCFPA) and United States Army Corps of Engineers (USACE). Such partnerships will provide millions of dollars in cost savings to the region over the 2018 permit cycle. [The initial cost for a municipality in the Wyoming Valley to implement the proposed stormwater management program on their own is double, and in some cases significantly more than the cost of a regional approach.](#)

As a municipal authority, WVSA has the opportunity to charge stormwater fees, which is a more equitable way to allocate the growing costs of stormwater management throughout the community.

7. What is all of this going to cost?

All stormwater revenue will be placed into a dedicated fund used only for the operation, maintenance and improvement of stormwater infrastructure. In the first five years of the program, funds will cover estimated costs associated with the following:

- Regulatory compliance (\$25 million)
- Program administration (\$5 million)
- Emergency O&M services for municipalities (\$8 million)
- O&M of installed BMPs (\$1 million)
- Stormwater parks (\$3 million)

8. How will stormwater fees be set?

The fee will be based on the amount of impervious surface on a property (rooftops, parking lots, driveways, etc.) that inhibits infiltration of rainfall into the soil. Single family residential properties will be billed a tiered flat rate, while non-residential properties' bills will be based on the actual amount of impervious surface on their property.

9. Is there a way for property owners to reduce their fee?

WVSA's Stormwater Management Fee Rules and Procedures will allow for credits. Credits are a monthly percent reduction in the stormwater fee for having and maintaining infrastructure that reduces the quantity or improves the quality of stormwater leaving a property.

10. What is the anticipated stormwater fee?

All property owners with impervious surfaces on their property will pay a fee. The amount will differ between residential and non-residential properties. The residential properties will likely be billed a tiered flat rate in which one Equivalent Runoff Unit (ERU) is anticipated to be charged \$4.80 per month. Non-residential properties will pay a multiple of the ERU based on the amount of impervious surface on the property.

11. Why is paying a stormwater fee more equitable than a property tax?

A stormwater fee based upon impervious area is more equitable because properties that create more stormwater runoff pay more, and properties that create less stormwater runoff pay less. Empirical studies show impervious area provides the best correlation of the quantity or quality of runoff leaving a property, as opposed to assessed property value. In addition, all developed properties contribute stormwater runoff and should pay the stormwater fee; however, some properties are exempt from taxes. The general result is an additional savings to residential property owners of roughly 55% - 75% in paying for stormwater management through a fee as opposed to a tax.

12. When can I expect this fee to be enacted?

Billing is expected to occur in the first quarter of 2019.

Acronym Key

BMP	Best Management Practice
CWA	Clean Water Act
DEP	Department of Environmental Protection
EPA	Environmental Protection Agency
ERU	Equivalent Runoff Unit
FPA	Flood Prevention Authority
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
O&M	Operation and Maintenance
PCM	Pollution Control Measure
PRP	Pollutant Reduction Plan
USACE	United States Army Corp of Engineers

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Revised 8/1/18