WVSA WYOMING VALLEY SANITARY AUTHORITY

Providing the highest quality wastewater treatment in a cost-effective, environmentally safe manner.

UNDERSTANDING STORMWATER REGIONALIZATION

WVSA Stormwater Management Vision

Aging stormwater infrastructure and increasing regulatory obligations are placing an increased burden on municipalities in the Wyoming Valley Region. A stormwater authority through WVSA provides opportunities for streamlined regulations, economies of scale, strategic partnerships and a more equitable distribution of costs amongst property owners benefiting from stormwater service.

Initially, WVSA will serve as the **MS4 Permit Administrator** for municipalities within its service area and provide 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 (due September 2017).
- Design, implementation and ownership of Best Management Practices (BMPs) outlined in the PRP (implementation of BMPs must be complete 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 Housekeeping).
- 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 support to municipalities relative to separate storm sewer system operation.
- Provision of funding to municipalities to support repair, rehabilitate and replace existing stormwater infrastructure, or the implementation of local BMPs (currently assumed to be $10/year/ERU).
  - Development of two to four regional stormwater parks in the Wyoming Valley Region.
  - Provide documentation to municipalities relative to BMP implementation of MCMs completed by WVSA for use by the municipalities in submitting annual MS4 Status Update Reports. Provide additional guidance to municipalities relative annual MS4 reporting requirements.

Increasing Regulatory Requirements

As the 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 Municipal Separate Storm Sewer (MS4) permits, first issued in 2003. **New requirements of the 2018 MS4 Permit** include the following:

1. Implementation of Best Management Practices (BMPs) by 2023 to reduce sediment pollution from each municipality by 10%, phosphorus by 5% and nitrogen by 3%.
2. Implementation of BMP's by 2023 to reduce pollution in the drainage area of impaired waterways in each municipality.
3. Complete Chesapeake Bay Pollution Reduction Planning and impaired water pollution reduction planning by September 2017.
4. Complete mapping of stormwater infrastructure for use in developing PRPs.
5. Complete Pollution Control Measure (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 Minimum Control Measures, and submit annual Status Update Reports.

MS4 permits are renewed in five year cycles. It is assumed that requirements of the permit will continue to increase in future years and will be supported via WVSA. Current permit requirements are an unfunded mandate which would place a significant strain 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 pollution reduction plans 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 Wyoming Valley, DEP will accept a single Chesapeake Bay pollution reduction plan for all 36 municipalities and six watershed based plans for the Region.

If a municipality were to complete Pollution Reduction Planning 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 in that the BMPs may be located anywhere within the watershed. This provides the opportunity to site and select BMP's in ways which provide the greatest pollutant reduction for the lowest cost. In the case of the Wyoming Valley Region, **regional Pollution Reduction Planning results in a reduced number of required BMP's 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 in tackling MCM's, 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 Region to implement the proposed stormwater management program on their own is at least **double**, and in some instances significantly more, than the cost of a regional approach. In considering operation, maintenance and improvement costs relative to stormwater over the next 20 years, municipal leaders can save their community over **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 to other needs of their municipality.

Equitable Funding of Stormwater Needs

Stormwater fees charged directly to property owners fairly apportion cost of stormwater service to properties benefitting from the service. Fees are based on a property's impervious area which better correlates to 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. **The result is an additional savings to residential property owners, as high as 57% in WVSA's service area**, when compared to paying for stormwater through taxes.

WVSA anticipates commencing stormwater fee billing in mid- 2018. **The fee for an average residential property is estimated to be $3.00 - $4.50 per month**. Fees will be set through a rate study completed following the 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 (FPA)** - Collaborating with the FPA 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 Amy Corps of Engineers (USACE)** - WVSA is entering into a partnership with the USACE to provide long term, multi-year grant financing in the form of technical assistance related to storm sewer mapping, infrastructure analysis and condition assessment. The partnership includes a 50/50 cost share, enabling the Authority to perform services at a reduced cost than if the municipalities were to do so individually.

- **PA DEP -** DEP sees WVSA's approach to regional stormwater management to be a strategic and forward thinking solution to improve water quality for a fraction of the cost, while reducing the burden placed on individual municipalities. DEP requirements in order for a municipality to participate in WVSA's regional Pollution Reduction Plan include entering into an Intermunicipal Cooperation Agreement with WVSA and sharing in plan preparation costs, set by WVSA to be $3,000 per municipality.

Frequently Asked Questions

1. Why has the importance and cost of stormwater management increased?

In the United States, the Environmental Protection Agency (EPA) is charged with regulating stormwater pursuant to the Clean Water Act (CWA). Portions of the stormwater requirements of the federal CWA are administered under the Pennsylvania Department of Environmental Protection's Municipal Separate Storm Sewer (MS4) Program. As part of their 2018 MS4 permit, municipalities in the Wyoming Valley Region a faced with new unfunded mandates, requiring them to spend considerably more money over the five year permit cycle than ever before to improve water quality, both local streams and the Chesapeake Bay.

2. What 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 to reduce pollution loadings 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. Additional Pollution Control Measures (PCMs) much be completed by thirty municipalities in WVSA's service area relative to mapping, testing and analysis related to acid mine drainage and priority organic compounds.

3. How can the 2018 pollution reduction requirements be met?

Requirements to reduce pollutants are met through Best Management Practices (BMPs). BMPs are used to protect water quality, enhance water availability and reduce flooding potential through effective stormwater management. Examples of structural BMPs include, but are not limited to, wet ponds, constructed wetlands, permeable pavement, riparian buffers, and stream restoration.

4. Who is responsible for undertaking these projects?

Municipalities who are designated as MS4 Permit holders are required to complete all aspects of the permit, 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 vital. WVSA will relieve municipalities of the time and expense relative to:

- Pollution Reduction Planning
- BMP implementation, operation & maintenance
- System mapping
- Impervious area development
- Pollution Control Measure requirements
- Various Minimum Control Measures (refer to WVSA Stormwater Management Vision)

The use of WVSA 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, state legislators and have a proven track record for meeting permit limits and implementing large scale capital improvements driven by regulatory requirements. WVSA may assume an expanded role in the future which includes operation, maintenance and improvements to existing storm sewer systems, along with meeting additional regulatory requirements anticipated in the future

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 than if a municipality were to tackle pollution reduction planning on their own.

Frequently Asked Questions, *continued...*

This will provide more flexibility for WVSA to site projects on publically available land, and chose BMP's which provide the greatest pollutant reduction for 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 and the USACE, which will provide millions of dollars worth of cost savings to the region over the 2018 permit cycle. The initial cost for a municipality in the Wyoming Valley Region 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, based upon benefits received.

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. Over 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 likely be billed a tiered flat rate, while non-residential properties are billed based on the actual amount of impervious surface on their property.

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

Yes. It is the intent that WVSA's Stormwater Management Fee Rules and Procedures will allow for credits. Credits are a monthly percent reduction in the Stormwater Management Fee for having and maintaining infrastructure which 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 billed $3.00 - $4.50 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 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 to 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?

Implementation of billing is expected to occur in mid-2018 to early 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
MS4	Multiple Separate Storm Sewer System
O&M	Operation and Maintenance
PCM	Pollution Control Measure
PRP	Pollutant Reduction Plan
USACE	United Stated Army Corp of Engineers

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