



Stormwater utilities support the development of green infrastructure to manage stormwater, like this bioretention system in Somerset, NJ. Source: Maser Consulting, 2020.2018.

Stormwater Utilities Can Facilitate Green Infrastructure

Issued by the Jersey Water Works Stormwater Utility
Subcommittee and Green Infrastructure Committee

Updated October 2024

Introduction

The Jersey Water Works Green Infrastructure Committee envisions a future in which green infrastructure is incorporated into developments across the state, leading to reduced flood risk, improved water quality, more walkable streets, and healthier communities. The Asset Management and Finance's Stormwater Utilities Subcommittee updated this memo to help towns understand the ways in which stormwater utilities can help them build green infrastructure. Take a look at the resources in this document, consider a stormwater utility, and help your community make a healthier New Jersey a reality!

Stormwater utilities can support the construction of green infrastructure, like this green roof in Cape May, NJ. (Photo credit: Andrew Tabas)



Why Should Municipalities Consider Stormwater Utilities?

Stormwater runoff in New Jersey often causes flood damage to properties and pollutes waterways. Green infrastructure (GI) stormwater management practices can mitigate these impacts by storing and infiltrating stormwater locally, allowing it to drain into the ground, while providing environmental, economic, and community benefits. To incentivize and help fund GI to maximize these benefits, New Jersey localities can now consider implementing stormwater utilities, as a dedicated funding source for stormwater management.

What is Green Infrastructure?

GI is a set of water management methods that mimic the natural water cycle to enable stormwater and melting snow to soak into soils near where they fall or to be captured for beneficial reuse, such as irrigation. GI stands in contrast to traditional gray infrastructure, like pipes and detention basins, designed to convey water rapidly away from where it falls to a location where it flows into streams and rivers. The NJ Stormwater Rule (NJAC 7:8) requires the use of GI in new major developments. Methods for stormwater capture include rain gardens (bioretention systems), pervious pavement, planted swales, street tree trenches, green roofs, cisterns, and rain barrels. The table below shows some of the numerous benefits of GI.

Benefits of Green Infrastructure		
Economic	Environmental	Community/Public Health
• Provides long-term savings • Reduces damage from localized flooding and erosion • Increases property values • Creates job opportunities for installation and maintenance	• Filters pollutants to improve water quality • Reduces stream damages • Increases groundwater recharge • Captures carbon dioxide (a greenhouse gas) in plant and soil materials • Provides pollinator habitat	• Meets public demand for sustainable development • Cools urban areas • Creates recreational spaces • Beautifies spaces
		

GI brings economic, environmental, and health benefits to communities. Source: GI Municipal Toolkit.



What is a Fee-based Stormwater Utility?

Stormwater utilities are designed using specific funding methods. A fee-based stormwater utility is a dedicated funding mechanism created to support the development, operation, and maintenance of stormwater infrastructure. A fee-based stormwater utility does not need to involve the creation of a new organizational infrastructure; often, the stormwater fees support work by existing engineering and public works departments, sewer utilities, parks department, and utility authorities. Property owners typically are charged a fee based on the amount of the property's impervious surfaces, such as concrete, rooftops, and pavement, which generate stormwater runoff, with the opportunity for credits if they manage their own stormwater onsite effectively.

This approach has two benefits. First, a stormwater utility is funded by all property owners who generate stormwater, not just those who pay property taxes. The only exception for exemption is specific types of agriculture. Second, property owners who manage their own stormwater through onsite retention are treated equitably.

Stormwater utilities are an especially equitable solution for funding stormwater management in the 21 New Jersey municipalities that have combined sewer systems. In these areas, the sewers receive flow not only from buildings but also from large impervious surfaces like parking lots. Without a stormwater fee, the sewer system ratepayers end up paying higher sewer bills to manage stormwater they didn't create.

The revenue from the fee provides a stable, dedicated source of funding for managing stormwater infrastructure; the revenue must be used for these purposes. The governing body that establishes the stormwater utility decides which stormwater management functions will be supported by the fee, such as routine operations and maintenance, capital improvements, and/or green infrastructure. According to a [recent study](#), the average monthly fee for a single-family home in the U.S. states with stormwater utilities is \$6.19, with a median fee of \$5.00.

Stormwater utilities are a popular solution to fund and manage stormwater challenges. Throughout the United States, more than 2,500 communities in [43 states](#) plus Washington, D.C. have established stormwater utilities and adopted stormwater or flood defense programs to help manage flooding, reduce stream damages, and improve water quality.

Thanks to legislation passed in 2019, New Jersey localities, including municipalities, counties, groups of municipalities, and sewerage and improvement authorities can create stormwater utilities. After five years, New Brunswick has become the first municipality in New Jersey to form a stormwater utility, which is projected to generate \$7.05 million in revenue over the next 5 years to be used for flood mitigation projects, including green infrastructure.



Bioswale in Asbury Park, New Jersey
Source: New Jersey Future

How Can Stormwater Utilities Incentivize Green Infrastructure?

Stormwater utilities can incentivize GI by offering fee reductions to property owners, leveraging as match dollars for grants, and funding outreach and education.

Fee Reductions to Property Owners

Stormwater utilities can incentivize GI by offering fee reductions (credits) to property owners. NJDEP guidance explains that New Jersey stormwater utilities are required to offer credits for properties that use GI. The following four descriptions of stormwater utilities in other states provide examples of incentivizing GI with fee reductions:



Ann Arbor, MI:

The City of Ann Arbor implemented a stormwater utility that provides several million dollars per year to fund GI, including about \$250,000 per year for maintenance. As part of the program, residents can earn stormwater credits by using rain barrels, building rain gardens, and more. For example, installing rain barrels can reduce the stormwater fee by \$3.06 every quarter of the year. Similarly, using rain gardens can reduce the fee by \$6.35 per quarter. All told, the City's GI installations infiltrate millions of gallons of water into the soil per year, reducing flooding and improving water quality in the Huron River. One benefit of Ann Arbor's stormwater utility is that it generated \$1.3 million to capture stormwater on [Miller Ave.](#)

Williston, VT:

A small town in Vermont created a designated funding source to support its stormwater program and to hire a Stormwater Coordinator. [Credits are offered](#) for residents that take specific, approved actions that reduce the impact of stormwater runoff on the area or provide an ongoing public benefit, including six specific GI practices. The town developed a [flow chart](#) to help property owners determine their fee. See the town's [Stormwater Fee Customer Service Manual](#) for more information.

Prince George's County, MD:

Prince George's County implemented a stormwater utility (the "Clean Water Act Fee") to provide funding for long-term construction and maintenance of GI projects through an innovative [public-private partnership](#). The county uses an [administrative fee and an impervious area fee](#). The impervious area fee can be reduced through the installation of GI. The GI can be located on-site or off-site within the same drainage area. A rebate program, the [Rain Check Rebate Program](#), provides funding for GI installation.

Lancaster, PA:

The City of Lancaster released an [extensive plan for green infrastructure in 2011](#). Its Green Infrastructure Advisory Committee recognized the need for a dedicated funding source to implement the plan and recommended a stormwater utility (called a "stormwater management fee"), which the City [approved in 2014](#). The fee incentivizes owners of commercial property to install GI by providing fee reductions of up to 50% per year for properties that use GI solutions. With the funds collected through the fee, Lancaster is able to provide a local match for state or federal grants to install GI and \$2,500 grants to residential property owners. In addition, Lancaster offers rebates to lower the cost of constructing GI.

Lancaster, PA: (con't)

The City's implementation of a stormwater fee that incentivizes GI has reduced combined sewer overflows, decreased the likelihood of regulatory violations, and improved the beauty of the town's streets. Lancaster's stormwater utility has enabled the City to construct 140 rain gardens and install permeable pavement in alleys, streets, and parking lots.

This rain garden in Manville, NJ treats stormwater from the road. (Source: Loana Mendez-Solano)





Grant Match Funding

Fees collected from a stormwater utility can be leveraged as matching funds in grant applications. Many grant applications require a 15 to 50 percent match, either cash or in-kind, as well as a commitment to long-term maintenance of the project site. There are numerous grant programs that seek to fund the planning, design, and construction of GI projects, including the [National Fish and Wildlife Foundation](#), [NJDEP 319\(h\) grants](#), and [FEMA Building Resilient Infrastructure and Communities \(BRIC\)](#). Having funds dedicated to stormwater and GI projects available for match funding will make the grant application much more competitive and may result in more GI projects being built within the utility service area.

Outreach & Technical Support

Fees collected can be used to launch campaigns to educate the public and businesses about the benefits of green infrastructure, how it works, and available incentives. Funds can be used to provide technical support to property owners, developers, and contractors on the design, installation, and maintenance of GI. This could include workshops, online resources, or one-on-one consultations.

How Can Stormwater Utilities Pay for Stormwater Permitting Requirements?

The revised [Tier A Municipal Separate Storm Sewer System \(MS4\) permit](#), effective January 1, 2023, reflects a shift toward watershed-level planning to address water quality issues and flooding to better protect communities from the impacts of climate change. A significant change from the previous permit is the inclusion of the Watershed Improvement Plan (WIP) requirement, which is aimed at addressing nonpoint source pollution and identify water quality improvement projects.

A WIP describes the actions the municipality will take to improve water quality in water bodies that have total maximum daily loads (TMDLs), improve water quality in water bodies listed as impaired, and reduce or eliminate flooding. These actions will require the identification, planning, and implementation of stormwater improvement projects. A stormwater utility can provide the funding to ensure the WIP is robust and results in the implementation of stormwater improvement projects, including GI.

The MS4 permit requires a Public Education and Outreach Program to ensure public involvement in educational and pollution prevention activities regarding the impacts of stormwater discharges on surface and groundwater, as well as how to reduce pollutants in stormwater and mitigate flow. Municipalities are required to conduct activities from at least three of the five categories listed in Attachment A of the Tier A MS4 permit, where at least one activity is required to involve educating businesses and the public about hazards associated with illicit connections and improper disposal of waste. Stormwater utility fees could be used to develop and promote demonstration projects that showcase successful GI installations to serve as educational tools and inspire others to adopt similar practices.

Check out New Jersey Future's [MS4 Primer](#) for a full outline of MS4 permitting requirements.



What are some other ways to incentivize green infrastructure?

Even if your town doesn't have a stormwater utility, there are ways to [incentivize green infrastructure](#). Here are some ideas:



01

Grants

Grants given to developers, commercial property owners, and homeowners to install GI can make it more affordable. The [funding](#) page in the Green Infrastructure Municipal Toolkit provides information on grants.



02

Design Help

Municipalities can provide design help for developing GI. The Rutgers Cooperative Extension's Water Resources Program has produced many resources to help with GI design, construction, and maintenance, including its [Green Infrastructure Guidance Manual](#) and [Rain Garden Manual](#) for New Jersey.



03

Application Fee Waiver and/or Accelerated Review

Municipalities can use development application fee waivers and accelerated review times to encourage projects. For example, [Chicago](#) rewards environmentally friendly projects with faster review times. Time is money!



04

Rebates

Localities may offer direct subsidies, reimbursements, or tax credits to make GI more affordable. Other incentives can be offered to developers for creating buildings with green roofs and other retention, infiltration, or rainwater harvesting systems. Washington, DC, for example, offers a [stormwater retention credit trading program](#).

What are some other ways to incentivize green infrastructure? (cont.)

05

Strengthened Stormwater Ordinances

New Jersey towns can use enhancements to their Stormwater Control Ordinances to require GI on more development projects, consistent with and going above and beyond current NJDEP stormwater management requirements.

06

Awards Programs

Awards programs reward innovation and increase awareness of GI projects. New Jersey Future's Smart Growth Awards, as well as Sustainable Jersey's certification program, are examples of awards programs that provide recognition for innovative development. Any municipality, whether it has a stormwater utility or not, can develop its own awards programs.

Additional Information



The [Stormwater Utility Resource Center](#) and New Jersey's [Stormwater Utilities Guidance](#) provide valuable information on stormwater utilities. For more information, check out these sites:

- [Building Community Resilience with Nature-Based Solutions \(FEMA\)](#)
- [Five Types of Green Infrastructure Incentive Programs \(WEF\)](#)
- [Green Infrastructure Municipal Outreach and Technical Assistance Program \(Rutgers\)](#)
- [Green Infrastructure Municipal Toolkit](#)
- [Green Streets Case Studies \(JWW\)](#)
- [Managing Wet Weather with Green Infrastructure: Municipal Handbook: Incentive Mechanisms \(USEPA\)](#)
- [New Jersey's Stormwater Utilities Guidance](#)
- [Residential Stormwater Planning \(City of Ann Arbor\)](#)
- [Stormwater Utilities Resource Center \(Homepage\)](#)
- [Successful and Beneficial Green Infrastructure \(JWW\)](#)
- [Unlocking Green Infrastructure Financing](#)

This new bioretention basin will help manage stormwater on-site. The development of stormwater utilities can help encourage this and other green infrastructure practices. Source: Bluegrass Landscape and Maintenance, 2018.



Acknowledgements

The Jersey Water Works Stormwater Utilities Subcommittee and Green Infrastructure Committee spearheaded the update of this project. The following members contributed to this project: Bill Cesanek, Brianne Callahan, Chris Obropta, Jennifer Duckworth, Kirk Barrett, Kelley Curran, Michele Langa, Dana Patterson Gear (Current Co-chair), Dan Van Abs, and Lindsey Massih.

About Jersey Water Works

Jersey Water Works is working to transform New Jersey's inadequate water infrastructure through sustainable, cost-effective solutions that provide communities with clean water and waterways; healthier, safer neighborhoods; local jobs; flood and climate resilience; and economic growth. The Green Infrastructure Committee's goal is to increase the number of communities that employ green infrastructure to maximize benefits including reduced flooding and improved water quality, local economies, community health, and long-term resiliency.



jerseywaterworks.org 
info@jerseywaterworks.org 
jerseywaterworks 