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LOCAL STORMWATER UTILITIES, AUTHORITIES, AND FEES

Introduction



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Obtaining the lofty but necessary goals of the federal Clean Water Act, fishable and swimmable water for all, has proved a knotty problem since the law was first passed in the 1970s. Here in the Chesapeake Bay watershed, where clean water objectives have been tightly focused by the Chesapeake Clean Water Blueprint (Total Maximum Daily Load and state Watershed Implementation Plans), the six states, District of Columbia, and the federal government are committed to specific pollution reductions by 2017 and 2025. While certain “point sources” of water pollution, such as wastewater treatment plants and industry, have been improving their performance over time as they obtain new pollution control permits, other point sources, such as polluted runoff from municipal stormwater pipes and outfalls, still face significant challenges. And it’s not only pollution: runoff can also regularly cause local flooding problems, which cost residents and businesses time and money to remedy.

Engineered solutions are relatively easy for wastewater and industrial plants, but not always cheap: treat or modify the inputs, improve the process flows, and better treat the regular outflow from a few discrete pipes. But dealing with land-based, urban/suburban sources of pollution is a lot harder, given the natural variability of precipitation and the extensiveness of existing municipal storm sewer systems: houses and driveways, businesses and parking lots, curbs, gutters, street inlets, underground pipes, and hundreds, sometimes thousands, of outfalls to streams. State and federal clean-water permits for municipalities’ polluted runoff are increasingly stringent, however, as they seek solutions to pollution that will take significant resources to implement.

That sometimes leaves local governments on the hook. For example, under their new municipal permits, communities must develop and staff programs to look for and fix illicit discharges to their systems and retrofit facilities like municipal parking lots and streets.

Best Practices in this Guide

- ✓ **Clear public education and outreach**
- ✓ **Tips for fair local ordinances, state statutes;**
- ✓ **Setting budgets and fees; innovative financing**
- ✓ **Putting the best projects on the ground**

Drainage from these hardened surfaces, polluted by lawn fertilizers and herbicides, animal waste, and toxic chemicals from cars and trucks, has historically been directed straight into the nearest stream, unimpeded and untreated.

The good news is that there are ready solutions to many of these local water pollution and flooding problems. This document outlines best practices regarding structuring and implementing local funding mechanisms to address stormwater challenges.

Local *stormwater utilities, authorities, or fee systems* are leading funding mechanisms to pay for such activities at the local level. Such systems are sustainable and adaptable (as opposed to dependence upon general purpose funds obtained from regular tax revenue in local budgets), and allow for the development of a long-term program. According to one annual academic survey, as of 2013 there were likely well more than 1,400 local stormwater utilities in 39 states.¹

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Public Education and Outreach

Clear public messaging about the need for a utility, and accurate, effective public information provided before and during local public deliberation, is essential. As a local utility or stormwater fee ordinance is



Ivo Shandok, Creative Commons

being contemplated, it is crucial that the public be educated about the problems which a program is intended to address, and steadily be “brought along” into a broad public understanding about both the need and the solution: a consistent funding source that feeds a *locally-run* utility or system to help clean up *local* streams and reduce *local* flooding problems. More green-space, street trees, and gardens; streets and basements unburdened by regular flooding; and sparkling local streams, are to everyone’s significant economic and social benefit. Because most municipal citizens pay for clean drinking water and sewer service, similar logic should apply to cleaning up this other polluted wastewater, urban/suburban runoff, which

continues to plague our local rivers and streams, as well as it floods our streets, basements, and backyards. But citizens need to understand the problems and available solutions before they can be asked to “kick in” to help fund them.

¹ C. Warren Campbell, Western Kentucky University, 2013 Stormwater Utility Survey, last viewed October 20, 2014 at http://www.wku.edu/engineering/civil/fpm/swusurvey/western_kentucky_university_swu_survey_2013.pdf [hereinafter Western Kentucky Survey].



Experience from some communities in Maryland that were “forced” by the state to adopt fee systems in order to adequately respond to demanding new municipal stormwater pollution permits, indicates that much more up-front community preparation may have been beneficial.

Instead, some local fee systems were seized upon by local and state politicians or candidates as the ultimate overreach: nonsensical “rain taxes.”

These politicians created public confusion and consternation. Of course, such a fee is not a tax on rain, but rather is: (1) a fee on hardened surfaces like rooftops and parking lots, from which runoff is produced; (2) charged for a real service/benefit provided by the municipality; (3) created in an amount reasonably related to a payer’s contribution to the local pollution and flooding problem; and (4) calculated so as to help solve the problem. In some communities in neighboring states where the system was more organically developed and the need was better understood by local political leaders, who then took the time necessary to explain the potential program to the public, the adoption of utilities and fee programs generally has proceeded more smoothly. Even where local stormwater utilities are not required by state law, creating and operating them make good sense where localities are facing polluted runoff and local flooding challenges.

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Stormwater Utility Operations

Program Development, Ordinance

As noted above, the best stormwater utilities and authorities base their fee systems upon their actual needs calculated over time, i.e. budgets reasonably developed by adequately assessing how and where practices need to be deployed across the community to meet clean water and flooding remediation objectives, and how much such activities will cost to implement. As utilities or authorities, they also should be structured from the beginning, by local law or ordinance, to clearly segregate their funds from a community’s General Fund, for use solely for stormwater management purposes. While such purposes can, of course, include some administrative expenses, the main idea is to develop a consistent and fair funding mechanism to satisfy stormwater capital and maintenance needs over a period of time.



City of Portland Environmental Services



These activities are sometimes directly required under a Clean Water Act municipal permit or, in the Chesapeake Bay watershed, the commitments in states' and communities' "Watershed Implementation Plans."

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The best of all worlds would initially have the *state* statutory authority for developing such an entity clearly articulated, without severe limitations or exemptions. State laws should be broadly inclusive of all property owners, so as not to trigger sovereign immunity claims by government agencies,

or claims of unfairness by large businesses or others. Second, the animating *local* ordinance should be very clear as to who is covered. Generally speaking, exempting this or that set of landowners from the outset is a bad idea. Instead, there will always be an opportunity to *shape* the fees so as not to seriously burden a particular set of local actors. For example, entities with limited means, such as churches, synagogues and other non-profits, or seriously disadvantaged populations, might be charged less or might have extra opportunities to earn credits so the fee may be reduced still further.

Exempting local, state, or federal government landowners at the outset may also significantly reduce the utility's income-generating capacity, depending upon the extent of such facilities in the community (for example, schools, maintenance facilities, courthouses, state or federal installations). Unless there is already a law which *requires* such an exemption, writing such special cases into the local ordinance only weakens its effectiveness. The federal Clean Water Act was amended in 2011 to purposefully allow federal facilities to be charged under fair and reasonable local stormwater utility program coverage, "to the same extent as non-governmental entities." This means that federal sovereign immunity cannot generally be claimed to avoid fee payment by a federal agency (regardless of whether the utility program is denoted a fee or a tax, says the law), unless there are significant carve-outs in the ordinance for various non-governmental entities. There really is no necessary basis in law for a locality's exempting, say, federal facilities such as research centers, defense bases, or major agency locations.

Finally in this vein, it would be useful for the locality to review how it regulates the management of polluted runoff from *private* property (as opposed to public property, where most of the utility-funded activity will take place). It is important that the community has an effective stormwater management ordinance that prohibits illicit discharges, requires good construction and post-development management of runoff, and ensures ongoing maintenance of stormwater practices and systems on private property. This is a good complement to the development of an authority, utility, or fee system that will address runoff that runs through municipal storm sewer systems.



Budgets, Fee-setting and Supplemental Financing

Communities should first determine how much money they will need to satisfy the objectives of their system, and then calculate how much they will need in fees to pay for it. Local stormwater utilities operate similarly to wastewater utilities. Once a reasonable overall budget is determined, a fee is levied on each “user” of the locality’s stormwater management services, commercial, residential, non-profit, and government property owners who have hardened surfaces on-site from which polluted stormwater runs off and will need to be treated.

The fees are usually set by the municipality based upon the amount of hardened surfaces owned by the property owner, such as the total of his/her rooftops, driveways, and parking lots. Sometimes averages or ranges are used, based on a municipality’s calculations. The main idea is to fairly and proportionally collect from the users an amount needed to remediate the problems the pollution from their property causes, over time. Fees may be collected via property tax bills or, for non-profits and government facilities which don’t receive tax bills, direct billing.

In 2013, the average monthly fee nationwide was \$4.57.² Regardless of how the bills are physically distributed, it is cleaner and more straightforward to charge a fee versus a tax (or some kind of tax-based assessment).

With a fee, there is no question about tax-exemption; additionally, the direct connection to the stormwater burden imposed by the property, and to the remediation services to be provided, is made clear.

Many communities design their fee system around the “Equivalent Residential Unit” or ERU, an average amount of imperviousness for a single family parcel of land in that municipality, usually between 1,500 to 3,000-square feet. Non-residential fees are then based on some proportionality with the local ERU, where the actual non-residential imperviousness may be measured. Other communities use a straight “tier system” based on the size/use of the parcel, or may simply set flat fees. The fairest approach uses either an accurate measurement (via aerial images) or a reasonable approximation of imperviousness based on local averages and proportions. Fee systems should allow for credits to reduce the fee if the property owner reduces runoff.

Some localities create utility fees based on the kind of land use involved, applying a so-called Residential Equivalency Factor (REF), which corresponds to the amount of polluted runoff coming from average residential parcels in a particular sized storm event. Commercial properties might have a proportionally larger REF and thus be subject to higher fees since, holding soils and slopes equal, the “runoff curve” number from a standard runoff calculation for non-residential properties (using USDA’s

² Western Kentucky Survey, 2.



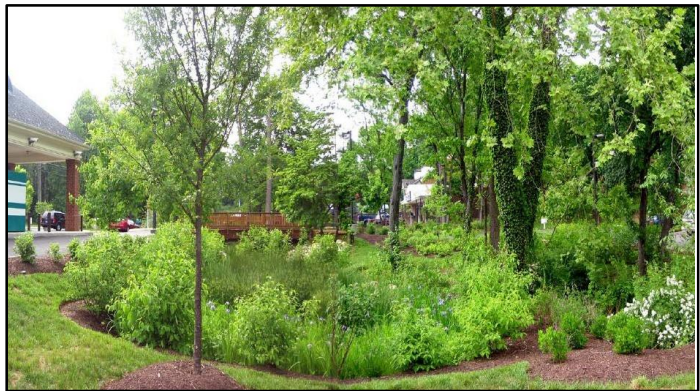
Natural Resource Conservation Service basic runoff formula) is higher. The fairest way to calculate a fee using an REF would be to use mean annual runoff for a locality over many years, so that an application of the rainfall formula does not unfairly favor residential over commercial property or vice versa.

There are several other systems for fee-setting besides those noted here that may better satisfy local political desires or administrative capabilities, though these are the most common.

Finally, some communities that are facing substantial stormwater management costs are beginning to experiment with innovative financing mechanisms that combine their use of stormwater fee or utility systems with private sector financing and construction. This so-called “public-private partnership” or “P3” approach leverages the regular and reliable stream of municipal income from a fee system to obtain private equity financing and participation by a private entity in the locality’s retrofit and maintenance program. Prince George’s County in Maryland will begin using such an entity to help it gain additional investment in, and more efficiently manage and implement, its permit-driven activities. In the bargain, it also hopes to create some economic development and job opportunities for new and expanding local businesses that will be needed to put new polluted runoff management practices in the ground.

Program Implementation

As noted above, the bulk of the fees (80 percent or more) should be set aside to be used for carefully prioritized, on-the-ground projects to remediate polluted runoff and flooding problems. Communities or their consultants should systematically evaluate the sub-watersheds within their jurisdiction as to current runoff problems, for example, major hardened surfaces with little or no stormwater management. They should assess older generation management practices such as “dry ponds,” and the state of the municipality’s storm sewer outfalls to streams.



Union Bank Trust, Charlottesville, VA

Localities should then consider the full range of cost-effective means for fixing such problems, and establish a list of prioritized projects that can be tackled over time. In some cases, just retrofitting and upgrading the older wet and dry ponds can be one efficient way to begin obtaining significant clean-water benefits.

In general, today’s best practices for managing polluted runoff favor capturing and treating it close to where it falls, rather than just “getting rid of it” quickly or shunting it off to big regional ponds.



They also favor trying to use or mimic the way nature treats runoff: slowly infiltrating it into the ground and allowing water-loving plants to take up the pollutants, or “harvesting” and re-using the runoff on-site for landscaping and other purposes. These practices are variously known as “Low Impact Development,” “Environmental Site Design,” or just “Green Infrastructure,” and they can often be less expensive to install and maintain than older “gray infrastructure” techniques.

The locality/utility should keep good records of its program and project expenditures, and also regularly report to the community on its performance with respect to the amount of polluted runoff its new practices is capturing and/or the local flooding it has resolved or significantly lessened. Such feedback is useful, especially for a new program that requires citizens to continue to pony up fees or taxes. It can also be used if the community is required to provide reports on its stormwater programs under a municipal Clean Water Act permit.

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Examples of Existing Stormwater Fee Systems in Pennsylvania, Maryland, and Virginia

Examples abound in all three major Bay states (not all utilities are listed here): In Pennsylvania, the Cities of Philadelphia, Lancaster, and Hazleton, Mt. Lebanon and Radnor Townships, and Jonestown Borough; in Maryland: the Cities of Rockville, Baltimore and Takoma Park, Towns of Oxford and Berlin, Counties of Montgomery, Baltimore, Howard, Charles, and Prince Georges; in Virginia: Cities of Staunton, Richmond, Lynchburg, Petersburg, Roanoke, Norfolk, Virginia Beach, Charlottesville, and Falls Church, and Counties of Fairfax and Prince William.

Conclusion

Local stormwater utility, authority, or fee systems are useful tools for meeting today’s increasingly stringent water-quality standards under municipal permits. It is helpful if clear authority for setting up



United States Environmental Protection Agency

such systems is available from the state, and the local programs so developed should be broad-based with few, if any, exemptions. The locality should be sure to effectively present good information to its citizens about the nature of the problem and potential solutions, and start a conversation and obtain feedback, before it introduces or implements such a program.



It is equally important that the community analyze its runoff problems as a whole, develop a clear, priority list of projects to address them, and provide a multi-year budget for the program, so that its fee system can then be based upon actual needs. There are a variety of fee systems that can be developed. Whichever method is chosen should be based on equitable standards of proportional contribution to the polluted runoff and local flooding problem by a community's corporate, private, and public sector property owners, usually with some measurement or average of impervious area at the base of such a system, and some means to reduce the fees if the owner institutes his/her own practices.

Finally, today's best practices emphasize trying to capture and treat polluted runoff near where it falls, and using or mimicking nature in how the runoff is managed.

Fair stormwater utility, stormwater authority or stormwater fee systems are one way to begin to get a handle on difficult local runoff pollution and flooding problems. Managed correctly from the beginning, they have the potential to deliver much cleaner municipal runoff water for local streams, rivers, and the Chesapeake Bay, and to reduce local flooding.

Additional Sources

Water Environment Federation, *User-Fee Funded Stormwater Programs* (2013, 2d ed.)

NACWA, *Navigating Litigation Floodwaters: Legal Considerations for Funding Municipal Stormwater Programs* (November, 2014)

