

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: <u>meetings@erg.com</u>

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

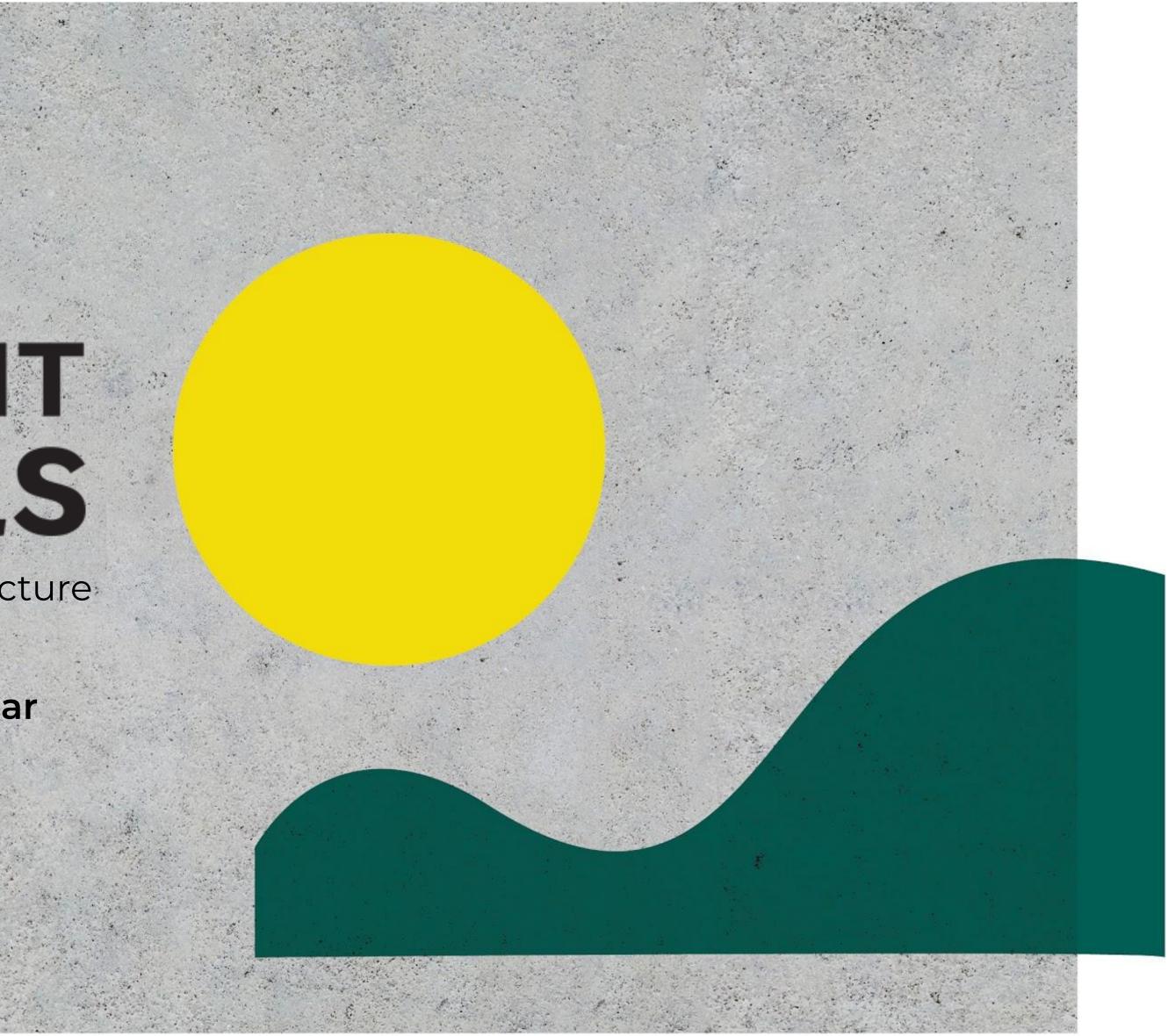
This webinar will be recorded and made available on the EPA website at a later date.

A GREENPRINT PARTNERS

Getting the most good out of green infrastructure

EPA Stormwater Funding and Equity Webinar July 27, 2021

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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













\$70B needed over the next 20 years

Failures disproportionately impact low-income communities of color

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Executive Order On Advancing Racial Equity and Support for Underserved **Communities Through the Federal** Government

ANUARY 20, 2021 • PRESIDENTIAL ACTIONS

Addressing inequity, especially in the face of climate change, is finally a national and local priority

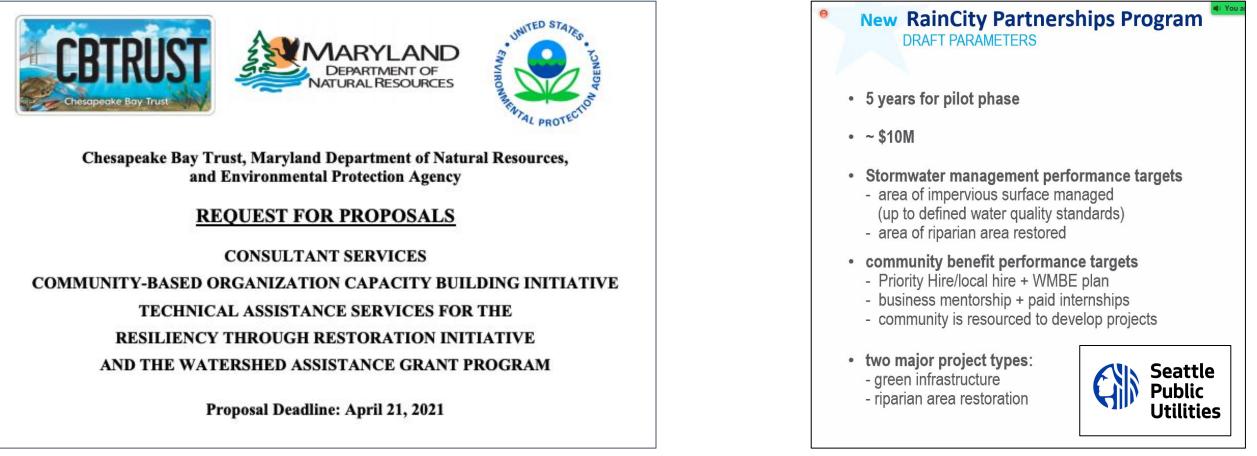




GREENPRINT PARTNERS And procurements today reflect a national push for more equitable stormwater infrastructure.



CITY OF MADISON



Examples of equity aims:

- 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.

1. Build capacity for communities to originate their own GSI projects and identify where they want to see



Greenprint Partners is a green infrastructure delivery partner. We're on a mission to get the most good out of green infrastructure.



INTRODUCING GREENPRINT PARTNERS



How do we get the most good out of green infrastructure?

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An Equity-Centered GSI Framework "In Progress"



the green infrastructure leadership exchange



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

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



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

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

MODULE 1



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





MODULE 2 Community members are essential partners and participants in all GSI program, policy, and project development.

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



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

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

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.

MODULE 3 Project selection approach and investment levels proactively consider potential to advance equity.



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

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.



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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.



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.





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

MODULE 5

GSI projects are designed, constructed, and maintained to provide lasting community benefit



Center community members as essential partners and participants in the design and development of all GSI projects.

Refine and apply technical design standards to articulate and prioritize design choices that advance equity...

Ensure that construction quality delivers on the benefits and priorities that were agreed to with impacted community stakeholders.

Minimize and communicate construction-related disruptions in a way that builds trust and relationship with impacted community members.

Develop a plan and budget for maintenance early in the design phase.



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MODULE 6

GSI procurement, employment, and workforce development practices 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.



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.





MODULE 7

GSI policy and program design, management, and reporting proactively elevate and drive transparency around equity

Equity planning should be built into program design and policies upfront to avoid uphill battles of retrofitting an existing program to become more equitable.



Compare the potential equity value of program and policy options to select equity-centered models.

Build equity planning into program design upfront to avoid the uphill battle of retrofitting an existing program to become equitable.

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.





GREENPRINT PARTNERS COMMUNITY ANCHOR RETROFITS



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.



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.



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

RESULTS

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.







Metropolitan St. Louis Sewer Distric

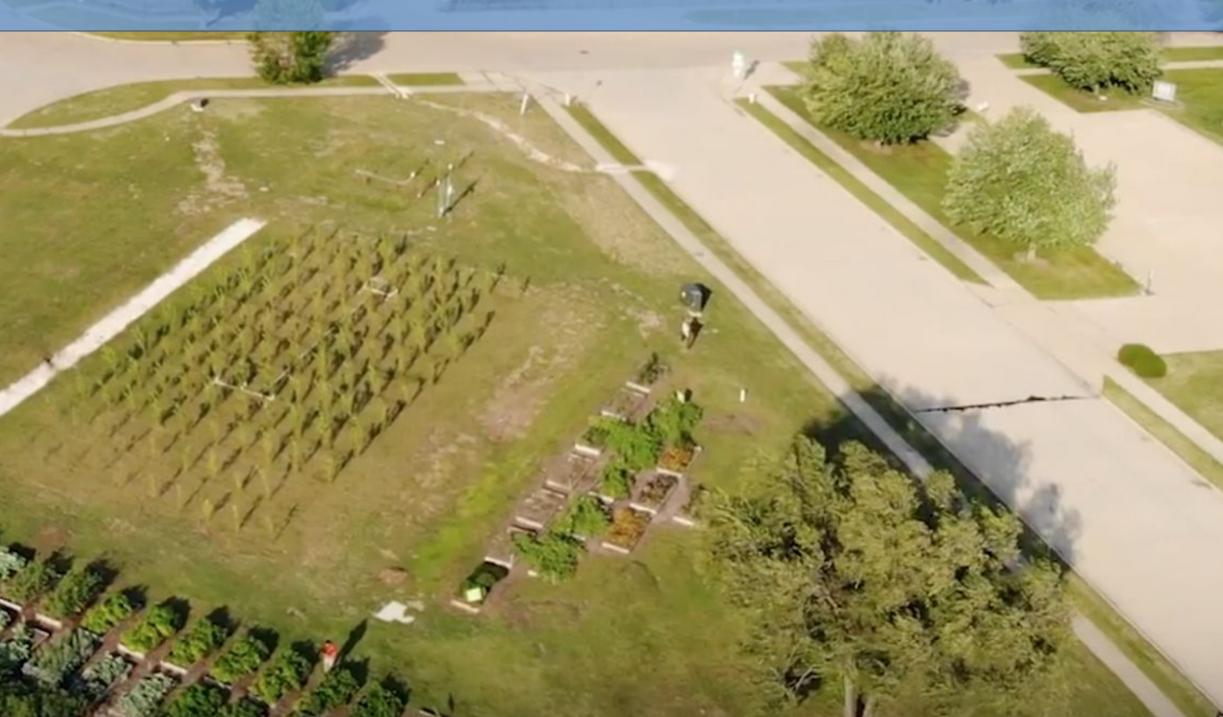


UTILITY RATEPAYOR FUNDING

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.









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.



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.



THE WELL FARM



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.



USDA ONRCS U.S. Department of Agriculture **Natural Resources Conservation Service**

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.



FUNDING AND FINANCING



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.



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.





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.

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.





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APRIL MENDEZ

CEO april@greenprintpartners.com









EPA Stormwater Funding and Equity Webinar July 27, 2021

Andrew M. Cuomo Governor Joseph J. Rabito President & CEO

EFC Overview

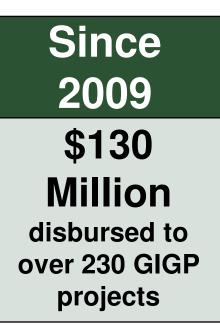
- Public benefit corporation which provides financial and technical assistance primarily to municipalities by providing lowcost financing for their water quality infrastructure projects
- EFC administers a number of programs including New York's State Revolving Funds
- These programs have provided over \$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







Program Priorities:

Climate Change Mitigation

 Reducing the effects of greenhouse gases and/or expand clean energy initiatives

Environmental Justice

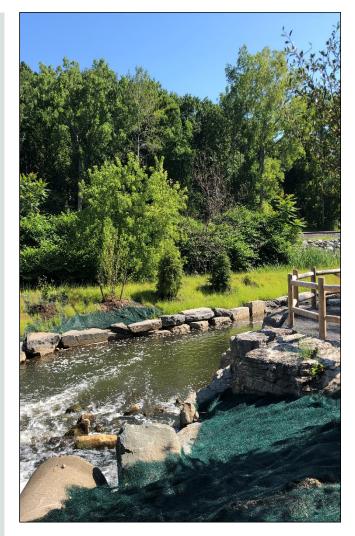
 Advance fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to development, implementation, and enforcement of environmental laws, regulations and policies.

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.

EQUITABLE IMPLEMENTATION OF COMBINED SEWAGE SYSTEM SOLUTIONS

- 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- A77ER





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 lowincome 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: Andrew Kricun, P.E. Managing Director, Moonshot Missions Senior Fellow, US Water Alliance andy@moonshotmissions.org akricun@uswateralliance.org

Environmental Finance Center

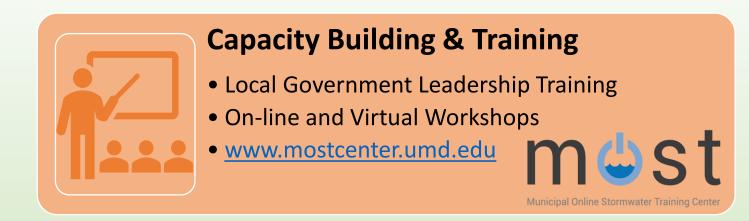
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Policy Analysis & Financial Assessment

- 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

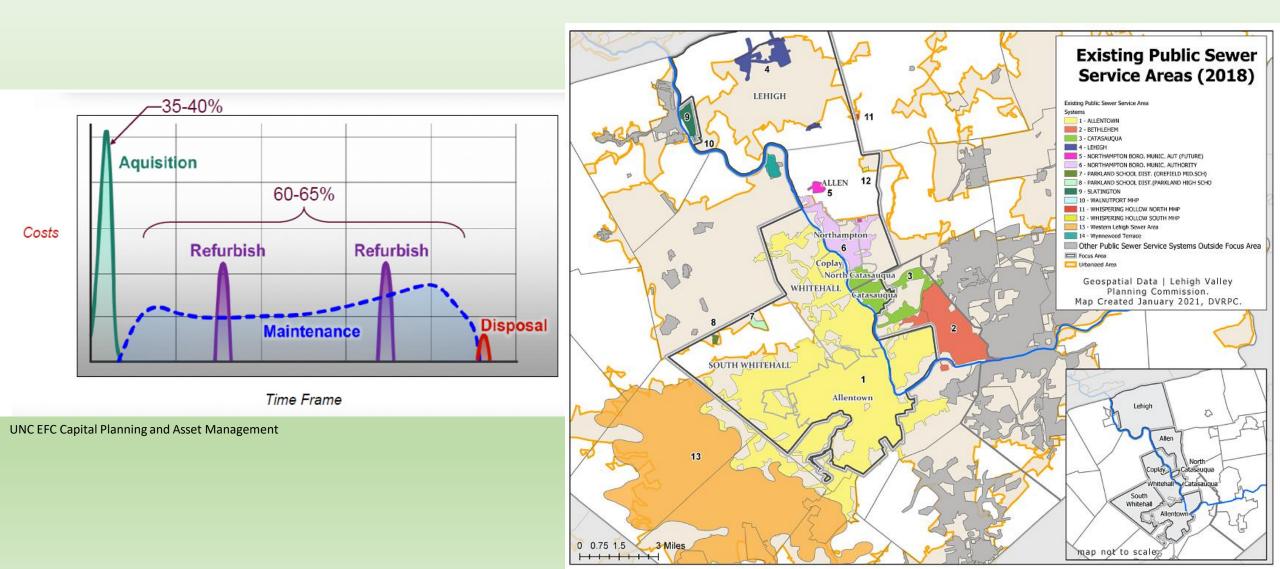
- Internal Municipal Partners (Parks & Rec, Roads, Admin)
- Municipal Committees
 (Open Space, Parks & Rec, Envtl Advisory)
- Existing Municipal Authorities
- Other Municipalities
- Watershed Organizations
- Conservation District
- County Planning Department

REVENUES

- General Funds
- CIP Funds
- Bonds
- Grants
- Fees

Source	Cost Coverage		Strongthe	Weeknees
	Capital	O&M	Strengths	Weakness
General Fund	Yes	Yes	Can be used to support all program costs	Competes with other community priorities, changes from year-to-year, less equitably spreads costs across payers
Grants	Yes	No	Good source for "shovel ready" project implementation, demonstration projects and initial program staff	Not guaranteed, highly competitive, suitable for demonstration projects, not sustainable in the long-term
SRF & Loan Programs	Yes	No	Can offer up-front capital for larger projects	Not guaranteed fund source, highly competitive, must repay often with interest
Bond Financing	Yes	No	Can be used for large, long-term expenditures	Dependent on fiscal capacity, must repay with interest, cost of securing bond may be high
Permit, Development & Inspection Fees	Yes	No	Offers nexus to system and program expansion needs	May not sufficiently cover program costs, may deter development
Stormwater Utility Fee	Yes	Yes	Can generate sufficient revenue, sustainable, dependable, equitable depending on design, support all program costs	Requires significant public dialogue, can create administrative challenges
Tax Districts	Yes	Yes	Can generate sufficient revenue, sustainable, dependable	Necessitates enabling statute, can have equity problems due to property value basis

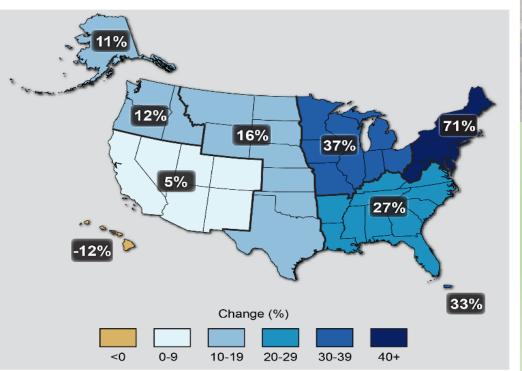
Funding Stormwater Maintenance



Climate Change and Equity

https://nca2014.globalchange.gov/report/ourchanging-climate/heavy-downpours-increasing

Observed Change in Very Heavy Precipitation



Center Reserve COR Toxic Floodwaters The Threat of Climate-Driven Chemical Disaster in Virginia's James River Watershed

> by Noah Sachs and David Flores March 2019

 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?

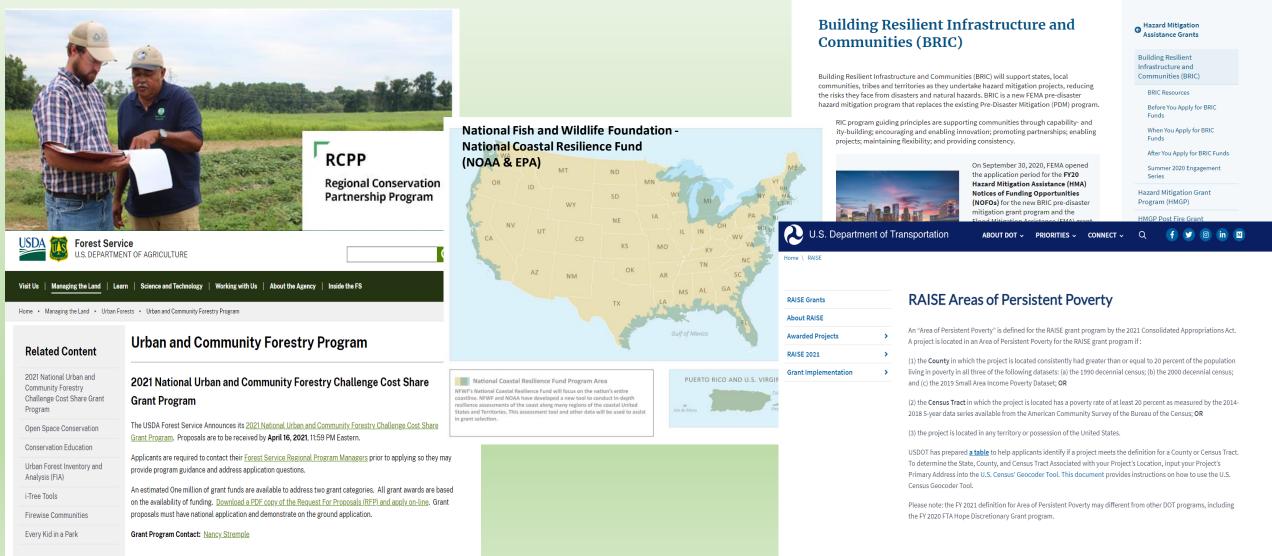
- What are the best financing mechanisms for this community
 - debt, rate increases, grants?

Federal Grant Programs

🐮 FEMA

Q Prepare for Disasters | Apply for Assistance | Get Flood Insurance

Disasters & Assistance 🗸 Grants 🗸 Floods & Maps 🗸 Emergency Management 🗸 About 🗸 Work With Us 🤟



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 underresourced 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
- Presenter contact information:
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 - Andy Kricun, Moonshot Missions: <u>andy@moonshotmissions.org</u>
 - Brian Hahn, NYSEFC: <u>brian.hahn@efc.ny.gov</u>
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