UNDERSTANDING

# Stormwater Utilities

## WHAT IT IS

For many cities and towns there are significant costs associated with operating, maintaining, and upgrading stormwater infrastructure. The municipal system for capturing and conveying stormwater from rooftops, driveways, and roadways can include the hundreds of catchbasins along street edges and miles of underground pipes.

Establishing a stormwater utility is one important strategy to creating a reliable funding source for this work. Currently there are between 1,500 and 2,000 stormwater utilities in the United States, 5 of which are located in Massachusetts (Fall River, Newton, Northampton, Reading, and Westfield).

Most municipalities in the Pioneer Valley rely on allocations from the general fund to service stormwater infrastructure. These allocations, however, are not keeping pace with actual needs for upgrading aging systems, reducing localized problems—such as flooding and erosion—and meeting regulatory requirements for environmental protection.

A stormwater utility operates much like an electric or drinking water utility. Fees collected from property owners go into a dedicated fund to pay specifically for the work of operating, maintaining, and improving stormwater infrastructure. This reinforces the idea that like other utilities, stormwater management is a public service. Monies can be used to pay for operation and maintenance expenses, project or capital-related expenditures, staffing, engineering, permitting, inspection, and program management costs.

In 1998, the City of Chicopee was the first municipality in Massachusetts to collect a fee for maintenance and upgrade of stormwater infrastructure, but the program is technically not a "stormwater utility" as funds go into a water pollution control account that also receives funding for projects that include the sanitary sewer system. So the program is referred to simply as a "stormwater fee."

## HOW IT WORKS

Since impervious surfaces (roofs, driveways, and roadways) are what produce the runoff from rainfall and snowmelt that must be managed, stormwater utility rates are most commonly based on the amount of impervious surface on a property. For residential customers, many municipalities set rates according to a method called Equivalent Residential Unit (ERU). This unit is derived from the impervious area footprint of a typical single-family home. The City of Newton, Massachusetts, for example, currently has an ERU of 3,119 square feet. Each residential property is thus billed $25 per year based on this average of 1 ERU. Non residential



properties, including industrial and commercial properties are billed based on 6 ERUs or $150 per year. The City has been exploring a different rate structure for residences of more than three households and commercial and industrial properties since the current flat rate of 6 ERUs has properties with small impervious areas (small downtown shops, etc.) paying the same as properties with large impervious areas (shopping malls). The new rate would assign a certain number of ERUs to a commercial and industrial property based on actual impervious area. Rates for larger properties in some municipalties are sometimes not based on ERUs, but rather a dollar per unit cost based directly on the area of impervious surface on a property.

A guidance document prepared by the National Association of Flood and Stormwater Management Agencies notes, "The fundamental objective of a stormwater utility/service fee is attainment of equity. Service fee rate methodologies are designed to attain a fair and reasonable apportionment of cost of providing services and facilities."

## Enabling Legislation

**In Massachusetts there are two companion pieces of legislation that allow municipalities to set up stormwater utilities: MGL Chapter 83 Section 16 and MGL Chapter 40 Section 1A. The first, MGL Chapter 83 Section 16, is relatively new enabling legislation that allows municipalities to set up a stormwater management utility and charge utility fees for managing stormwater. The second, MGL Chapter 40 Section 1A, provides a definition of a district for the purpose of water pollution abatement, water, sewer, and/or other purposes. Together, these two pieces of legislation allow a municipality to set up an authority to manage stormwater and to charge utility fees for managing stormwater.**



# WHERE THEY ARE USED CURRENTLY IN MASSACHUSETTS

Two of Massachusetts' five stormwater utilities are located in the Pioneer Valley. (See table below.) The cities of Northampton and Westfield are currently the only municipalities in the region with programs that collect fees specifically dedicated to maintenance and upgrade of stormwater infrastructure. Westfield instituted a stormwater utility in 2010 for the purpose of financing a stormwater management division, responsible for meeting federal requirements for stormwater monitoring and maintaining the City collection system. Northampton adopted a stormwater utility in 2014 to generate funding for meeting federal permit requirements and attending to aged stormwater and flood control infrastructure.

There are roughly 6,600 smaller residential properties (1-3 family) in Northampton. Under the billing formula these properties are divided into four groups based on the impervious surface area on each property. All properties within each group pay the same fee. This standard fee is calculated based on the average impervious and pervious areas for all properties within each group. Based on the annual budget of $1,980,056, the annual residential fees are estimated to be:

## Stormwater Utilities/Fees in Massachusetts

| Community | Date Created | Equivalent Residential Unit (ERU)* | Fee | Annual Revenue |
|---|---|---|---|---|
| Chicopee | 1998 | 2,000 s.f. | Single family residential at<br>$100 per year<br>Multi family, industrial, commercial properties at $1.80 per 1,000 square feet, with a minimum charge of $100 per year and a maximum charge of $640 per year | $1,500,000<br>(2012) |

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|---|---|---|---|---|
| Fall River | 2008 | 2,800 s.f. | Residential: 1 to 8-family at $140 per year<br>Commercial, industrial and residential properties greater than 8 family at $140 per year for 2,800 square feet of impervious surface | $4,660,000<br>(2012) |
| Newton | 2006 | 3,119 s.f.<br>Proposed change: 2,600 s.f. | Residential at $25 per year, with those receiving elderly discount, $17.52 per year<br>Non residential at $150 per year (Proposed change involves replacing the flat fee with a fee based on area of imperviousness. This would include residences with 3 or more units.) | $725,000<br>(2012) |
| Northampton | 2014 | | 1 to 3 family homes annual residential fee estimated to be:<br>$63.94 for impervious area <2,250 sq. ft.<br>$91.05 for impervious area 2,250 to 3,056 sq. ft.<br>$125.61 for impervious area 3,056 to 4,276 sq. ft.<br>$259.07 for impervious area >4,276 sq. ft. | $2,000,000<br>(estimated) |
| Reading | 2006 | 2,552 s.f. | Single and two-family residences at $40 per year<br>Multi-family, commercial, and industrial properties at $40 per 3,210 square feet annually | $357,000<br>(2012) |



| | | | | |
|---|---|---|---|---|
| Westfield | 2010 | NA | Residential at $20 per year<br>Commercial properties at $.045 per 1,000 square feet up to a maximum of $600 per year | $560,000 (2012) |

*Residential customers are typically billed for stormwater runoff based on the Equivalent Residential Unit (ERU). An ERU is based on the amount of impervious surface area or percent impervious area found at the typical single-family home within the municipality.

## DISCOUNTS AND CREDITS

Local governments with stormwater utilities can encourage better practices on private property by reducing fees in exchange for facilities that reduce the need for service by the municipal stormwater system. Discounts and credits can be geared to promote impervious surface reductions, onsite management or volume reduction, or the use of specific practices, such as raingardens/bioretention facilities, drywells, cisterns, or green roofs.

The City of Chicopee has just begun to implement a "Rain Smart Rewards" ordinance that offers a stormwater fee reduction of up to 50 percent in exchange for implementation of improved stormwater management practices by property owners.

In Minneapolis, Minnesota, 50 percent of the stormwater fee can be waived if the property owner can demonstrate that the runoff from a 10-year, 24-hour storm event can be managed on site. If a property owner can demonstate that the runoff from a 100-year, 24-hour storm event can be managed on site, the entire stormwater fee is waived.

Portland, Oregon's Clean River Rewards program provides stormwater utility fee discounts to encourage residential and commercial property owners to manage stormwater on site (35 percent discounts) and/or on the public right of way that serves their property (65 percent discounts). Partial credits are also given for ecoroofs, four or more trees over 15 feet tall, and for properties with less than 1,000 square feet of imperviousness. There is a Residential Discount Calculator and a Commercial Discount Calculator on the program's website so that property owners can calculate what changes they might make to obtain certain savings.

Starting July 1, 2014, credits in Northampton will be available for small residential stormwater improvements (rain gardens and porous driveways), construction and maintenance of larger stormwater best management practices, protected open land, commonly owned undeveloped properties and educational programs. Senior (needs-based), low income, and protected land credits are automatically applied based on documentation by the Northampton Assessor's Office. All other credits will require submission of an application and other documentation.

## BENEFITS

Establishing a stormwater utility is no easy task. It requires tremendous effort in terms of education and politics. The process, however, helps everyone to understand the service provided by the municipal stormwater system and the significant costs of operating, maintaining, and improving this infrastructure. In the end, the utility provides a dedicated and stable source of funding to maintain and upgrade an aging system, reduce localized problems—such as flooding and erosion, and meet regulatory requirements for environmental protection.

A stormwater utility has other benefits as well:

- **Creates an equitable way to pay for stormwater services, especially if the fee structure is based on the amount of impervious surface. Discounts or offsets can be provided to low-income residents or elderly, further ensuring the fee's equitability.**
- **Tax-exempt properties like universities, hospitals, and places of worship are required to pay the fee, so that they help cover the cost of services they receive**
- **Typically easier for the municipality to institute than other forms of funding. "In many communities, new taxes require a vote of approval by the public, while a fee is a charge that municipalities have the authority to leverage for the services they provide."6**
- **May enable municipalities to consolidate or coordinate responsibilities previously dispersed among several departments and develop programs that are comprehensive, cohesive, and consistent year to year**
- **Creates funding that can be leveraged to meet grant and bond requirements**
- **If a credit or reduction is offered, the fee can become an incentive for improved stormwater management on private property thereby reducing the service demand on the municipal system**

## IMPORTANT CONSIDERATIONS

To achieve desired objectives, several considerations should be taken into account when proposing and establishing a stormwater utility:

Start with a thoughtful outreach campaign that generates enthusiasm for the community's stormwater vision. If property owners understand the benefits they will receive, they are more likely to support the fee. As part of this, it is important to work in advance with religious institutions, private schools, hospitals, and non profits to be clear that the utility is like other utilities that they must pay. And education should be ongoing.

As part of setting rates and calculating bills, develop a sound methodology with rigorous quality assurance. GIS mapping should be integral to this method if area of impervious cover is a factor in setting rates.

Set rates so that the fee provides adequate revenue to achieve stormwater goals. If the fee is unreasonably high, it will not be supported. If it is too low, promised benefits will not materialize and public support is likely to erode.

Give some advance thought to determining how stormwater utility fees can be collected. Typically, they have been collected either on a separate bill, added to a water collection bill, or added to the property tax bill.

Be sure that the greatest costs are directed toward those who create the most runoff, particularly commercial and industrial facilities with large areas of impervious cover, rather than residential and other properties with low impervious cover.7 At the same time, municipalities should be sensitive to where residents may already be paying stormwater management fees through homeowner associations.

Ensure that fees do not harm low-income residents, as in Detroit, where an increase in stormwater fees caused some low-income residents to be unable to pay their water bill and have their water turned off. Sliding fee scales, bill discounts, crisis vouchers, and zero interest loans for qualified customers are options for offsetting the burden on lower income residents.

## LINKS TO MORE INFORMATION

METROPOLITAN AREA PLANNING COUNCIL. 2013. STORMWATER UTILITY FUNDING STARTER KIT. SEE:
http://www.mapc.org/stormwater-utility-funding-starter-kit
(Note: A well done update of PVPC's 1998 kit called, "How to Create a Stormwater Utility.")

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http://www.wku.edu/engineering/civil/fpm/swusurvey/

ENVIRONMENTAL FINANCE CENTER, UNIVERSITY OF NORTH CAROLINA. 2012. STORMWATER UTILITY DASHBOARD. SEE:
http://efc.unc.edu/tools/NCStormwaterDashboard_2012.html

DELANY, JOE, K. HONETSCHLAGER, AND T. MCINTIRE. 2009. STRUCTURING A STORMWATER UTILITY. TOWN OF READING, MA. SEE:
http://www.salemsound.org/PDF/ReadingStormwaterUtility.pdf

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www.crwa.org/projects/stormwater/Municipal%20SFM%20Case%20Studies%20Repo.pdf

NEW ENGLAND ENVIRONMENTAL FINANCE CENTER. 2005. STORMWATER UTILITY FEES: CONSIDERATIONS AND OPTIONS. SEE:
http://efc.muskie.usm.maine.edu/docs/StormwaterUtilityFeeReport.pdf

## FOR MORE INFORMATION, PLEASE CONTACT

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