By Pat Devlin, Center for Water Quality Excellence, Land Logics Group

Gearing Up for a Stormwater Fee Program

For boroughs debating how to pay for increased costs in managing stormwater, the needed repairs or replacement of aging infrastructure, or how to meet permit requirements to discharge stormwater from municipal separate storm sewer systems (MS4s), the traditional mix of funding – general tax revenue, grants, and bonds – is just not enough.

For municipalities with an MS4 program, the adoption of a stormwater fee, which is based on the amount of runoff generated by a property, may be a stable funding source.

Though still in its infancy across the state and nation, stormwater fees have been seen as a fair way to raise much needed revenue specifically for municipal stormwater programs.

Stormwater Law

Stormwater fees are sometimes called stormwater utility fees because they are modeled after water and sewer utility service fees.

"Years ago, common law determined that stormwater was the common enemy – everyone has the power to control it," said Susan J. Smith, an attorney in southcentral PA who specializes in municipal planning and environmental and public utility law. "You could even send it to your neighbor's property downstream."

That premise began to change in the early 1960s when the courts found property owners liable if runoff harmed a downhill property.

What was historically called "drainage" and typically related to flooding has since morphed into the term "stormwater," explained Smith.

In response to the impacts of accelerated stormwater runoff from land development, PA enacted the Stormwater Management Act (Act 167) in 1978, requiring counties to have watershed-based stormwater management plans.

Once these plans were approved by the PA Department of Environmental Protection, municipalities had to adopt and implement ordinances to regulate land development consistent with these plans.

Only about half of the counties have complied with the act, according to Smith, but it's still an important tool, especially for municipalities contemplating a stormwater fee to make sure the fee structure is consistent with the local stormwater ordinance.

Following Act 167, municipalities had more authority and responsibility

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to regulate and manage stormwater. Driving changes was pollution affecting the Chesapeake Bay, which led the federal Environmental Protection Agency to beef up the runoff mandate to include water quality controls.

In 2018, communities designated as MS4s faced a new requirement under their National Pollutant Discharge Elimination System permit to reduce sediment within their five-year permit cycle. This was added to previous requirements to address post-construction runoff.

Stormwater Authorities

It became apparent that local governments needed a way to help fund their growing responsibilities in stormwater management.

In 2013, PA amended its Municipality Authorities Act to allow municipalities to create authorities to "finance, acquire, construct, improve, maintain, operate, and oversee stormwater management." A year later, a new law permitted stormwater authorities to impose "reasonable and uniform" stormwater fees.

At least 35 individual municipalities and one regional authority representing 19 municipalities have since adopted stormwater fees.

Stormwater Fees

"We have to remember that stormwater management was largely ignored and misunderstood for a long time," said Sally B. Holbert, a landscape architect with Land Logics Group and manager of the Center for Water Quality Excellence (CWQE). "In the water-rich East Coast states, stormwater was viewed as a nuisance. With no provisions for rate and sound volume control, runoff generated from the built environment ended up causing downstream flooding and eroding stream channels."

Over the past two decades, landscape architects and stormwater managers started to embrace the notion of keeping stormwater close to where it fell, using practices that slowed down and infiltrated rainwater and snow melt. It's called green infrastructure (GI) and includes vegetated swales, rain gardens, and pervious pavement.

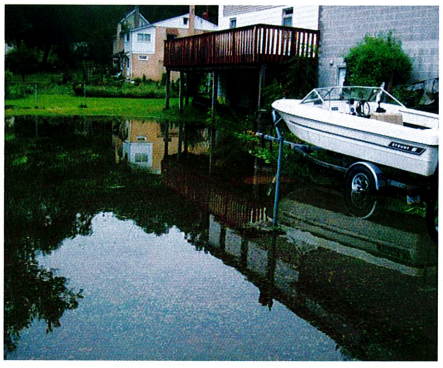
These practices can do more than meet regulatory requirements. They can beautify communities and can create more resilient stream systems that withstand floods better, improving local fishing, enhancing public parks, and protecting sources of drinking water.

ERUs

A stormwater fee is based on a property's contribution to stormwater runoff volumes. The basis for that determination is the amount of a property's impervious cover – hard surfaces like roofs, parking lots, and streets that do not absorb or retain water. The bigger the rooftops, driveways, and parking lots, the more a property owner pays.

Most fee structures start with an equivalent residential unit (ERU) that measures the impervious area from a typical single-family residence. Properties with very little impervious cover may be charged some fraction of an ERU, whereas properties with lots of impervious cover, like shopping malls or industrial facilities, may be charged multiple ERUs.

Considered the most equitable approach by many because of its connection to impervious surface area, a stormwater fee program's revenue helps pay for stormwater planning, public education, installation of green and traditional gray infrastructure, and long-term operations and maintenance.



Aging stormwater infrastructure can lead to serious flooding and road repair issues like this backyard flooding in Felton Borough, York County. Most grant programs do not cover underground stormwater upgrades, making stormwater fees a financially sound community investment.

Getting Started

Because boroughs must utilize a municipal authority to establish a stormwater fee, it is critical to follow the procedures as outlined in the Municipality Authorities Act.

The following are tips offered by Smith from her experience in municipal law:

- Be clear about an authority's purpose and geographic scope.
- Budget all of the costs of forming the authority because authority costs are separate from a municipality's. These costs should include projects for the MS4 permit compliance, along with operation and maintenance, education, inspections, repairs, and reports.
- Provide adequate resources for the start-up and invest time in ensuring the accuracy of billing to reduce the number of fee appeals.
- Inform the public and allow for public participation before adopting an authority or stormwater fee. Be prepared to address misconceptions about stormwater fees and always be transparent about authority operations.
- Be clear when setting up contractual arrangements so there is no confusion over who has the legal power to act.

Mapping

The foundation of every good fee program is impervious land-cover data.

"It's important to have a defensible, data-driven approach to assessing stormwater impact fees," said Emily Mercurio of Civic Mapper, a firm that specializes in geospatial mapping solutions.

Aerial imagery is typically used to develop a land cover classification map in order to estimate the percent of impervious coverage on individual land parcels.

Mercurio cautioned municipalities to limit the number of land-use classes employed to calculate fees. A good land cover classification might have seven or fewer classes.

The best part is that getting solid aerial data can be free. Reputable resources include the PA Emergency Management Agency, National Aerial Imagery Data Program, and state light detection and ranging (LIDAR) data, which can be found at www.pasda.psu.edu.

"You want to work with a geospatial professional who can build the land-cover data sets needed to quantify the percent impervious cover for each parcel in your borough. It's a much more cost-effective way compared to digitizing data," said Mercurio.

After that, the borough would conduct accuracy assessments to fine-

tune its system. Services that offer low-cost, high-quality assessments include the University of Vermont Spatial Analysis Lab and Ecopia.

It can also be highly cost-effective to share the cost of land-cover data analysis with other municipalities.

Aerial imagery is accurate within two feet, Mercurio added. Parcel data, on the other hand, is less accurate and can be 20-30 feet off.

CWQE manager Holbert said that municipalities should have a simple appeal process and make digital impervious cover layers easily accessible to landowners to confirm the impervious area estimate.

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Credit Programs

Any stormwater fee program should include a credit policy. Stormwater credits provide property owners the opportunity to reduce their fee by implementing stormwater management practices on their own properties that reduce runoff or improve water quality.

Credits can be awarded for new and retrofitted stormwater practices and for best management practices (BMPs) previously installed, as long as the practices meet the policy's criteria.

Policies typically offer credits up to 50% for structural practices, educational efforts, and non-structural management practices such as reducing fertilizer use and adopting an annual operations and maintenance program with annual stormwater BMP inspection reporting.

"Some municipalities may think that stormwater credit programs mean they collect less money," said Holbert, "however, participation of larger private properties can help meet your MS4 requirements. If you have limited public land to implement BMPs, credits open the door to incentivize private property owners to consider constructing green infrastructure or retrofit an old, poorly designed stormwater detention basin to improve local water quality. It's a win-win.

A credit policy can help alleviate the initial pushback from the community. It's also educational – it gets people involved and helps them make connections between the built environment and how that impacts our natural systems."

Attorney Smith added, "At the end of the day, credit programs help you meet compliance. That's the purpose of your program. You'll still have money to cover your costs."

Fore more information on stormwater authorities and fees, visit the CWQE at support.cwqe.org. B

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Need Stormwater Help?

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The Center for Water Quality Excellence (CWQE), funded by the PA Investment Infrastructure Authority (PENNVEST) and administered by Land Logics Group, a geospatial and environmental consulting firm, can provide guidance on leveraging available grants and loans, helping local governments select cost-effective stormwater practices, and sharing information on creative financial strategies and local partnerships.

CWQE offers no-cost services at its office in Columbia Borough, Lancaster County, and through its support hub at support.cwqe.org, which hosts a library of searchable, digital resources.

The Columbia office, 430 Walnut St., Suite 303, is open Tuesday, Wednesday, and Thursday from 9 a.m.-5 p.m.; walk-ins are welcome and appointments can be made at 855-227-1202.