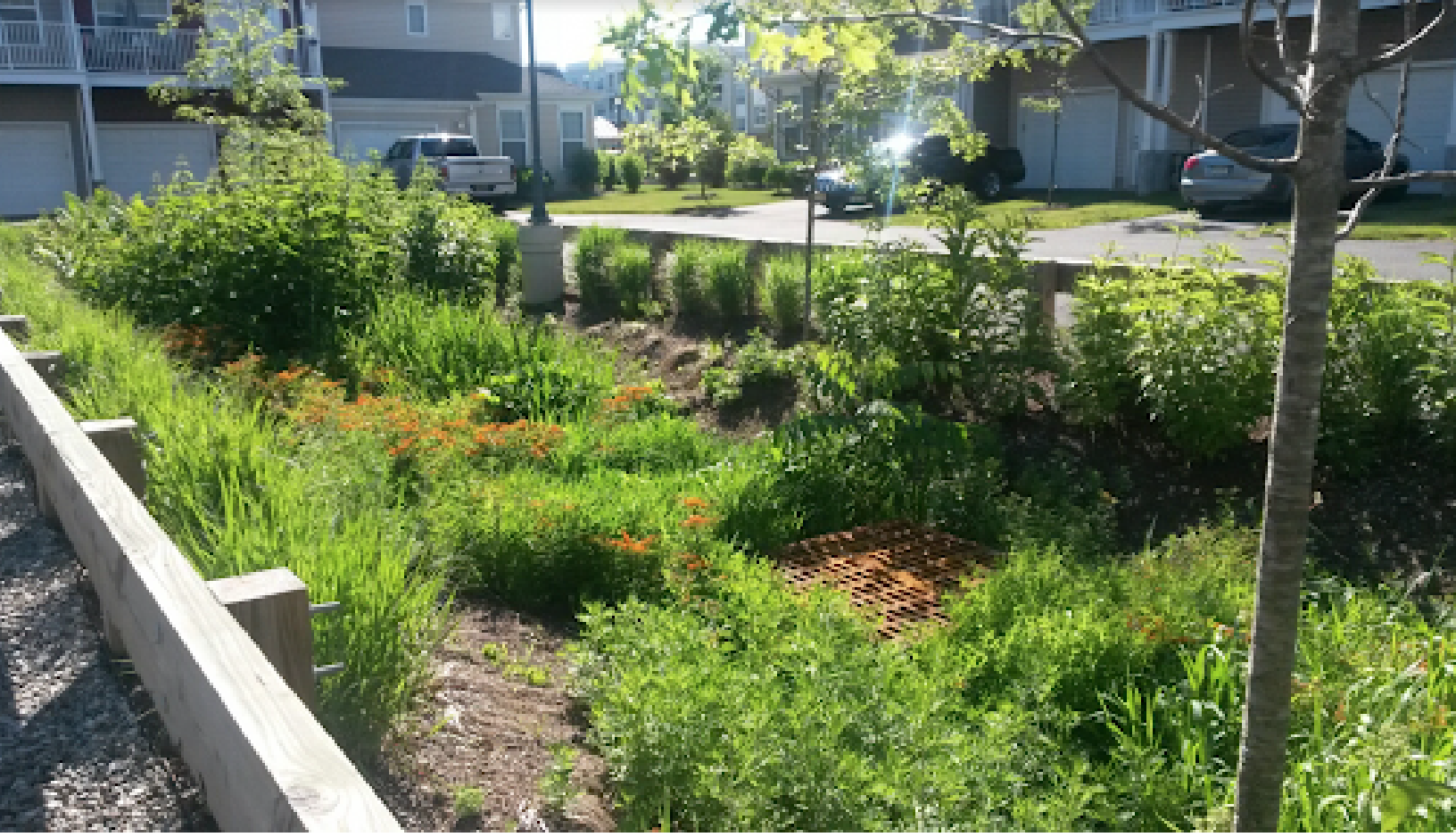


Stormwater utilities support the development of green infrastructure to manage stormwater, like this bioretention system in Somerset, NJ. Source: Maser Consulting, 2020.2018.

Stormwater Utilities can Incentivize Green Infrastructure

Issued by the Jersey Water Works Green Infrastructure Committee

Date: October 2021

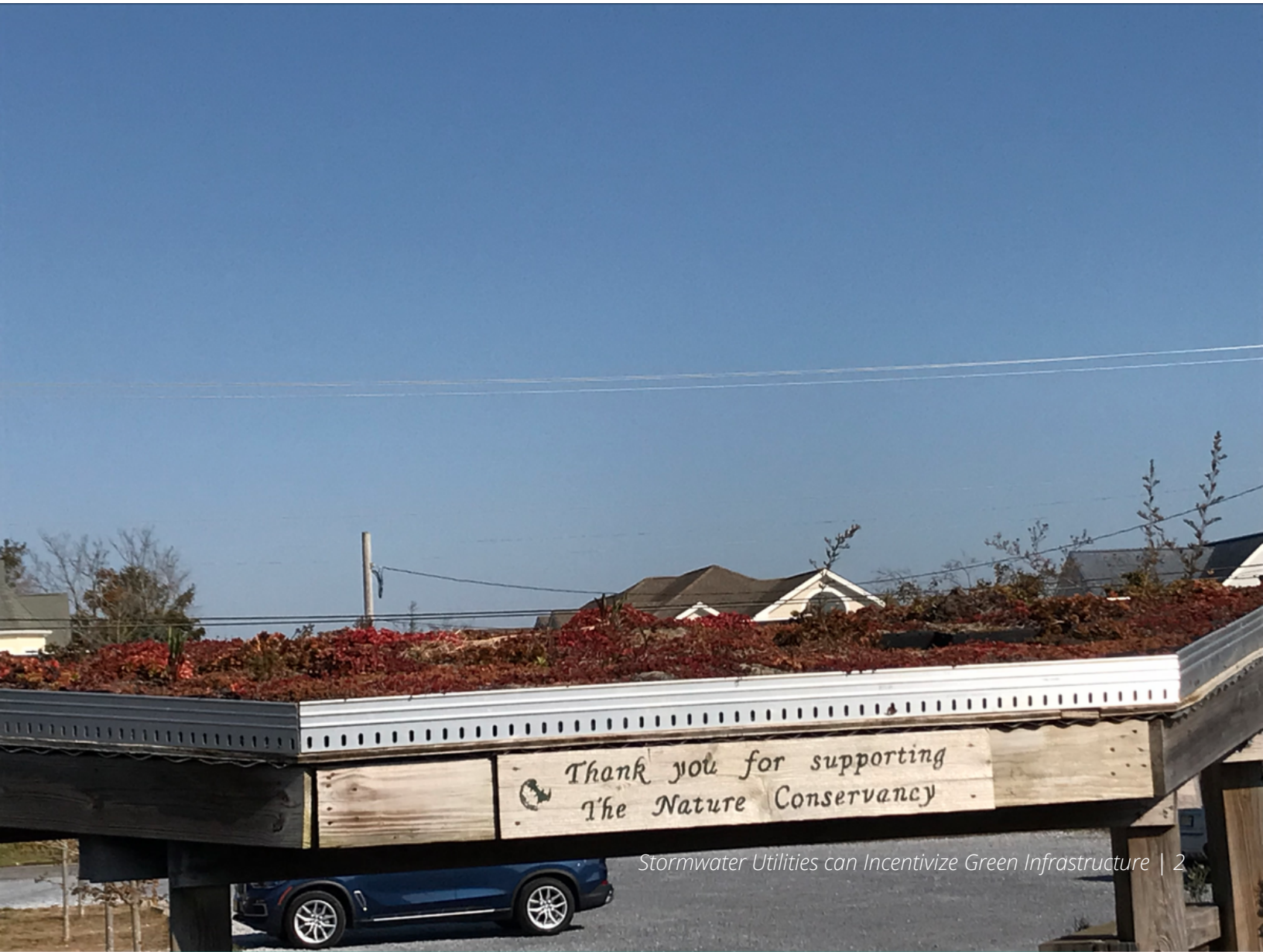
JERSEY WATER WORKS

Smart infrastructure. Strong communities.

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 Committee's Stormwater Utilities Subcommittee developed 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, compromises public safety, and pollutes waterways. Green infrastructure (GI) can mitigate these impacts by infiltrating stormwater onsite (allowing it to drain into the ground), while providing environmental, economic, and community benefits. New Jersey localities can now consider implementing stormwater utilities, which can incentivize and help fund GI to maximize these benefits. Stormwater utilities can also fund more traditional gray stormwater infrastructure.

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 a beneficial reuse, such as irrigation. GI stands in contrast to traditional gray infrastructure (e.g., pipes), which is designed to convey water rapidly away from where it falls and collects. The NJ Stormwater Rule (NJAC 7:8), which went into effect in March 2021, requires the use of GI in new major development. Methods for stormwater capture include rain gardens (a.k.a. bioretention systems), pervious pavement, planted swales, street tree trenches, green roofs, and storage systems, such as 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 • Increases property values	• Filters pollutants to improve water quality • Increases groundwater recharge • Captures greenhouse gases	• Meets public demand for sustainable development • Reduces urban heat island effect • Creates recreation spaces • Creates maintenance job opportunities
		

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

What is a Stormwater Utility?

A 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 creation of a new organizational infrastructure; often, the stormwater fees support work by public works departments, sewer utilities, and utility authorities. User fees from property owners are based on the amount of the property's impervious surfaces, such as concrete, rooftops, and pavement, which generate stormwater runoff. The revenue from the fee provides a stable, dedicated source of funding for stormwater infrastructure. According to a recent study, the average monthly fee for a single-family home in the U.S. is $5.87. Stormwater utilities ensure that everyone pays their fair share for their generated runoff and can receive credit for onsite retention. Stormwater utilities are an equitable solution for funding stormwater management, especially in areas with combined sewer systems. In these areas, wastewater treatment plants treat runoff from large impervious surfaces like parking lots. Without a stormwater fee, the ratepayers end up paying for the stormwater treatment through higher sewer bills.

Stormwater utilities are a popular solution to fund and manage stormwater challenges. More than 1,800 communities in 40 states across the U.S. 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 (municipalities, counties, groups of municipalities, and sewerage and improvement authorities) now have the ability to create stormwater utilities. The Stormwater Utility Resource Center and New Jersey's Stormwater Utilities Guidance provide valuable information on stormwater utilities.

How Can Stormwater Utilities Incentivize Green Infrastructure?

Stormwater utilities can incentivize GI by offering fee reductions to property owners. NJDEP guidance explains that New Jersey stormwater utilities are required to offer credits for properties that use GI. Here are four examples of stormwater utilities in other states 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.

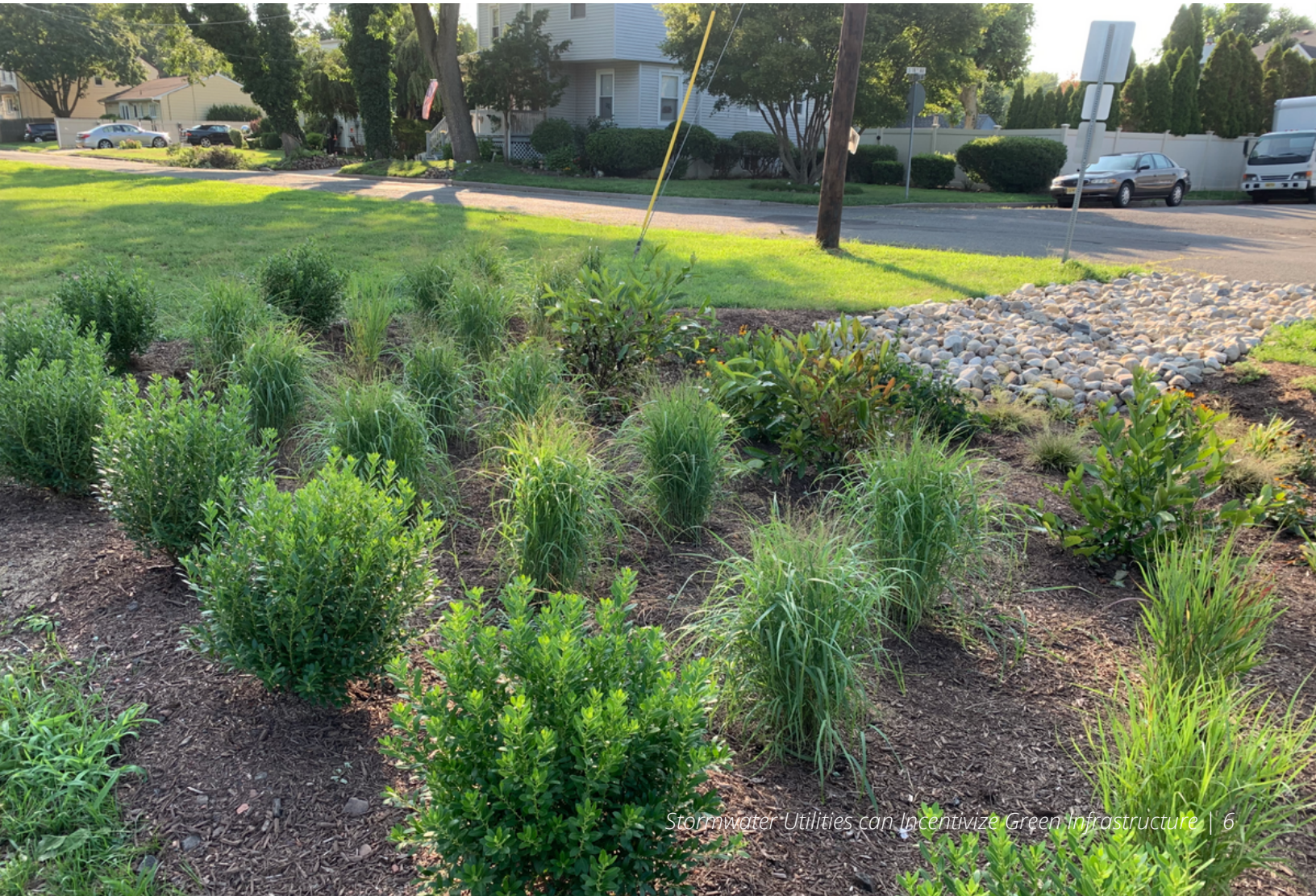
Lancaster, PA:

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)



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 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. Rutgers has produced many resources to help with GI design, construction, and maintenance, including its Green Infrastructure Guidance 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.

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, D.C., for example, offers a rebate of $15 per square foot for green roof construction.

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

05

Strengthened Stormwater Ordinances

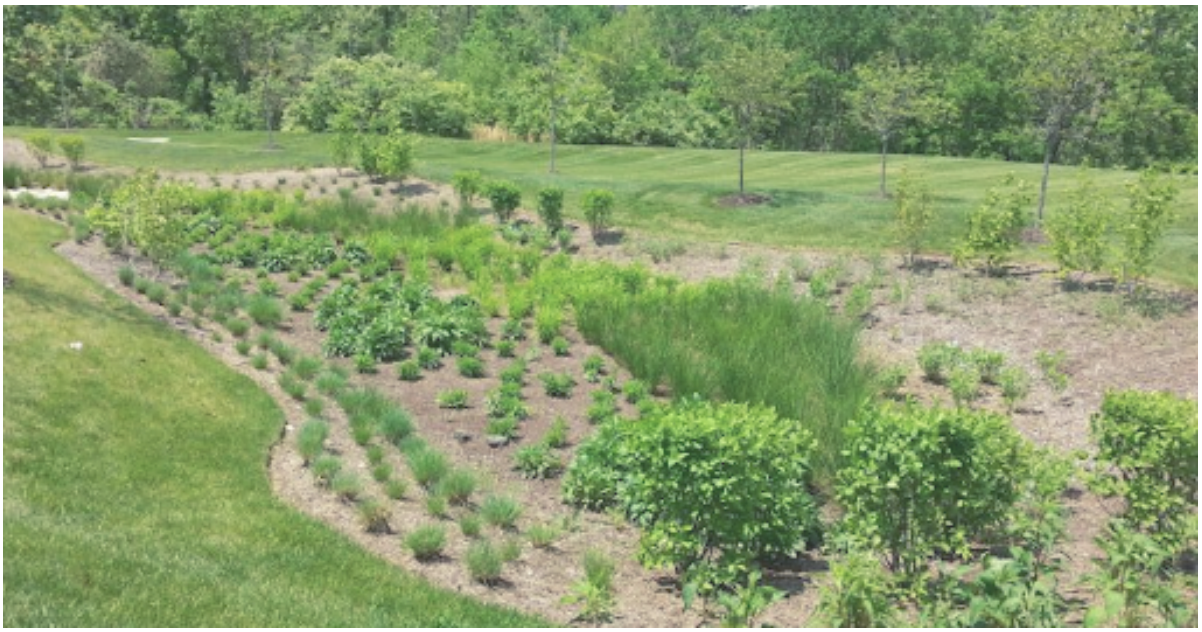
New Jersey towns can use enhancements to their Stormwater Control Ordinances to require GI on more development projects, consistent with and going above and beyond current NJDEP stormwater management requirements.

06

Design Help

Awards Programs: These 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



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 Green Infrastructure Committee's Stormwater Utilities Subcommittee spearheaded this project. The following members contributed to this project: Bill Cesanek (Chair), Brianne Callahan, Chris Obropta, Jennifer Duckworth, Kirk Barrett, Kelley Curran, Michele Langa, and Andrew Tabas (backbone staff).

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.

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