Stormwater Funding and Financing Webinar Series

Stormwater Infrastructure Funding and Equity
July 27, 2021, 2:00 – 3:00 PM EDT
Zoom Tips

• All participants will be muted during presentations

• Ask questions via the Q&A function or live:
  • Submit questions any time during presentations via the Q&A function
  • Raise your hand to ask a live question during Q&A (time permitting)

• For tech support, please email: meetings@erg.com
Agenda

• Welcome and introductions
• Background on the Water Finance Center
• Featured speakers on frameworks and approaches to stormwater funding and equity
  • April Mendez, Greenprint Partners
  • Andy Kricun, Moonshot Missions
  • Brian Hahn, New York State Environmental Facilities Corporation
  • Ellen Kohler, University of Maryland Environmental Finance Center
• Q&A

This webinar will be recorded and made available on the EPA website at a later date.
Getting the most good out of green infrastructure

EPA Stormwater Funding and Equity Webinar
July 27, 2021
Today’s Goals

1. Consider what “equitable green stormwater infrastructure” is

2. Engage with three case studies that demonstrate concrete examples of building equitable green infrastructure and associated funding/financing mechanisms
Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

JANUARY 20, 2021 • PRESIDENTIAL ACTIONS

$70B needed over the next 20 years

Failures disproportionately impact low-income communities of color

Addressing inequity, especially in the face of climate change, is finally a national and local priority
And procurements today reflect a national push for more equitable stormwater infrastructure.

Examples of equity aims:
1. Build capacity for communities to originate their own GSI projects and identify where they want to see GSI.
2. Prioritize community benefits and design options for GSI projects; own the big picture of what co-benefits the facilities should achieve.
3. Advocate for continued and growing investment in GSI.
4. Build trust between the general public and the utility/local government.
Greenprint Partners is a green infrastructure delivery partner. We’re on a mission to get the most good out of green infrastructure.
How do we get the most good out of green infrastructure?
An Equity-Centered GSI Framework “In Progress”

This work is contributing to the development of a framework to guide GSI practitioners in decision-making and evaluation of equity-centered practices.

The Framework intends to:
- Serve GSI Practitioners, both utilities and community-based
- Make the case for equity as a driver for GSI program design
- Be grounded in community perspectives
- Be grounded in the realities of resources available to GSI practitioners
- Elevate best practice examples
- Provide a core set of metrics that GSI practitioners should consider tracking to measure their programs’ effectiveness
- Provide decision-making and evaluation tools that practitioners can quickly put into practice
MODULE 1

GSI staff understand equity and are committed and equipped to advance it through their work.

Institutionalizing equitable practices is impossible without a shared commitment among the team to collectively evolve culture, policies, and practices.

WHY?

Build internal capacity for staff to center equity in GSI programs and projects.

HOW?

1
MODULE 2

Community members are essential partners and participants in all GSI program, policy, and project development.

WHY?

One of the most fundamental actions practitioners can take is to meaningfully engage representative community stakeholders throughout GSI planning and delivery.

HOW?

1. Develop and maintain a community engagement plan that combines historical input with refreshed input from representative community voices.

2. Engage community stakeholders as essential partners in the upfront planning and design of as many GSI program plans, policies, and projects as possible.

3. Engage community stakeholders as essential and informed partners, building trust and managing change through consistent engagement and communication.
One of the most powerful ways of advancing equity is through direct investment in communities experiencing inequity. Siting and planning is a phase where this discussion should take place.

1. Prioritize siting GSI in areas with the greatest potential to advance equity, co-creating the project siting approach with community input.

2. Develop project budget levels and funding decisions that take into account the potential equity improvement value of a project and the resources needed to realize that potential.
MODULE 4

Gentrification and displacement risk are proactively addressed in all GSI program, policy, and project development.

Low income communities and communities of color deserve to benefit from GSI without fear of being displaced by its installation.

**WHY?**

Where gentrification / displacement may be a real / perceived risk, proactively engage in risk mitigation dialogue with the impacted community; include experts in the conversation.

Develop an anti-gentrification and displacement plan for each program and project.

Create an approach to evaluating the extent to which a GSI may have contributed to gentrification / displacement.

Catalyze multi-agency conversations about the role that policy plays in combating green gentrification.

**HOW?**
Different types of green infrastructure contribute to different social and environmental co-benefits. And design can have significant economic, cultural, and displacement impacts.

1. Center community members as essential partners and participants in the design and development of all GSI projects.
2. Refine and apply technical design standards to articulate and prioritize design choices that advance equity.
3. Ensure that construction quality delivers on the benefits and priorities that were agreed to with impacted community stakeholders.
4. Minimize and communicate construction-related disruptions in a way that builds trust and relationship with impacted community members.
5. Develop a plan and budget for maintenance early in the design phase.

GSI projects are designed, constructed, and maintained to provide lasting community benefit.
GSI procurement, employment, and workforce development strategies build economic stability and wealth for underinvested communities.

GSI involves significant investment in a local workforce and assets, and is especially accessible to new workers through job training and other workforce development strategies.

**WHY?**

Identify and develop an action plan to eliminate barriers for SWMBE firm, local, and hyper-local hiring and sourcing.

Assess current % of supply purchases that source from local firms and develop and implement an action plan to increase over time.

Create or improve a GSI workforce development program with a clear understanding of the barriers that prevent disadvantaged populations from accessing employment in the water sector, recruitment and program models that are most effective at overcoming those barriers, and sufficient resources to effectively recruit for, run, and evaluate a best practice program.

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3. Create or improve a GSI workforce development program with a clear understanding of the barriers that prevent disadvantaged populations from accessing employment in the water sector, recruitment and program models that are most effective at overcoming those barriers, and sufficient resources to effectively recruit for, run, and evaluate a best practice program.
Equity planning should be built into program design and policies upfront to avoid uphill battles of retrofitting an existing program to become more equitable.

**WHY?**

1. Compare the potential equity value of program and policy options to select equity-centered models.
2. Build equity planning into program design upfront to avoid the uphill battle of retrofitting an existing program to become equitable.
3. Develop and implement a public reporting plan that shares program and project results, with explicit transparency on 1) activities undertaken to proactively advance equity, 2) results to date, and 3) work yet to be done.
CASE STUDIES
COMMUNITY ANCHOR RETROFITS

Supporting dozens of community anchor institutions from coast to coast to retrofit their properties with grant-funded GSI.
COMMUNITY ACTIVATION
Greenprint Partners builds knowledge sharing, community authorship, celebrations, and storytelling into each project to engage core stakeholders, the surrounding community, and the general public. We set high standards representative participation, and measure success.

BENEFITS-DRIVEN DESIGN
The benefits-driven design process builds capacity for community members to identify and prioritize the GSI co-benefits they want to maximize, the collaboratively works to achieve their vision.

HIGH IMPACT SITE SELECTION
Greenprint seeks community anchor sites primarily in low income neighborhoods and communities of color where stormwater challenges and environmental injustices often intersect.
RESULTS

23
GSI developments currently in design, construction, and maintenance across 7 cities, with 20 more in pre-development.

75%
of projects are located in low income census tracts

90%
of projects are located in communities of color

100%
Designed in partnership with representative stakeholders to maximize their prioritized co-benefits.
GREENPRINT PARTNERS

FUNDING AND FINANCING

PREDEVELOPMENT FINANCING
Greenprint uses mission-driven grant or recoverable grant capital to cover the costs of predevelopment.

DELIVERY FINANCING
Greenprint secures external mission-driven financing to bridge between project award and utility payment.

UTILITY RATEPAYOR FUNDING
Utilities use rate revenue to pay for the projects, in advance, at completed milestones, or upon final delivery.
THE WELL FARM | PEORIA, ILLINOIS

This once-vacant municipal property is in one of America’s poorest 100 zip codes. Today it’s a multi-benefit green infrastructure hub that manages 1.3M gallons of stormwater each year through a stormwater forest, bioswale, and 100 raised garden beds.
COMMUNITY AUTHORSHIP
The final design was the result of regular guidance with community stakeholders and advisors, including public meetings in which neighbors provide input and feedback as the project progressed.

IMPACT-DRIVEN SITE SELECTION
As one of the 100 poorest zip codes in the nation, Peoria's south side is home to the city’s most concentrated minority and low-income population, and is most impacted by flooding and combined sewer overflows.

BENEFITS-DRIVEN DESIGN
The final design reflected the priorities of food security, health, and workforce development.
The end result was a working farm that provided training and income for resident apprentices and fresh produce and a place to be outdoors and active for local residents.
DEMONSTRATION FUNDING
Greenprint secured a $1M CIG grant and $1M in inkind match to plan and implement the Well Farm project as an early demonstration of multibenefit approaches to GSI.

UTILITY RATEPAYOR FUNDING
Peoria's Stormwater Utility will fund repayment of SRF and other financing sources for future GSI built under their CSO Consent Decree.
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HEALTH-FIRST GSI | PHILADELPHIA, PA
Unlocking healthcare as a source of GSI funding by developing a health-first GSI plan to achieve investment-inspiring evidence that well-designed green infrastructure in Philadelphia drives positive outcomes on the health priorities that matter to communities, health plans, and health providers.
GREENPRINT PARTNERS

FUNDING AND FINANCING
We gratefully acknowledge that funding for this project is provided through a grant from William Penn Foundation.

PLANNING FUNDING
Greenprint secured grants from the William Penn Foundation to establish the case for the project and engage health, GI, and community stakeholders in a collaborative planning process.

TBD

APPLIED RESEARCH FUNDING
Health stakeholders, foundations, utility, and other partners.

TBD

SCALING FUNDING AND FINANCING
Health stakeholders, foundations, utility, and other partners provide funding through a structured pay-for-performance mechanism.
Environmental Facilities Corporation

EPA Stormwater Funding and Equity Webinar
July 27, 2021

Andrew M. Cuomo
Governor

Joseph J. Rabito
President & CEO
EFC Overview

- Public benefit corporation which provides financial and technical assistance primarily to municipalities by providing low-cost financing for their water quality infrastructure projects
- EFC administers a number of programs including New York’s State Revolving Funds
- These programs have provided over $34 billion in low-cost financing and grants for approximately 3,000 water and sewer infrastructure projects across New York State
Green Innovation Grant Program (GIGP)

- GIGP grants are awarded on a competitive basis to projects that improve water quality and mitigate climate change through green stormwater infrastructure, energy efficiency and/or water efficiency.

- The GIGP helps EFC meet the CSWRF Green Project Reserve (GPR) requirements and aids in the implementation of the NYS DEC Nonpoint Source Management Program, which was developed in accordance with Section 319 of the Federal Clean Water Act.

Since 2009

$130 Million disbursed to over 230 GIGP projects
# Program Priorities:

- **Climate Change Mitigation**
  - Reducing the effects of greenhouse gases and/or expand clean energy initiatives

- **Environmental Justice**
  - Advance fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to development, implementation, and enforcement of environmental laws, regulations and policies.

- **Integration**
  - Integrating green stormwater into traditional gray clean water infrastructure projects

- **Natural Restoration**
  - Riparian buffers, streams, and wetlands

- **Transformation**
  - Utilize green practices to provide multiple environmental, economic and social benefits
  - These projects align with larger goals of the community or region
Green Stormwater Infrastructure

Eligible costs are limited to planning, design and building of capital water quality projects through one of the following eight specific green infrastructure practices:

- Bioretention
- Establishment or Restoration of Floodplains, Riparian Buffers, Streams, or Wetlands
- Downspout Disconnection
- Green Roofs and Green Walls
- Porous Pavements
- Stormwater Harvesting & Reuse
- Stormwater Street Trees/ Urban Forestry
- Stream Daylighting
Green Innovation Grant Program

**Project Title:** Canal Square Park  
**Grant Recipient:** City of Cohoes  
**Total Project Amount:** $1,540,800  
**EFC Grant Amount:** $415,000  
**GIGP Round:** 2017

**Project Description:**

The City of Cohoes used GIGP funds to install bioretention, porous pavement and a rainwater harvest and reuse system as part of a larger project to revitalize Canal Square Park.

These green infrastructure practices filter and reduce stormwater from entering the City’s combined sewer system.

The new Canal Square Park is used for community events in an environmental justice area, including a free concert series during the summer.
Contact Information

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IMPLEMENTING AND FUNDING STORMWATER MANAGEMENT IN AN EFFECTIVE AND EQUITABLE MANNER

Andrew Kricun, P.E.
Managing Director, Moonshot Missions
Senior Fellow, US Water Alliance

July 27, 2021
LOCALIZED AND COMBINED SEWAGE FLOODING IN CAMDEN, NJ FROM A 1-INCH RAIN EVENT
COMBINED SEWER SYSTEMS

- State of the art in the late 19th century, anachronistic with the advent of the automobile and subsequent paving of cities and towns

- Equitable solutions must:
  - Eliminate combined sewage flooding.
  - Minimize combined sewage overflows.
  - Address these issues while charging an affordable, equitable rate.
I. Optimize existing combined sewer system capacity
   i. Green infrastructure to capture stormwater and reduce the volume of flow entering the sewer system.
   ii. Optimizing maintenance to maximize sewer storage capacity.

II. Increase combined sewer system capacity
   i. Judicious sewer separation, where possible.
   ii. Judicious replacement with larger capacity pipes, where possible.

III. Expand receiving wastewater treatment plant
   i. Remove volumetric bottlenecks
   ii. Increase pumping to storage capacity
   iii. Secondary treatment bypass, where possible
BALDWIN’S RUN STREAM DAYLIGHTING PROJECT - BEFORE
BALDWIN’S RUN STREAM DAYLIGHTING PROJECT - AFTER
EQUITABLE FUNDING OF COMBINED SEWER SYSTEM SOLUTIONS

A. Minimize revenue required from all ratepayers through:
   - Operational Cost Efficiencies
   - Obtain grant and low interest loan funding
     - WIFIA
     - SRF
     - Open space grant funding

B. Obtain revenue equitably
   - implementation of a stormwater fee for impervious surfaces
STORMWATER FEES—AN ESSENTIAL COMPONENT OF AN EQUITABLE CSO STRATEGY

1) Stormwater can average approximately 40% of total volume received in a combined sewer system in a typical year.

2) 1 gallon of sewage + 1 gallon of stormwater = 2 gallons of sewage

3) If no one pays, then everyone pays

4) Inequitable apportioning is more disadvantageous to low-income households

Conclusion: It is essential to charge for impervious surface in a combined sewer system, in order to be equitable to all users, especially low-income households
SUMMARY

Equitable Combined Sewer Solutions Include:

1. Elimination of combined sewage flooding and overflows
2. Triple bottom line solutions, such as green infrastructure
3. Maximizing funding to reduce total revenue requirements
4. Stormwater fee to apportion revenue requirements fairly and equitably
THANKS FOR LISTENING!

If you would like more information, please contact:

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Capacity Building & Training
- Local Government Leadership Training
- On-line and Virtual Workshops
- www.mostcenter.umd.edu

Policy Analysis & Financial Assessment
- Policy Review
- Financing Strategies
- Budget Analysis
- Program Evaluation

Community Outreach & Facilitation
- Designing outreach campaigns
- Facilitating stakeholder engagement
- Conducting focus groups
- Managing community surveys and interviews
Stormwater Program Financing Strategy Components

**ACTIVITIES**
- Capital Improvements (BMPs)
- Operations and Maintenance
- Public Education and Involvement
- Technical Support
- Engineering and Planning
- Regulatory Compliance and Enforcement
- Administration
- Billing and Finance

**PARTNERS**
- Internal Municipal Partners (Parks & Rec, Roads, Admin)
- Municipal Committees (Open Space, Parks & Rec, Envtl Advisory)
- Existing Municipal Authorities
- Other Municipalities
- Watershed Organizations
- Conservation District
- County Planning Department

**REVENUES**
- General Funds
- CIP Funds
- Bonds
- Grants
- Fees
<table>
<thead>
<tr>
<th>Source</th>
<th>Cost Coverage</th>
<th>Strengths</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>Yes</td>
<td>Can be used to support all program costs</td>
<td>Competes with other community priorities, changes from year-to-year, less equitably spreads costs across payers</td>
</tr>
<tr>
<td>Grants</td>
<td>Yes</td>
<td>Good source for “shovel ready” project implementation, demonstration projects and initial program staff</td>
<td>Not guaranteed, highly competitive, suitable for demonstration projects, not sustainable in the long-term</td>
</tr>
<tr>
<td>SRF &amp; Loan Programs</td>
<td>Yes</td>
<td>Can offer up-front capital for larger projects</td>
<td>Not guaranteed fund source, highly competitive, must repay often with interest</td>
</tr>
<tr>
<td>Bond Financing</td>
<td>Yes</td>
<td>Can be used for large, long-term expenditures</td>
<td>Dependent on fiscal capacity, must repay with interest, cost of securing bond may be high</td>
</tr>
<tr>
<td>Permit, Development &amp; Inspection Fees</td>
<td>Yes</td>
<td>Offers nexus to system and program expansion needs</td>
<td>May not sufficiently cover program costs, may deter development</td>
</tr>
<tr>
<td>Stormwater Utility Fee</td>
<td>Yes</td>
<td>Can generate sufficient revenue, sustainable, dependable, equitable depending on design, support all program costs</td>
<td>Requires significant public dialogue, can create administrative challenges</td>
</tr>
<tr>
<td>Tax Districts</td>
<td>Yes</td>
<td>Can generate sufficient revenue, sustainable, dependable</td>
<td>Necessitates enabling statute, can have equity problems due to property value basis</td>
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</tbody>
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Funding Stormwater Maintenance
Climate Change and Equity

- Has the impacted community been consulted in identifying the problem and the solution?
- Is the solution designed so that the maximum benefit is being realized where the problem is located both in terms of project outcome and in terms of financing?
- What are the best financing mechanisms for this community – debt, rate increases, grants?


Observed Change in Very Heavy Precipitation
Federal Grant Programs

National Fish and Wildlife Foundation - National Coastal Resilience Fund (NOAA & EPA)

RCPP
Regional Conservation Partnership Program

Urban and Community Forestry Program

2021 National Urban and Community Forestry Challenge Cost Share Grant Program

The USDA Forest Service Announces the 2021 National Urban and Community Forestry Challenge Cost Share Grant Program. Proposals are due by April 16, 2021, 11:59 PM Eastern.

Applicants are required to contact their Forest Service Regional Program Managers prior to applying as they may provide program guidance and address application questions.

An estimated $21.5 million in grant funds are available to address two grant categories. All grant awards are based on the availability of funding. Download a PDF copy of the Notice for Proposals RCPP-Grant and apply on-line. Grant proposals must have a local implementation and be conducted in grant selection.

Grant Program Contact: Brenna Shilling
**State Grant Programs**

**VIRGINIA**

**Stormwater Local Government Assistance Fund**
- Provides matching grants to local governments for the planning, design, and implementation of stormwater best management.
- Can be used to meet Chesapeake Bay total maximum daily load (TMDL) requirements, local TMDLs and MS4 requirements.
- Covers capital projects, including (a) new stormwater best management practices, (b) stormwater best management practice retrofitting or maintenance, (c) stream restoration, (d) low-impact development projects, (e) buffer restoration, (f) pond retrofitting, and (g) wetlands restoration.
- Grants awarded for projects related to Chesapeake Bay TMDL requirements may take into account total phosphorus reductions or total nitrogen reductions. Grants awarded for eligible projects in localities with high or above average fiscal stress as reported by the Commission on Local Government may account for more than 50 percent of the costs of a project.

**PENNSYLVANIA**

**CFA H20 PA/Water and Sewer Program**
- Funding is for stormwater, drinking water and sanitary sewer projects using state gaming and tourism revenues.
- Minimum grant amount of $500,000 and a maximum of $20 million for any one project. Timeline cannot exceed 6 years.

**Dirt and Gravel/Low Volume Road Program**
- Funded through the Motor Vehicle License Fund.
- Managed by Conservation Districts.
- Implementation of environmental sensitive management practices for road runoff and road stream crossings.
Conclusions

• Need more sustained grant funding to address long-term inequities
• SRF funds are the most affordable source of debt financing
  • How much funding is available to communities that don’t have ability to support more debt (which probably also means can’t afford higher rates)?
  • Do the SRF programs support investments in natural infrastructure (rain gardens, stormwater basins, riparian buffers, tree canopy cover) as part of communities’ water infrastructure?
• State programs fill an important funding gap but they are opportunistic and may sustain inequities.
• Huge backlog of maintenance challenges without funding strategy to address; these challenges are even bigger in under-served and under-resourced communities
• Hard to get in the funding door without planning support
Questions & Answers
Thank you!

For additional questions and more information, please contact the Water Finance Center: waterfinancecenter@epa.gov

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