



LESSONS LEARNED

Townships Share Their Experiences with Stormwater Fees

BY BRENDA WILT / ASSISTANT EDITOR

More and more municipalities are turning to stormwater fees to generate the revenue necessary to comply with federal pollution reduction mandates for runoff. Townships that have taken that step reflect on why they decided on a fee, how they sold the idea to residents, and what they have learned from the experience.

Along with the rising costs of just about everything these days, many municipalities are also facing expensive projects and activities to comply with pollution reduction mandates for local waterways. Townships that have municipal small separate storm sewer systems, or MS4s, especially in the Chesapeake Bay watershed, may need to reduce specific contaminants to meet the requirements of a pollutant reduction plan as part of their five-year permit under the National Pollution Discharge Elimination System.

These actions cost money, of course. This isn't Harry Potter; township officials can't just wave a magic wand and suddenly have a modern, well-functioning storm sewer system discharging filtered runoff into pristine waterways. In addition to the six minimum control measures MS4 communities are required to implement, townships may also need to retrofit stormwater detention basins, reline or replace deteriorating pipes, or complete any number of

Right and adjacent page: Lower Paxton Township in Dauphin County uses revenue generated through a stormwater fee to complete infrastructure projects such as this culvert replacement. (Photos courtesy of the township.)

other activities to remove impurities from runoff before it enters creeks, streams, and rivers.

To address these needs, over the past few years some townships have instituted a stormwater fee that is charged to all properties based on their impervious surface, or areas that do not absorb stormwater, such as roofs, driveways, and parking lots. The *News* talked to some of the townships that have adopted stormwater fees to find out why they decided to go that route, how they got the public on board, and what they have learned from the process that may help other municipalities take the leap.

'A big win for the township'

There are many benefits to adopting a stormwater fee, says Bruce Hulshizer of engineering firm Herbert, Rowland & Grubic, Inc. First, it provides a dedicated revenue stream for stormwater management costs.

"Stormwater management includes more than just infrastructure projects," he says. "It includes annual reports, inspections, administrative and operating costs, and public education and outreach."

Second, having a fund designated for these expenditures means the township won't have to defer maintenance





of stormwater infrastructure, which usually ends up costing more the longer you put it off, Hulshizer says.

Third, a stormwater fee is more equitable than simply increasing the real estate tax. Property tax is based on an assessment of real estate value, which has no connection to impervious surface, while a stormwater fee is based on the amount of runoff a property actually contributes to the stormwater system.

“Assessed residential properties may make up 70% of the property tax collected but only account for 40% of

impervious area in a municipality,” Hulshizer says. “With a stormwater fee, residential property owners typically save 50% to 70% over an additional property tax.”

What’s more, even tax-exempt properties, such as churches, hospitals, and schools, are subject to the stormwater fee based on their impervious area, which can be substantial. With a fee, rather than a tax, the municipality can also offer credits to property owners for installing best management practices to reduce and/or filter runoff.

Lower Paxton Township in Dauphin County decided in April 2018 to impose a stormwater fee to cover the costs of fulfilling its pollutant reduction plan to address sediment, nitrogen, and phosphorus levels in Paxton Creek and the Chesapeake Bay. The township estimated it would need nearly \$1 million in addition to the \$2.6 million it already was spending on stormwater to fund the new MS4 permit requirements, says Sewer Depart-

ment Director Bill Weaver, who set up the stormwater program.

“The township board decided to use a fee, rather than a tax, because the Authorities Act amendment allows an authority to implement the fee, it can be assessed to tax-exempt properties, and the sewer authority is already equipped for billing, rate structures, capital planning, and pipe maintenance and replacement programs,” he says.

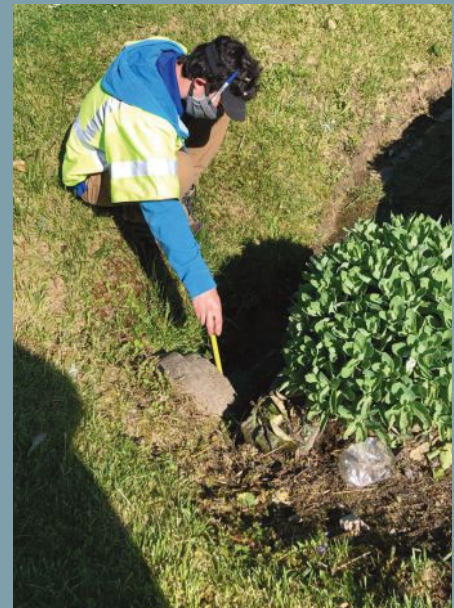
The township amended its existing management agreement with the sewer authority to include stormwater, provides all labor and material, and presents the annual operations and maintenance and capital budgets and proposed rates.

Thanks to the stormwater fee, the township has been able to undertake several stormwater and pollution reduction projects, such as culvert replacements, drainage improvements, detention basin retrofits, and stream restorations.

A stormwater fee also seemed like



In addition to upgrading stormwater facilities, such as this detention pond retrofit (top left) that included installation of a biofiltration system (bottom left), Brighton Township in Beaver County also uses money from its stormwater fee for conducting annual outfall screenings and inspections (below). (Photos courtesy of the township.)



the best option for East Lampeter Township in Lancaster County.

“Ultimately, our board felt that a stormwater utility fee is the most equitable way to generate the dollars needed to comply with MS4 permit requirements, complete required pollution reduction projects to clean local waterways, and maintain and improve the stormwater system,” manager Ralph Hutchison says.

The stormwater system was subsequently transferred to the existing sewer authority, he says, and the township and authority entered into an agreement to have the township complete the billing and fee collection, system operation and maintenance, and pollution reduction projects.

“The authority continues to be a financing body for the sanitary sewer utility and an operating authority for the stormwater utility,” Hutchison says.

Budgeted expenditures for the stormwater fee include staffing, engineering fees, materials and supplies, and costs related to stormwater system inspection and improvement, as well as infrastructure projects.

“Specific stormwater and pollution reduction projects are still in the design and permitting process and have not yet gone to construction,” Hutchison says.

In neighboring Lebanon County, North Lebanon Township reluctantly chose to adopt a stormwater fee, manager Cheri Grumbine says.

“When looking at viable projects that would provide the 10% reduction in total suspended solids required to meet the MS4 mandate, we determined that our cost would be slightly over \$1 million for the five-year permit cycle,” she says. “This is an amount that our general fund budget just could not absorb. The board was very reluctant to go down the path of adding a new fee to our residents, but every avenue we researched came back to this as our only option.”

The township joined five other municipalities in the Lebanon County Stormwater Consortium to prepare a joint pollutant reduction plan and pool their funds to finance projects, she says. The plan lists projects that will help each of the members meet the 10%

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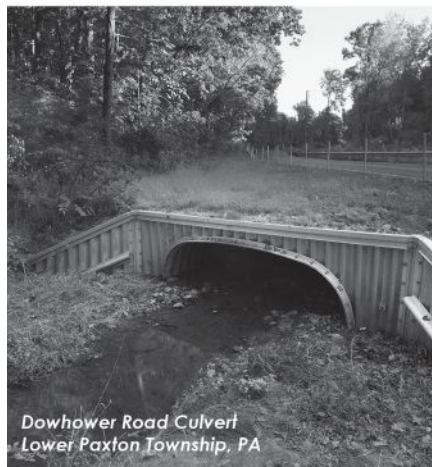
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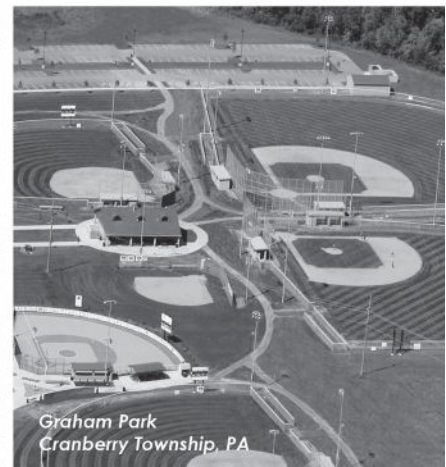
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reduction requirement, plus they can all take credit for projects that are completed anywhere within the consortium communities.

When calculating the stormwater fee, Grumbine says, the township built additional funds into it above the amount needed for the MS4 projects for its own stormwater upgrades.

“Just this year, we spent \$200,000 to reline a small portion of old stormwater pipes that desperately needed improvement,” she says. “Being able to upgrade these aging stormwater structures will continue to be a big win for the township.”

Generating funds to offset the increasing costs of stormwater management also motivated Antrim Township in Franklin County to implement a stormwater fee. This way, all properties contribute to mitigation measures required by the pollutant reduction plan, assistant zoning and code enforcement officer Amber Reasner says.

“The fee correlates directly to stormwater that is generated,” she says. “With the fee, [rather than a tax,] we can establish a credit program and appeal process. This allows the residents to remove impervious area or construct stormwater controls on their properties to get credit or appeal the impervious area calculated for their property.”

Like North Lebanon Township, Antrim does not use a municipal authority to collect the fee and, in fact, has no intention of creating a stormwater authority. In Pennsylvania, townships of the second class may implement a stormwater fee without using an existing or newly created authority.

Reasner says the stormwater fee will be used to fund the \$2.8 million in projects that are required by the township’s pollutant reduction plan, although that 2017 estimate is likely to have increased by now.

Considering a stormwater fee? Here’s how to start

Townships that are considering establishing a stormwater fee may wonder where to begin. Bruce Hulshizer of engineering firm Herbert, Rowland & Grubic, Inc. has helped municipalities get their fee program up and running and says townships should follow these steps to get started:

1) Hire a consultant who has worked with other municipalities to establish stormwater fees. There are a lot of considerations, and it helps to have someone who has already done it to steer you and ensure that you don’t skip any steps.

2) Identify key people (*ideally, one or more township officials*) who will act as advocates for a stormwater fee.

3) Determine how you will gather up-to-date impervious area data. You may want to hire a flight for aerial views. If you go that route, do it in late fall or early spring to avoid leaf and snow cover.

4) Do a stormwater cost analysis that takes into account all stormwater activities and needs. This can be a challenge because many municipalities do not focus on stormwater as a separate budget item. The cost should include projects that have to be done to comply with the MS4 permit, as well as other stormwater needs, such as operation and maintenance of stormwater infrastructure, inspections, reports, and more.

Most municipalities do not have a capital improvement plan for stormwater, and it’s a good idea to develop one as part of the fee implementation. Communities are not used to thinking about millions of dollars when talking about stormwater, though they may have as many miles of stormwater pipes as sanitary sewer pipes. The two should have similar budgets.

5) Consider regional cooperation on stormwater management and pollution reduction. Working with other municipalities, the county, or regional authorities on stormwater projects can benefit from economies of scale and ensure that pollution reduction projects are put where they will work best. This approach also recognizes that watersheds and stormwater needs do not correspond to municipal boundaries.

In western Pennsylvania, Brighton Township in Beaver County also implemented a stormwater service fee to cover the costs of complying with its MS4 requirements.

“It was clear we needed a stable and reliable funding source to cover the costs, including the cost of annual inspection and testing of outfalls and reporting requirements,” manager Bryan Dehart says. “A fee applies to tax-exempt properties also, and the township has a significant amount of tax-exempt value — over 23%. This includes county, school district, and hospital properties, which also have some of the larger impervious areas.

“The township determined the fee was more fair than sole reliance on increased real estate tax levies,” he adds.

Brighton Township does not use

a municipal authority to handle the stormwater fee, instead managing it as a township function. It does outsource the billing, however.

The township has been using the revenue generated from the fee to finance annual inspections and various stormwater projects, including detention pond retrofits to provide for greater filtration of runoff.

Getting the public on board

One of the hurdles that municipalities face when establishing a stormwater fee is getting the public on board with the idea. After all, no one wants another bill to pay.

HRG’s Hulshizer suggests several steps townships can take to help property owners not only accept the new fee but also become supporters of the

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“We tried to present **clear and complete information** throughout the process and answer every question that was asked.”

initiative. From the outset, a municipality should work with a stakeholder advisory committee, he says.

“It should be a cross-section of the community: residential, commercial, and tax-exempt property owners — about 10 to 15 people,” he says.

He suggests holding about a half-dozen meetings to explain the why and how of a stormwater fee and collect feedback from the participants. Over time, they will start to understand that the stormwater system should have been given more attention over the years, and some may become advocates for the program, who can speak at public meetings and help convince others.

Townships should also communi-

cate through every channel available to them, including direct mail, websites, social media, township newsletters, local media, etc., to get the word out. Some townships even send out a mock bill ahead of time so property owners can see exactly what they will be receiving once the fee is implemented.

“That may generate questions that can be answered ahead of time,” he says.

Ideally, this public outreach and sharing of information about stormwater and the township’s responsibility as an MS4 will have been happening for years before the stormwater fee is even considered.

Public meetings are also important for keeping residents informed and explaining the need for a stormwater fee, Hulshizer says.

“You might want to have separate meetings for residential, commercial,

and tax-exempt customers as their questions and concerns may be different,” he says.

East Lampeter Township used all these methods to engage the public before adopting its stormwater fee.

“We created a stakeholders committee made up of individuals representing different land uses to work with our consultant and staff to review our efforts, consider options for the structure of a stormwater utility fee, and make recommendations for the township and authority,” manager Ralph Hutchison says. “We held special public meetings where all of the information developed by the consultant was presented and questions were asked and answered.

“We also requested and received media coverage from the local newspaper and TV station,” he adds. “We tried to present clear and complete information throughout the process and answer every question that was asked.”

Continuing that outreach to property owners is important, too, he says: “As properties are turned over to new owners who are unfamiliar with the stormwater utility fee, we are called upon to educate them as well.”

Antrim Township also held numerous public meetings to discuss the implementation of the stormwater fee, assistant zoning officer Amber Reasner says.

“We accepted public comment at the meetings and also written communication from our residents to express their concerns,” she says. “Due to public comment and concerns, we changed the way that we were calculating the fee. Originally, it was based on an estimated number, and now it is based on actual impervious area of the property. We are also excluding sidewalks from the calculation.”

Getting public support has been an uphill battle, Reasner says.

“Many residents are not happy with the stormwater regulations as a whole,” she says. “Education is important. We take the time to explain why a fee

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needs to be established and what it will be used for.”

Brighton Township started priming the pump for public acceptance of a stormwater fee years before it happened, manager Bryan Dehart says.

“We mail printed newsletters to each household and business three times a year,” he says. “Each newsletter included an article or two on the MS4 program and what the township was doing. It was evident years before the fee implementation that there would be increased costs coming as the requirements by DEP grew greater with each permitting cycle.”

As the township worked through the process of developing the pollutant reduction plan and then the stormwater fee analysis, it reported on them in the print newsletter.

“Obviously, they were discussed and approved at public meetings and in the minutes, but very few people attend the meetings,” Dehart says. “The community was kept aware of the requirements and pending fee possibility [through the newsletter] for two or three years before implementation.

“Each non-residential property that would pay more than one equivalent residential unit was sent a letter explaining the fee and how it would be billed, with a copy of their fee calculation in advance so they could contact us if they had questions. It also permitted them to budget for it the following year.” (See the box on page 28 for an explanation of equivalent residential units.)

Dehart says that the newsletter articles over several years that explained what the township had to do to comply with MS4 requirements and the cost involved helped the public understand the need for the fee. The township also reports in the newsletter on the use of the funds and the projects that they make possible.

Continuing communication is also a big part of Lower Paxton Township’s stormwater fee program, sewer department director Bill Weaver says. The webpage lowerpaxtonatwork.com provides general information about the stormwater fee, as well as photos and progress reports on stormwater projects.

“I recommend regular webpage updates and GIS mapping to show the

public how the money is spent and to answer billing questions,” he says. “We politely direct all customers who call to the webpage first, and if they can’t get all their stormwater questions answered there, they can call us back and we will be happy to answer any questions.”

Lessons learned

No matter how successful implementing a new program might be, there are always lessons to be learned.

Hulshizer says that some communities he’s worked with wish they had done more public outreach before sending out that first bill.

Early on, when Pennsylvania municipalities first began adopting stormwater fees, some implemented their programs without having a credit policy or appeal process in place.

“You need to have them upfront,” he says. “Property owners need to know from the start that there is a way



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to reduce their fee by installing best management practices or appeal their impervious area calculation.”

Hulshizer says it is also helpful to talk about the fee as part of a larger program to manage stormwater, reduce pollution, and improve water quality.

“We have a tendency to focus on pipes, outlets, and other infrastructure,” he says. “That’s the stormwater system. A stormwater management program is more comprehensive.”

Lower Paxton Township’s Weaver says that one thing he wishes they had done differently is have a longer implementation schedule to allow for more staff time to develop the program.

“It took longer than expected due to the size of the township,” he says. “We have over 19,000 parcels, and it also took time to develop multiple policies with the board.”

Weaver says the township also found that stormwater pipe replacement costs have been higher than expected, while project costs for the pollutant reduction plan have been lower because the township has partnered on some with other municipalities and PennDOT.

“Also, many property owners are requesting stormwater improvements since the fee was created, which has meant additional planning and policy documents,” he says.

He suggests that townships network with other municipalities and authorities when developing a fee to get feedback and help create a project list. Also, add plenty of time to the schedule for unforeseen problems.

Weaver also recommends factoring in the cost of a GIS program for asset management and creating maps to inform residents about various aspects of the stormwater fee program.

“We created an impervious surface viewing tool on our webpage for cus-

tomers to enter their address or parcel number to see the impervious surface of their property and how the fee was calculated,” he says.

North Lebanon Township manager Cheri Grumbine says that since the stormwater consortium has been slow out of the gate with projects due to the pandemic, it has been important to keep residents notified about the proposed work and any progress.

“Instead of starting with smaller projects, we probably should have focused on one that was more in public view so they could see the progress and where the money was spent,” she says.

For townships considering a stormwater fee, Grumbine advises setting it so that it covers all the years of the permit so you don’t have to increase the fee.

“We built in credits that would be approved, engineering and legal costs, billing costs, and an annual amount for improvements to stormwater structures owned by the township,” she says. “We did not include any potential grants because this was and still is a big unknown.”

Antrim Township’s Reasner says that implementing a stormwater fee has been a lot of work and not always easy. The township had to set up a new billing software program to include the properties that do not get public water or sewer service. Without an in-house engineer or staff person dedicated exclusively to stormwater, the township has had to work with consultants and DEP to get the program up and running.

“Don’t be afraid to ask questions or think outside the box,” she says. “Educate yourself and others and listen to your residents’ ideas.”

Reasner says above all, townships should recognize that a stormwater fee is not a one-size-fits-all prospect.

“Do what works for your township,” she says. “There are many different dynamics throughout the state. Take the ideas of others and adjust them to make them work for you. Work closely with DEP and bounce ideas off of them before discounting them. They are willing to listen and work with you. We are all in the same boat.” ♦

WHAT ARE ERUS?

Municipalities use impervious cover to calculate stormwater fees

Stormwater fees, rather than being a flat rate, are based on the amount of stormwater runoff that properties contribute to the storm sewer system. Typically, they are calculated using an equivalent residential unit (ERU), which represents the average impervious area (*or surface that does not absorb runoff*) of an average single-family residence in the community.

For example, Brighton Township in Beaver County calculates one ERU as 4,700 square feet of impervious area and charges \$5.50 per ERU. In other words, all residential property owners pay \$5.50 for every 4,700 square feet of impervious area on their property per billing cycle, which works out to \$66 a year. Lower Paxton Township in Dauphin County calculated an ERU of 3,400 square feet and charges property owners \$32 per quarter.

Non-residential properties are charged based on actual square footage. For ease of calculation, if one ERU equals 2,000 square feet and a commercial property has 10,000 square feet of impervious cover, it will pay for five ERUs per billing cycle.

Most stormwater fee structures include an option for property owners to earn credit toward their fee by installing green infrastructure on their property to reduce the amount of impervious area. Examples of green infrastructure include rain gardens, pervious pavement, rain barrels, gravel driveways, swales, and riparian buffers.