



Ann Arbor Stormwater Utility

Case Study

Project Snapshot

In 2006, the City of Ann Arbor updated the rate structure for its stormwater utility to charge property owners based on the amount of impervious surface on their property. The new, more equitable rate structure includes incentives to manage stormwater onsite. The utility, which generates over \$5 million per year, funds operations and maintenance projects for the stormwater system, water quality improvement projects, stormwater education, implementation of environmental regulatory or remediation plans, and green infrastructure projects that reduce strain on the stormwater system.

Utility Details

Until 2006, the City of Ann Arbor's stormwater utility, which began in 1984, charged residential property owners a flat rate. The City looked to update the utility in order to meet expanding service needs, employ new technologies to improve the system, and comply with evolving regulatory requirements. Specifically, in *Bolt v City of Lansing* (1998), the Michigan Supreme Court struck down Lansing's stormwater utility and established three utility rate design requirements:

- 1) Fees must serve a regulatory and not revenue-generating purpose.
- 2) Fees must be proportionate to the necessary cost of service.
- 3) Property owners must be able to refuse or limit their use of the service.

Ann Arbor's utility and rate structures are designed to meet these criteria. First, all services are regulatory and fulfill National Pollutant Discharge Elimination System (NPDES) permit and National Flood Insurance Program (NFIP) obligations. Second, cost allocation and rate-setting processes ensure that costs are proportional to the fees charged. Third, residents and businesses can reduce their use of the service (and therefore their rates) by reducing the amount of impervious area on their properties. Properties that flow directly into the river are exempt because they do not use the City's stormwater system.

In addition, the City offers a series of credits that reduce rates. Achieving "RiverSafe Home" certification or installing rain barrels, rain gardens, or detention basins lead to lower rates for property owners. Commercial credits include installing detention basins, following water quality best management practices, and achieving "Community Partners for Clean Streams" designation.

Funding

Setting up the new rate structure carried significant cost because it required detailed information about each parcel and the City's overall impervious area. These measurements are based on flyover maps; Ann Arbor's most recent flyover map cost about \$50,000. Although setting up a utility has high upfront costs, it



Ann Arbor, MI

Population: 113,934

Governance: Council-
Manager

What is a stormwater utility?

The Michigan Department of Environmental Quality (DEQ) defines a stormwater utility as a "source of funding the construction and maintenance of stormwater management facilities. User fees are typically charged based on the amount of runoff that may be anticipated from a property."

Nine Michigan communities have a stormwater utility: Adrian, Ann Arbor, Berkley, Chelsea, Harper Woods, Jackson, Marquette, New Baltimore, and Saint Clair Shores.

brings in enough revenue to administer the program once it is operational. In 2010, Ann Arbor's utility generated nearly \$5.3 million in revenue.

Results

In addition to operations and maintenance of the stormwater pipes, the utility has provided funding for diverse projects that reduce strain on the system. Sample projects include installing a permeable concrete alley in a residential neighborhood, creating a wetland preserve in a public park, building underground detention basins, and operating the City's urban forestry management program. The City has granted over 5,000 credits to residents and businesses for actions that reduce strain on the stormwater system.

Advice for Communities Considering a Similar Project

- **Start with education** – Laying the education groundwork and making sure the community understands the connection between rainfall and water quality is a crucial first step before setting up a stormwater utility. Fostering a connection to the river or lake where the stormwater goes forms the basis for peoples' willingness to pay for stormwater system improvements because they understand the water quality benefits. Partnership opportunities can begin with the public schools for stormwater education. "Watershed" and "Runoff" are part of the Michigan Educational Assessment Program (MEAP) standards. Ann Arbor Public Schools has an urban hydrology program for 2nd through 6th grades.
- **Empower residents to make a difference** – The rate structure gives residents an opportunity to use their property to improve water quality and get recognized for their efforts. These residents can then become ambassadors to their neighbors about the benefits of rain barrels, rain gardens, and other strategies to manage stormwater onsite.
- **Use high-quality data** – Investing in technology to have accurate flyover data helps ensure that rates are fair and minimize disputes. GoogleEarth does not provide enough detail, in part because the flyover should happen during leafless conditions. Ann Arbor uses six-inch pixels and updates its maps every three years. The maps (and the cost for generating them) are shared with other City units.
- **Emphasize transparency** – Through the City's website, residents can see an aerial photo of their parcel with impervious areas marked and the calculations the City used to determine their rate. The site outlines a process for property owners to dispute the City's calculations if they believe there are errors in the aerial photograph or interpretation. After visiting the property in question, field staff make corrections and adjust rates if necessary.
- **Leverage partnerships** – The City of Ann Arbor, Washtenaw County, and the University of Michigan all own and operate portions of the stormwater system within city limits. Ann Arbor has kept program costs low and streamlined administration by partnering with the County Water Resources Commissioner's Office on stormwater improvement projects, education and outreach programs.
- **Raise the bar for municipal operations** – Ann Arbor works to integrate best practices for stormwater management into its own operations as well. For instance, a newly constructed Municipal Center is an example to the community that includes a rain garden, cistern, infiltration beds, green roof, planter boxes, and permeable pavers in the parking lot to achieve a net zero runoff from the site.

Additional Information

- A copy of the flyover mapping RFP is available at MichEEN.org under the Michigan Green Communities group.
- Visit a2gov.org/storm for more information on rate structure, available credits, and more.



Michigan Green Communities is a network of local government and university staff that collaborate with one another, through peer learning and information sharing, to promote innovative solutions and move sustainability initiatives forward at the local, regional, and state level.

For questions or information, visit greenchallenge.mml.org or contact Laura Matson (lmatson@a2gov.org).