



The Value of Stormwater Utilities for Local Governments in the Chicago Region

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The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization. Its GO TO 2040 planning campaign is helping the region's seven counties and 284 communities to implement strategies that address transportation, housing, economic development, open space, the environment, and other quality of life issues.

See www.cmap.illinois.gov for more information.

Table of Contents

Introduction	5
Legal Authority	7
Program Details	9
Stormwater Utility Best Practices	9
Fee Proportional to Runoff (#1)	9
Revenue Used to Provide Stormwater Services (#2)	10
Provide Credits or Rebates for Reducing Runoff (#3)	10
Appropriate Government Unit	11
Stormwater Utilities in Illinois	12
City of Rolling Meadows	12
City of Highland Park	13
Village of Downers Grove	13
Implementation Process	14
Assess Community Stormwater Needs	14
Conduct Stormwater Utility Feasibility Study	14
Conduct Public Outreach and Education	14
Develop Local Ordinance and Credit Manual	14
Addressing Concerns about Stormwater Utility Programs	15



Introduction

Communities in the Chicago region face increasing challenges in managing stormwater.

Flooding is a major problem in many areas. Storm sewers, culverts, and a host of other stormwater infrastructure components need repair, but funding for capital improvements is scarce. Likewise, many communities are interested in stabilizing stream banks and other restoration projects, yet they have limited resources to do so. And local responsibilities in complying with the federal Clean Water Act have multiplied and will likely increase in the future.

The stormwater utility is a good option for local governments to respond to these challenges. Setting up a stormwater utility allows a community to establish a user fee based on the demands property owners place on the drainage system. It provides a dedicated revenue stream for stormwater programs as well as an incentive for property owners to reduce the amount of runoff they generate. While special service areas may be used to fund projects at the neighborhood level, many needs are community-wide in scope and require a community-wide source of revenue.

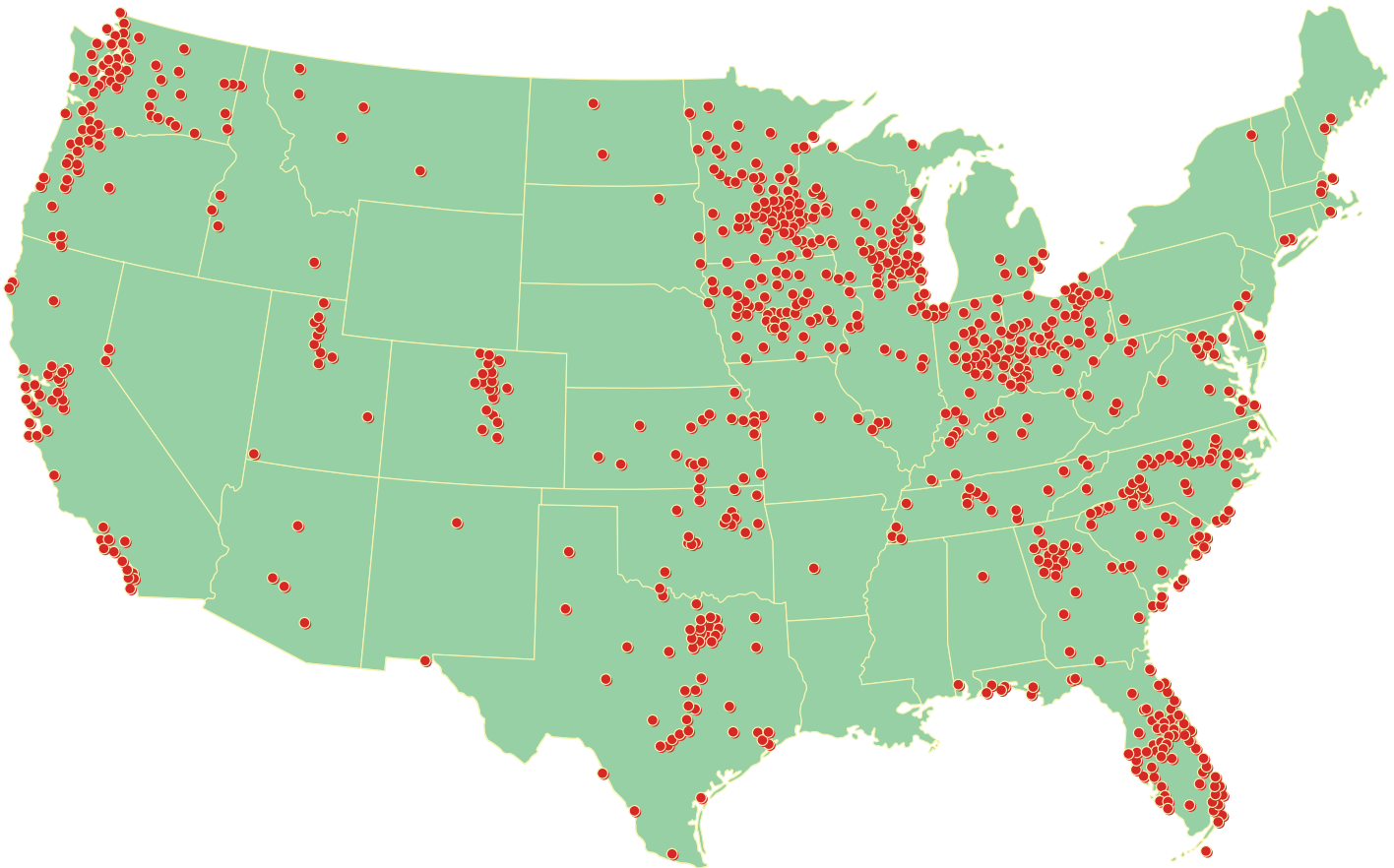
A federal survey in 2008 found that municipalities in the Chicago region had a stormwater funding backlog of \$233 per household.¹ Annualized flood damages in the Chicago region amount to \$55 million per year.²

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- 1 Calculated from the municipalities that provided stormwater needs estimates in the 2008 Clean Watershed Needs Survey, inflated to 2012 dollars. <http://water.epa.gov/scitech/datait/databases/cwns/2008reportdata.cfm>.
 - 2 Illinois Department of Natural Resources. 1998. Our Community and Flooding. Estimate inflated to 2012 dollars. About half of the damages are in the Des Plaines basin. http://www.dnr.illinois.gov/WaterResources/Documents/OurCommunityAndFlooding_Oct1998.pdf.

Stormwater is the only major infrastructure system in the Chicago region that is not typically paid for through user fees. Whether public or private, drinking water, sewer service, electricity, natural gas, and telecommunications are all provided on a user-fee basis. Stormwater management, on the other hand, is usually funded through general revenue. Under the current system, then, some property owners are overpaying for stormwater services, while others are being subsidized. For example, a homeowner who builds an addition onto a house will pay higher property taxes than one who merely installs a patio of the same area, yet they would generate the same amount of runoff. A stormwater fee is a more equitable approach to paying for stormwater services.

Although they are still relatively rare in Illinois, stormwater utilities have become more common across the country (Figure 1), and many case studies exist. A number of communities have begun to study them more closely. Stormwater fees are within the powers of local governments in Illinois and have withstood legal challenges. Most local governments already operate water and wastewater utilities; stormwater can be readily addressed as a utility program.

Figure 1. Stormwater utilities in the United States as of 2012



Source: Western Kentucky University 2012 Stormwater Utility Survey.

Legal Authority

At the heart of the stormwater utility is the concept that stormwater services should be provided through a user fee rather than general taxation.

When stormwater utilities have been challenged in court, litigants have sometimes argued that the fee is actually a real estate tax and that the tax was improperly levied — for instance, levied on a church or other institution that is exempt from property taxes. However, stormwater fees have withstood this type of legal challenge in Illinois³ as well as in several other states.⁴ Case law supports the proposition that a stormwater charge meeting a basic legal test is not a tax.

A second question is whether local governments have the ability to institute the fee. Home rule units of local government, with their relatively broad powers to institute fees and taxes,⁵ should have no legal difficulty in establishing stormwater fees. The majority of municipalities in Illinois that have established stormwater fees have done so under their home rule powers. While non-home rule units are more restricted in the fees they may establish, all municipalities have the power to own and operate utilities under the Illinois Municipal Code.⁶ The non-home rule Village of Morton, City of East Moline, and Village of Richton Park have each established stormwater fees.

While authority under the utility statutes is clear, some non-home rule municipalities may feel more comfortable with more direct legislative language. It would be beneficial for the General Assembly to explicitly grant non-home rule units that operate separate storm sewer systems the power to establish stormwater utility fees. This should be valuable to many municipalities that need dedicated revenue for stormwater infrastructure but do not seek the broad local powers associated with home rule.

³ Church of Peace v. City of Rock Island, 828 N.E.2d 1282, 1284 (Ill. App. Ct. 2005).

⁴ Bolt v. City of Lansing, 459 Mich. 152, 587 N.W.2d 264 (1998); Howard Jarvis Taxpayers Association v. City of Salinas, 121 Cal. Rptr. 2d 228 (Cal. Ct. App. 6th dist. 2002); McLeod v. Columbia County, 278 Ga. 242, 599 S.E.2d 152 (2004).

⁵ Illinois Constitution, Article VII, Section 6.

⁶ 65 ILCS 5/Art. 11 Div. 139 and 141. This section takes advantage of research in Stormwater Utility Feasibility Study: Final Report for the City of Urbana, Illinois, September 2011 (report prepared by AMEC) and a memorandum to the Village of Lombard from Klein, Thorpe, and Jenkins, Ltd. (2006).



Program Details

Stormwater Utility Best Practices

An ideal stormwater utility program would have the following characteristics:

1. The fee for each parcel is proportional to the runoff generated by that parcel;
2. All revenue is used to provide stormwater services and placed into an enterprise fund; and
3. Credits are given to property owners who reduce or treat their runoff.

This type of program is the most effective, most equitable, and least litigable. It is discussed in more detail below. Yet programs exist in Illinois and elsewhere that diverge from this pattern, and many are successful. For instance, some utilities charge a flat fee. Others may charge a fee proportional to runoff but not provide credits. Still others place the revenue into a special fund, but it may not be a true enterprise fund.

Fee Proportional to Runoff (#1)

The simplest, most widely-used method of computing a stormwater utility fee is to calculate an equivalent residential unit (ERU) equal to the mean or median impervious area on single-family residential parcels.⁷ All single-family lots are charged at the rate of 1 ERU. Non-residential or multifamily residential parcels are then charged by the number of ERUs onsite. For instance, if an ERU is 2,000 square feet and a commercial property has 20,000 square feet of imperviousness, then it would be charged 10 ERUs.

The ERU method treats all single-family residences as producing the same amount of runoff while generally making the fee proportional for other property types. Although this reduces the administrative workload associated with the fee, it also works against the equity principle of the fee itself. For that reason, some local governments have chosen to develop tiers of impervious surface. Under this system, there would be a different fee to reflect, for example, low, medium, or high amounts of impervious surface on residential properties. Or a fee could be charged for every 500 square feet of impervious surface, for example, with individual properties rounded up or down to the nearest 500.

⁷ Campbell, C. Warren (2011). Western Kentucky University 2012 Stormwater Utility Survey, Western Kentucky University, Bowling Green, 51 pp. Available at <http://www.wku.edu/engineering/civil/fpm/swsurvey/>. See also Black and Veatch, 2010 Stormwater Utility Survey, http://204.118.135.81/Downloads/Resources/Brochures/rsrc_EMS_2010StormwaterUtilitySurvey.pdf.

Revenue Used to Provide Stormwater Services (#2)

The fee per ERU or unit of impervious area is based on the total revenue needed to build capital projects, fund program staff, and cover other aspects of the stormwater program. Thus the fee depends on the revenue needed. Some typical projects funded by stormwater fees are shown in Figure 2. In a true stormwater utility, the fee revenue would only be used for the stormwater program, not for other governmental purposes. Conversely, the fee would entirely cover the cost of the stormwater program, with no supplements from other funds. Ideally revenues would be placed into an enterprise fund, which is used to account for government activities that operate similarly to private business, where the costs of service are recovered through user charges. Local government accounting typically treats water and sewer utilities as enterprise funds, and stormwater would be no different.

Provide Credits or Rebates for Reducing Runoff (#3)

A good stormwater utility will include a set of rebates for implementing measures that reduce, treat, or otherwise manage stormwater runoff. Then a property owner, including a church or school, can take steps to reduce the bill owed for stormwater services. For instance, installing rain barrels to capture rain from downspouts, installing rain gardens in the yard, or using permeable pavement on the driveway — measures commonly called “green infrastructure” — could be worth a certain credit. In a community that has both newer subdivisions with detention ponds and older subdivisions with no detention, property owners in the subdivision with detention could be given rebates to reflect their reduced impact.

Figure 2. Typical projects funded by stormwater utility fees



Addressing street flooding.

Source: <http://ceephotos.karcor.com/>



Stabilizing streams and other stream restoration projects.



Removing debris from streams.



Installing storm sewers.

Source: <http://www.erdmananthony.com/ProjectPortfolio/Detail.aspx?id=41>

Appropriate Government Unit

A stormwater utility could be established in a variety of local government units or special districts, but the most likely units of government in northeastern Illinois are either a municipality or county. Nationwide, 81 percent of stormwater utilities are municipal and 19 percent are county-based or regional.⁸ This publication takes no position on which level of government is most appropriate, and only notes some of the pros and cons associated with each. The level of government responsible for the utility is a secondary issue; what matters most is recognizing the importance of a dedicated user fee for stormwater.

A county-level utility would have some practical advantages. Economies of scale are possible by having a larger agency handle acquisition and analysis of impervious cover data. In fact, some municipalities do not have GIS capabilities sufficient to handle that aspect of stormwater fee administration (although they could contract for that service). Because of their role in property tax assessment and maintaining property records, the counties generally have sophisticated GIS capabilities. On the other hand, most municipalities already have water and sewer utility billing systems set up for their residents while counties generally do not. Stormwater fees are often added onto water/sewer bills rather than mailing separate bills.



Replacing failing culverts.

Source: www.newnhamfarms.com



Implementing green infrastructure projects.

From a policy standpoint, a county-level utility may help reduce concerns that the playing field for development is uneven because of varying fees between municipalities. (While property owners would be responsible for paying the fee, not developers, the fee would to some extent affect the price at which a developer could sell a property.) A tradeoff is also present in the use of funds. Pooling funds for larger projects selected at the county or watershed scale would likely lead to projects with larger benefits relative to their costs, but there may not be perfect proportionality between the jurisdictions providing fee revenue and those benefiting from projects. On the other hand, municipal land use regulations (such as parking ratios, height and bulk requirements, etc.) play a significant role in setting the level of imperviousness on private property. A fee charged at the county level may be disconnected from these municipal decisions.

One solution would be to have joint administration of the fee. In so doing, each level of government could take charge of the administrative aspects it is best suited to handle, taking care to make sure that services and fees are not being duplicated between municipalities and the county. In fact, such an approach could build on the successful model of joint county-municipal governance in the stormwater management and planning committees, which set county-wide stormwater standards through a body with equal numbers of county board members and municipal representatives.⁹ Finally, as non-home rule units, counties would need legislation to enable them to charge fees — the utility statutes mentioned above do not apply to them.

⁸ Black and Veatch, 2010 Stormwater Utility Survey. http://204.118.135.81/Downloads/Resources/Brochures/rsrc_EMS_2010StormwaterUtilitySurvey.pdf.

⁹ Authorized by 55 ILCS 5/5-1062 and established in all of the CMAP counties.



Upgrading local drainage.

Source: <http://saveourstream.blogspot.com/p/green-infrastructure.html>

Stormwater Utilities in Illinois

Only eight municipalities in the Chicago region have implemented stormwater utility fees, and of those just three base the fee on impervious surface.

The others charge either a flat fee or a variable fee based on drinking water usage. The map in Figure 3 shows the municipalities that have instituted fees as of 2013. Fees range from a base rate of less than \$2 per month to more than \$8. Besides the eight municipalities in the Chicago area with stormwater utilities, another 11 downstate have enacted these programs (Table 1). This section briefly summarizes the programs implemented by Highland Park, Rolling Meadows, and Downers Grove, the three Chicago-area communities that base their fees on imperviousness.

City of Rolling Meadows

The City of Rolling Meadows implemented its new program in 2001 with the intention of charging an initial fee that would be under \$20 per home per year. Based on an ERU approach, the fee was relatively easy to implement. A city newsletter, city council meetings, and other public meetings were used to inform residents of its purpose. In hindsight, however, the utility could have been more effective at funding stormwater management operations if the fee was designed to meet specific budget needs. It has taken several years of approximately 5 percent annual increases for the fee to be sufficient for meeting bond repayment obligations incurred to address local flooding and pay for operational costs. Current revenue generation is expected to reach \$650,000 for the town of 24,000 people and can now fully support all aspects related to municipal stormwater management.

City of Highland Park

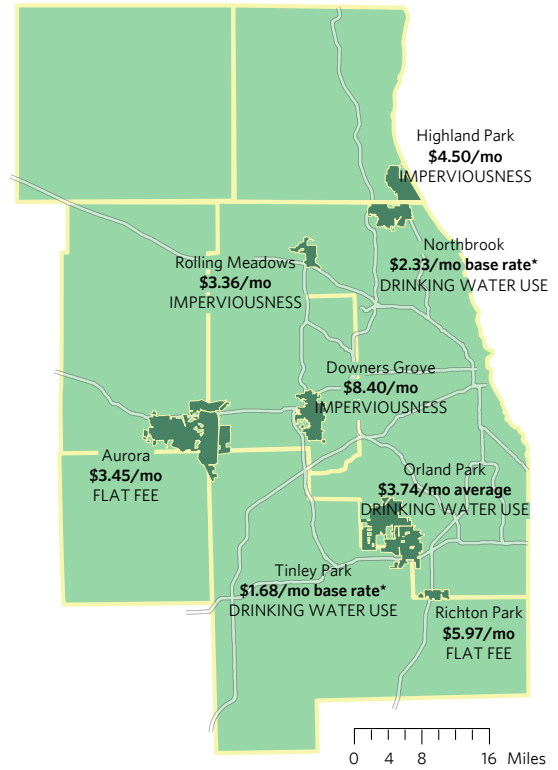
The City of Highland Park adopted a stormwater fee in 2006 with the goal of eventually generating enough revenue to fully fund stormwater operating and capital expenses. Support for the fee was driven from the need to fund stormwater operating and capital without having to increase property taxes. Currently, revenues from the fee provide approximately 60 percent of the stormwater budget. Over the next few years, the fee will increase annually until revenues cover 100 percent of the operating and capital costs. The City issued a bond to cover the remaining portion of the costs during the fee ramp-up. In FY 2012, the City expects that the fee will generate \$1.2 million in a community with a population of almost 30,000.

The fee is collected based on impervious area of properties, with 2,765 square feet of impervious surface equaling one impervious area unit (IAU). The fee per IAU was initially \$4. This was increased to \$4.50 in 2012 and is expected to increase annually for the next several years. The fee appears on the water bill. The City offers two credits. If the property does not impact the stormwater sewer system (e.g. if the property's downspouts flow into the Skokie River), a 50-percent credit is given. Commercial properties that detain and treat their stormwater prior to discharge may be eligible for a 25 percent credit.

Village of Downers Grove

The Village of Downers Grove implemented a new stormwater utility program in January 2013. The fee is based on a tiered system for single family residential parcels and on the amount of impervious area per parcel, expressed in equivalent runoff units (ERU) at the rate of \$8.40 per ERU. There are no exemptions from the fee, including Village-owned properties. Six types of credits are available along with a one-time incentive for installing qualifying best management practices. Fees will be included in the bimonthly water bill. Revenue generated is expected to be \$3.3 million and will be the sole source of funds for the stormwater operating budget, including bond repayments that were recently incurred to fund stormwater improvements. Key to gaining support for the new program from government officials was a prior study and plan to address stormwater system maintenance and infrastructure needs for the village of 48,000 residents.

Figure 3. Monthly stormwater fee and basis of fee for municipalities in northeastern Illinois



Source: CMAP and Western Kentucky University.

*The actual average charge paid in communities basing the fee on drinking water usage is higher than the base rate shown.

Table 1. Downstate communities with stormwater utility programs

COMMUNITY	MONTHLY FEE	COMMUNITY	MONTHLY FEE
Bloomington	\$4.35	Morton	\$4.74
Champaign	\$5.24	Normal	\$4.60
East Moline	\$2.54	O'Fallon	\$3.45
Freeport	\$4.00	Rantoul	\$3.43
Moline	\$3.75	Rock Island	\$3.95
		Urbana	\$4.94

Source: Western Kentucky University and CMAP.

Implementation Process

This section provides an outline of the steps to take in creating a stormwater utility. It is merely a guide, and some steps may blend into one another. Some communities will have already completed elements of the outline.

Assess Community Stormwater Needs

This step helps a community determine the scope of the water resource problems the community faces, such as flooding, erosion, water quality, federal or state mandates, etc. Project concepts and budgets may be developed at this stage. Many communities have already developed stormwater master plans, participated in watershed planning efforts, or through the normal budgeting process have a sense of their needs. Typically an engineering firm with experience in water resources would be hired to conduct a study, but many tasks can also be carried out in-house.

Conduct Stormwater Utility Feasibility Study

A feasibility study helps determine whether a stormwater utility is the right approach to meet identified needs. It would address policy and administrative details such as the method used to calculate the fee, the means of billing, penalties for non-payment, and so forth. Typically an engineering firm with experience in stormwater utilities would be hired to conduct the study. Some tasks may also be performed in-house.

Conduct Public Outreach and Education

Public outreach is critical to developing support for raising local revenue from a novel source. The most important elements likely will be to show the magnitude of the needs and to indicate how residents will benefit from any new fee.

Develop Local Ordinance and Credit Manual

An ordinance is required to implement the utility program. It would provide a fee schedule by property type based on the recommendations of the feasibility study and provide for a set of credits and rebates. It would also provide for an appeals process for property owners who believe they were billed improperly. A credit manual is often developed to accompany the ordinance and explain in more detail how to implement the practices that qualify for credits. Officials should strongly favor choosing the rate structure that will actually pay for their identified needs rather than a lower rate that seems more expedient. Communities that began with a lower rate have often wished they introduced the program at the level actually needed.

Addressing Concerns about Stormwater Utility Programs

It is worth exploring why and how attempts to create stormwater utility programs sometimes falter.

One issue is that residents may not perceive any new benefit from the new fee. But the needs assessment is meant to take the measure of flood risk and other problems that affect residents. If residents can be shown that the fee they pay would reduce or eliminate these problems, then they typically see a benefit to themselves in the fee. This is one of the reasons why public participation is critical. Residents may also perceive the fee as a new charge for something that has always been free. Likewise, education is needed to show that stormwater services are provided by local government now — although not to the extent needed — but paid for through residents' taxes.

Institutions such as schools and houses of worship that have large impervious areas but pay no local taxes will find themselves paying the stormwater fee. Opponents of the fees sometimes argue that requiring schools to pay a stormwater fee is “double taxation” in the sense that taxpayers fund the school system and so are ultimately also responsible for the stormwater fee as well. However, schools pay for water, electric, sewer, and gas service, and this state of affairs goes unchallenged. Religious institutions, on the other hand, may argue that their exemption from local taxes also qualifies them to avoid the stormwater fee. Again, this cannot be the case since a fee is not a tax. A stormwater utility that follows best practices will also include a set of rebates for implementing measures that reduce

stormwater runoff. Then property owners, including schools and houses of worship, can reduce or eliminate the fee they pay.

The main reason to create a stormwater utility program is that needs are not being met with available resources. Thus, raising appropriate revenues should be seen as a goal of the program. Yet a stormwater utility can also result in direct savings for residents. Depending on the fee and credit structure, it is entirely possible for a property owner who takes advantage of the credits to pay less under the stormwater utility than under a system based on taxation. Savings for residents may be possible in other places as well. A stormwater utility should make it easier for local governments to earn credits under FEMA's Community Rating System¹⁰ program, thereby earning residents reductions in their flood insurance premiums and returning the cost of the fees to residents.

Finally, while typical fees are fairly low (\$2 – 8 per month), fees will be more difficult for some to pay than others. Rate assistance can be given, perhaps using the same policy that the water or sewer utility uses.

¹⁰ See <http://www.fema.gov/national-flood-insurance-program/community-rating-system>.



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