Developing a Stormwater Fee to Support Stormwater Management





Stormwater management can be a costly endeavor for municipalities. One way to leverage funding for stormwater improvements is by developing a stormwater fee. This fee charges all parcel-owners, even including tax-exempt parcels, for their contribution to stormwater runoff. Many municipal governments across the Commonwealth and the nation have begun instituting stormwater fees to create a fund for stormwater improvements in their jurisdiction. This document provides a background on stormwater fees, how to implement them, and a list of current stormwater fees in the SPC 10-county region and the Commonwealth.

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Disclaimer: This guide does not in any way replace or supersede any municipal, county, state, or federal regulations or information. Fees and Authorities provided in this guide are for informational purposes only. Additional fees and authorities may be added at a future date, so this list is not all encompassing. June 2020

Background

What is stormwater?

Stormwater runoff is generated when precipitation from rainfall and snowmelt flows over top of the land because it is not able to infiltrate into the ground. Runoff increases in areas with impervious surfaces that do not allow for infiltration, such as paved streets, parking lots, rooftops, driveways, etc. The precipitation that runs off can flow into storm drains that often lead straight into streams, rivers, and lakes. Stormwater runoff can pick up pollutants such as car oil, trash, sediment, fertilizer, dog waste, etc., which degrades water quality.

Water quality is regulated at the federal, state, and local level. The Clean Water Act (CWA) prohibits the discharge of pollutants into waterways without the appropriate permits. These programs are managed under the National Pollutant Discharge and Elimination System (NPDES) by the US Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (DEP). Municipal Separate Storm Sewer System (MS4) permits are required for municipalities that are located in the urbanized area, which is determined by the US. Census Bureau, or if they are designated needing a permit from DEP. See DEP's website https://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater/Pages/default.aspx for more information on permits.

Pennsylvania DEP has determined the water quality standards for waters of the Commonwealth, and requires these standards to be met. Because stormwater can carry pollution, municipalities must manage their stormwater infrastructure such as underground pipes, storm drain catch basins, and outfalls, as well as addressing sources that contribute pollutants to stormwater runoff such as eroding stream banks, illicit discharges, and more.

What is a stormwater fee?

Municipalities are faced with completing various projects to meet MS4 permit requirements and repairs to their aging stormwater infrastructure, both of which can be very costly. Developing a stormwater fee is one avenue a municipality can pursue that will create revenue for reinvestment into the community.

Stormwater fees charge all parcel-owners for their contribution to stormwater runoff. Typically, stormwater fees are calculated with an equivalent residential unit (ERU) that represents the average imperviousness of the average parcel in the community. For example, Brighton Township, PA classifies 1 ERU as 4,700 square feet of imperviousness and charges \$5.50 per ERU, meaning property owners pay \$5.50 per every 4,700 sq. feet of imperviousness on their property per billing cycle. Properties with more impervious surfaces are charged proportionally. See other examples of fee structures in the section below "Implementing a Stormwater Fee".

What is a stormwater authority?

To implement a stormwater fee in Pennsylvania, municipalities (except for second class townships) must establish a stormwater authority in accordance with the Municipal Authorities Act (53 Pa. C.S.A. Chapter 56). Only second class townships can collect a stormwater fee without an authority, although legislation (PA House Bills 913-916 Regular Session 2017-2018) has been introduced to allow fee implementation without creating an authority. An existing water/sewer authority can create a stormwater division to run the stormwater fee program.

Implementing a Stormwater Fee

Stormwater Fee Needs Assessment

Municipalities must first decide if a stormwater fee is the correct way for their municipality to fund stormwater projects. This typically involves a consultant analyzing stormwater budgets and current revenue; utilizing GIS to assess the community and imperviousness; and determining an initial billing rate. The municipality uses this report to determine if they want to move forward with implementing a stormwater fee and what that entails for their specific community.

Elements to consider when assessing whether a stormwater fee would benefit your community:

- What are the existing threats?
 - Water quality impairments (Total Maximum Daily Loads (TMDLs), Pollutant Reduction Plans (PRPs), etc.)
 - Water quantity concerns (flooding)

- Aging infrastructure
- Funding sources/grants will not award money for projects being required for MS4 permits
- · How does a fee factor into your stormwater management plan?
- · What are your short and long term stormwater-related expenses?
 - Capital improvements
 - · Operation and maintenance
 - Specific projects for Pollutant Reduction Plans (PRPs)
- Flooding issues
- · Aging infrastructure
- Hazard mitigation projects

- · Benefits to pursuing a stormwater fee
 - Share burden by how much a property contributes to problem
 - · No one is exempt, unlike taxes
 - Credits can reward positive stormwater management behaviors
 - Provides incentive to reduce impervious surfaces
- Challenges to creating a stormwater fee
 - Stormwater authority may have higher costs
 - · Community may be against stormwater fees
 - · Elected officials may want to control, rather than an authority

- Provides a steady revenue stream solely for stormwater management
- · Allows municipal funds to be spent on other municipal needs
- Under an authority, stormwater debt does not contribute to municipal debt
- Service area of an authority can extend beyond municipal boundaries (regional planning)

Financing Structure and Rate Development

Part of the feasibility study is analyzing how to structure the stormwater fee. There are several fee structures that may work for your community; including but not limited to:

- Equivalent Residential Unit (ERU)
- Tier System
- Intensity of Development (ID)
- Equivalent Hydraulic Area (EHA)
- · Residential Equivalence Factor (REF)
- · Fixed Rate

The most common of these is the Equivalent Residential Unit (ERU). An ERU is calculated for the municipality for single-family residences and then typically used as a multiplier for non-residential properties. An ERU is the average impervious area of a residential parcel. Sometimes this is aggregated across all residential parcels in the community.

Typically, all residential units will be charged the determined fee for 1 ERU. Non-residential properties will be charged based on actual square footage by ERU. For example, if 1 ERU equals 2,000 square feet of imperviousness, and a commercial property has 10,000 square feet of imperviousness, they will pay for 5 ERUs per billing cycle. If the cost per ERU is \$5.00/month, the commercial property will pay \$25/month. To find more information about stormwater fee structures, see EPA's "Funding Stormwater Programs" factsheet or PEC's "Stormwater Fees" booklet.

Stormwater Authority Creation

Once an authority or department is established for the fee, an ordinance or resolution (if a municipal authority) must be adopted to provide the legal authority to collect the fee. This ordinance will lay out all the details of the program including the fee structure, credit options, and appeals.

Create a Billing System

Before sending out the first bills, the municipality or municipal authority must have the correct information for property owners, parcel data, and a system for sending out the bills. There are two main ways to bill: add the stormwater fee onto an existing utility bill or a separate bill for the stormwater fee. It is traditionally easier to add the stormwater fee as a separate line item on an existing bill.

Outreach and Education (Internal and External)

Public education and public meetings are an important part of creating a stormwater fee/authority. Property owners need to know that they will be charged a new fee for stormwater maintenance before the first bill is sent. Having a strong public information program before the fee is implemented to convey the importance of a stormwater fee can help prevent backlash from citizens.

Credit Systems

Most stormwater fee structures include an option for property owners to earn credit towards their stormwater fee by installing green infrastructure on their property. This helps reduce their impervious area that is contributing to stormwater runoff in the first place. Examples of green infrastructure that property owners can install to mitigate stormwater runoff can include rain gardens, pervious pavement, rain barrels, gravel driveways (versus pavement), riparian buffers, etc. Additionally, some municipalities offer grant programs to help residents who may not be able to afford the fee.

Examples of Stormwater Fees

Stormwater Fees in Southwestern Pennsylvania

As of May 2020, thirteen (13) municipalities in the Southwestern Pennsylvania region have implemented stormwater fees. Most municipalities utilized an Equivalent Residential Unit (ERU)-structure for their stormwater fee. ERUs, monthly fees, and credits are described for each municipality in the Table 1. Other municipalities in Southwestern Pennsylvania that are considering a stormwater fee include the <u>City of Pittsburgh</u>, <u>Scott Township</u>, and <u>City of Latrobe</u>.

							Resendential	Non- Resendential	
Municipal Authority	County	Population	Ordinance Number	Date	Type of Fee	ERU square feet of imperviousness	Monthly fee	Monthly fee	Annual Revenue
<u>Coraopolis</u>	Allegheny	5,530 (2017 estimate)	Resolution 18-76 A	1-Jan-19	ERU	1,900	\$7.00	\$7.00/ERU	
Dormont Borough	Allegheny	8,319 (2016 estimate)	Ordinance No. 1609	3-Aug-15	Tier	1,883	Single Family Residence: 1.00/ERU (\$8.00) 2 Family: 1.25/ERU (\$10.00) 3 Family: 1.50/ERU (\$12.00) 4 Family: 1.75/ERU (\$14.00) Rowhouse: 0.50/ERU (\$4.00)	\$8.00/ERU	\$370,000 expected
<u>Findlay</u> <u>Township</u>	Allegheny	5,871 (2018 estimate)	Ordinance No. 429	13-Nov-19	ERU	4,400	\$3.50	\$3.50/ERU	
Fox Chapel Borough	Allegheny	5,274 (2018 estimate)	Ordinance No. 2019-02	1-Mar-19	ERU	8,400	\$12.50	\$12.50/ERU	\$220,000 expected
Moon Township	Allegheny	25,580 (2016 estimate)	Ordinance No. 688	1-Jan-20	ERU	3,800	\$5.50	\$5.50/ERU	
Mount Lebanon	Allegheny	32,475 (2016 estimate)	Ordinance No. 3187	9-Aug-11	ERU	2,500	\$8.00		
<u>Monroeville</u>	Allegheny	27,529 (2018 estimate)	Ordinance No. 2689	9-Oct-18	ERU	2,385	\$10.00		
North Fayette Township	Allegheny	14,545 (2016 estimate)	Ordinance No. 457	11-Jul-18	ERU		\$3.50	\$3.50 + \$1.50/ additional ERU	\$346,000 expected
<u>Plum</u> <u>Borough</u>	Allegheny	27,135 (2018 estimate)		1-Apr-15	ERU	2,500	\$5.00 for single family home \$3.00 for apartment	\$5.00/ERU with max fee of \$50/ month	
Whitehall Borough	Allegheny	13,648 (2016 estimate)	Ordinance No. 1071	19-Nov-14	ERU	2,800	\$8.00		\$650,000 expected
Brighton Township	Beaver	8,369 (2016 estimate)	Ordinance No. 217	10-Dec-18	ERU	4,700	\$5.50	\$5.50/ERU	
White Township	Indiana	15,968 (2016 estimate)	Resolution MA-2-15	1-Jul-16	ERU	3,700	\$2.00	\$2.00/ERU	
New Castle	Lawrence	21,797 (2018 estimate)							
<u>Derry</u> <u>Borough</u>	Westmoreland	2,558 (2017 estimate)			ERU	3,800	\$6.50	\$6.50/ERU	

Table 1. Stormwater Fees in Southwestern Pennsylvania. Compiled by SPC Water Resource Center as of May 2020. Stormwater fees by municipality in Southwestern Pennsylvania. This information was compiled by SPC Water Resource Center through internet research, as of May 2020. It may not represent all current stormwater fees in the region. Consult your municipality for the most up-to-date information.

Other Stormwater Fee Examples in PA

Pennsylvania as a whole has many municipalities who have implemented stormwater fees as a means to fund stormwater management efforts. The Wester Kentucky University documents this in their annual Stormwater Utility Survey. Table 2 below shows examples of other stormwater fees in Pennsylvania, outside of the 10-county SPC region.

Community	County	Type of Fee	ERU (ft2 of imperviousness)	Fee
Allentown	Lehigh	ERU	500	\$10/month
Borough of Carlisle	Cumberland	Tier		- Tier 1: \$10.50/quarter (up to 1,800 sq ft of impervious area) - Tier 2: \$21.00/quarter (1,800 to 3,600 sq ft of impervious area) - Tier 3: \$31.50/quarter (3,600+ sq ft of impervious area)
Borough of Greenville	Mercer	ERU	3,122.83	\$75/ERU/yr
Chambersburg*	Franklin	Sanitary connection	-	\$4.00/connection/yr
Chester	Delaware	ERU	1,139	\$8.25/month
Clarion Borough	Clarion	Tier		Tiers 1-7 – tier number is multiplied by \$3.00/month
<u>Easton</u>	Northampton	ERU	1,797	\$81/year (\$6.75/month)
Ebensburg	Cambria	ERU	2,830	\$8.00/month
<u>Greencastle Borough</u>	Franklin			\$5.36/year for every 100 sq ft of impervious area (only bill 83% of actual imperviousness)
<u>Hampden Township</u>	Cumberland	ERU	3,534	\$4.42/month
<u>Hanover Borough</u>	York	Tier	2,250	1 ERU = \$66.44/year - Tier 1: 0 to 4,208 sq ft = 0.75 ERU - Tier 2: 4,209 to 7,814 sq ft = 1.00 ERU - Tier 3: 7,814+ sq ft = 1.25 ERU
<u>Harrisburg</u>	Dauphin	Tier	1,000	\$74/year
Highspire Borough	Dauphin	Residential/ Commercial		\$7.00/month
Jonestown	Lebanon	ERU	3,100	\$6.67/month
<u>Lancaster</u>	Lancaster	Tier	1,000	\$7.74/month
<u>Lebanon</u>	Lebanon	ERU	1,780	\$60/yr + \$12.56/additional ERU/yr (non-residential)
Lower Allen Township	Dauphin	ERU	3,115	\$19.00/quarter
Lower Paxton Township	Dauphin	ERU	3,400	\$32.00/quarter
<u>Meadville</u>	Crawford	ERU	2,660	\$7.50/month
North Lebanon Township	Lebanon	ERU	3,755	\$3.35/month
<u>Philadelphia</u>	Philadelphia	ERU	1,050 impervious area / 2,100 gross area	\$13.48/month
<u>Radnor Township</u>	Delaware	Tier		\$4.83/month
West Chester	Chester	Tier		Base rate of \$6.70/month per 1000 sq ft of impervious area. See website for tiers.
Wyoming Valley	Luzerne	ERU	1,000	\$5.10/month

table 2. Stormwater fees in Pennsylvania municipalities outside of the SPC region. Data source: Western Kentucky University Stormwater Utility Survey 2019 and municipal websites. *The Borough of Chambersburg charges per sanitary sewer connection currently but is in the process (as of March 2019) of having the fee based upon imperviousness per property.

Examples Outside of PA

The Western Kentucky University Stormwater Utility Survey also catalogs stormwater fees across the country. Here is just a sample of some of these fees in other states.

- Portland, ME fee lookup tool to find rate by address
- Bend, OR fee approved in 2007, create a Stormwater Utility Fee Citizens' Task Force (CTF) to engage public
- Northeast Ohio Regional Sewer District interactive fee finder map
- Takoma Park, MD thorough FAQ

Summary

With increased frequency and intensity of precipitation events, funding for stormwater infrastructure repair and maintenance has become especially important. Stormwater fees are an effective way of raising revenue for these projects. There is plenty of potential for more stormwater fees to be developed in the Commonwealth, as well as accompanying credit systems that encourage increased implementation of stormwater best management practices (BMPs).

Additional Resources

- EPA Region III Funding Stormwater Programs (January 2008)
- SPC WRC Workshop Presentation Stormwater Fees and Multi-Municipal Stormwater Management (March 27-28, 2018)
- Pennsylvania Environmental Council (PEC) Stormwater Fees: Overview of Municipal Stormwater Fee Programs (March 2017)
- HRG Inc Determining if a Stormwater Utility is Right For Your Community (July 2016)
- 3 Rivers Wet Weather Funding Stormwater Solutions
- Western Kentucky University Stormwater Utility Survey (2019)
- NRDC Making It Rain: Effective Stormwater Fees Can Create Jobs, Build Infrastructure, and Drive Investment in Local Communities (April 2018)

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