

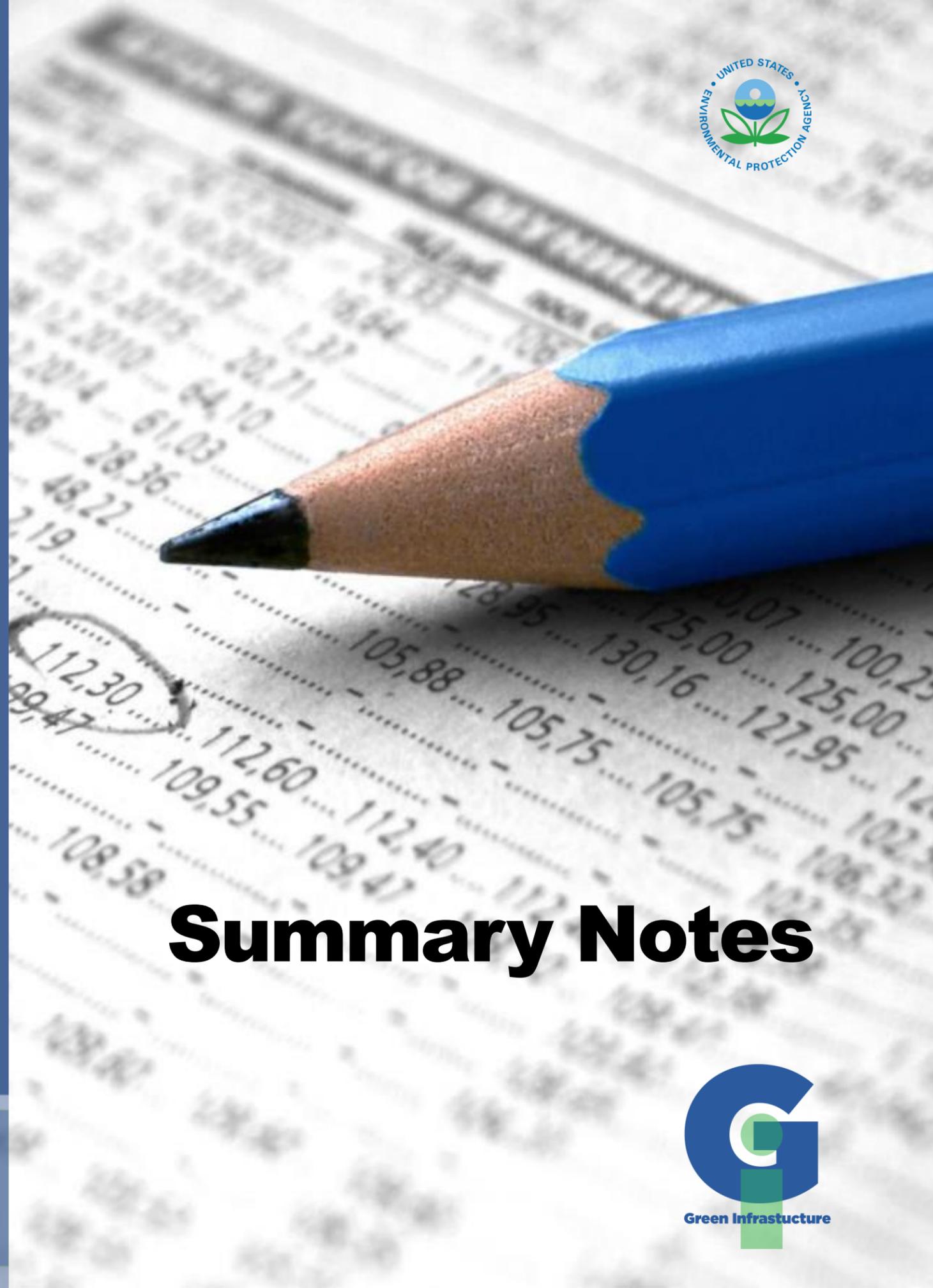


Public Private Partnerships



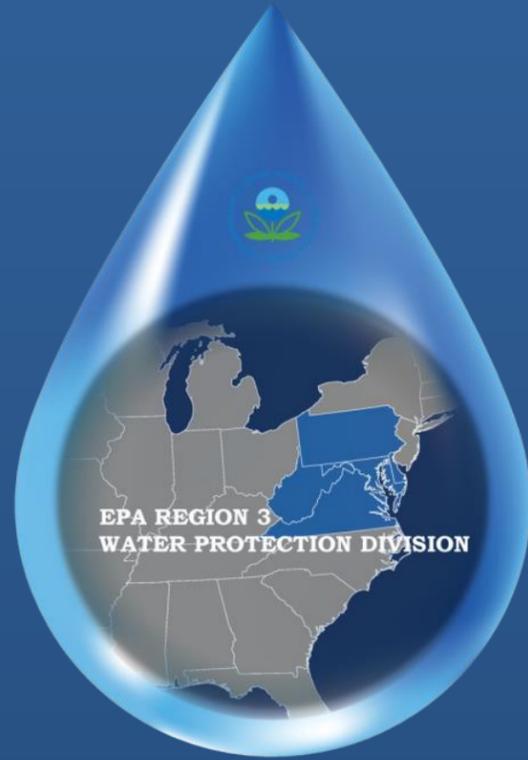
SUSTAINABLE STORMWATER FINANCING

FORUM



Summary Notes





EPA REGION 3
WATER PROTECTION DIVISION



Public Private Partnerships



Introduction

\$ustainable Stormwater Financing Forum

“Faster, Cheaper, Greener”

Urban Stormwater Retrofits

A CALL TO ACTION!

Building Sustainable Stormwater Infrastructure and Economic Health Through
Community-Based
Public-Private Partnerships (CBP3s)
and Smart Financing

TUESDAY, DECEMBER 9, 2014

8:30 AM to 5:30 PM

“...We (at EPA) have been on a path of trying to understand how this can work in an effective, affordable way to help close the gap between current resources and funding and capacity necessary to meet both water quality requirements and community infrastructure needs.”

Dominique Lueckenhoff, Deputy Director
Water Protection Division, EPA Region 3



Welcome and Overview

Dominique Lueckenhoff, Deputy Director
Water Protection Division, EPA Region 3

“ ... we are not pursuing fair weather partnerships, the ones that work for you today, but when things get tough, you drop out. We need to take a “long-view” approach, as this is not only about sustainability, but also about growing an emerging industry, about a new economy.”

There’s a saying, if you want to see the sunshine, you have to weather the storm. We are now in the eye of the storm, and we need to work together towards addressing the daunting infrastructure challenges in this country.”

- ❖ Nonpoint Source Pollution and increasing impacts due to Stormwater are major water pollution challenges for the 21st Century.
- ❖ 21st Century pollution needs 21st Century solutions – as highlighted by this morning’s keynote speaker, Michael Curley, in his book, *Finance Policy for Renewable Energy and a Sustainable Environment*.
- ❖ Big issues also surrounding water are growing flooding and drought problems, due to climate-related impacts. These complexities call for innovative, sustainable solutions with multiple benefits.
- ❖ There are not enough public dollars to solve the problem. EPA is working to understand and address these problems through partnering with the private sector so we can work together towards affordable solutions. We want to drive the markets towards achieving successful solutions. Therefore, we need to better understand markets and finance, while identifying and supporting innovative alternative approaches that get the job done.

On September 9, 2014, the Water Environment Research Foundation (WERF) and the Water Research Foundation (WRF) released an executive report summarizing a study on the *National Economic and Labor Impacts of the Water Utility Sector (4566)*. The study found that water, wastewater, and stormwater utilities will contribute \$524 billion to the economy over the next decade, supporting 289,000 permanent jobs. There is much opportunity here to not only protect our water resources, but also to support the economic viability of our communities.



Opening Keynote

Achieving Sustainable Water Infrastructure and Economic Prosperity through Smart Financing

Michael Curley

Environmental Law Institute

Author: *Finance Policy for Renewable Energy and a Sustainable Environment*

“Stormwater management is key to protecting water quality.”

- ❖ The largest and best clean water financing programs are the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) with more than \$40 billion in combined funding. However, there is not enough public money available in the State Revolving Funds (SRF) to address the stormwater infrastructure needs of the US. Need private sector investment.
- ❖ Loan Guarantees – Conservative cost estimates for stormwater infrastructure needs uses a 25:1 multiplier = \$1 trillion in SRF. Whereas, the S&P has calculated the cost using a 75:1 multiplier = \$3 trillion. Good opportunity to use as loan guarantees to bring the cost of private dollars.
- ❖ Guiding principles in leveraging private sector investment for stormwater infrastructure costs:
 - Provide incentives for private sector investment (e.g., permeable pavement). The majority of stormwater-related issues are having a greater impact on poor communities. Look to a broader jurisdiction, such as the state, to address the disparity between poor and wealthy communities.
 - Tax the beneficiaries of popular tourism areas (e.g., Chesapeake Bay, coastal communities) through the use of tolls (out-of-state pay higher toll-road fees) and the establishment of critical tax areas (special tax district such as coastal communities).

Sewer authorities are typical borrowers of SRF funds making approx. 30,000 transactions per year equaling on average \$3 million in financing.



Session 1

Sustainable Stormwater Infrastructure - The Need and New Approaches that Drive the New Economy

Jon Capacasa, Director

Water Protection Division, EPA Region 3

“...the limiting factor to stormwater management is cost. What actions can we take in the Mid-Atlantic and beyond to develop sustainable solutions that address community needs to reduce flooding, adapt to climate change, and streamline government practices”



- ❖ Local Community Based needs to meet the demand for green infrastructure, to create local jobs and businesses, and build a new business model for design, implementation and maintenance
- ❖ Regulatory Drivers for new solutions include, TMDL's, stormwater MS4' s, and retrofit requirements
- ❖ Meeting water quality goals at lower costs and integrating economic development with community quality of life objectives

Sharing new solutions to quicken the pace for meeting our goals. Using public funding to engage private sector resources as a multiplier to get important work done “Faster Cheaper, Greener”.



Sustainable Stormwater Infrastructure - The Need and New Approaches that Drive the New Economy

G. Tracy Mehan III, Member

US EPA Environmental Finance Advisory Board

"...We need to incentivize what we want, and disincentive what we don't."

- ❖ There is a clear need to better utilize underutilized assets (e.g., Clean Water SRF) and regulatory intervention.
- ❖ Community Based Public-Private Partnerships (CBP3s) provide multiple sustainable, scalable solutions as well as, environmental and social benefits.

Need to take a market-based approach to stormwater management. Innovative Community-based Public-Private Partnerships (CBP3s) are absolutely necessary to solve the nation's stormwater problem.

Larry Coffman, Deputy Director

Department of the Environment, Prince George's County

"...Local governments are not very efficient or effective in managing large-scale capital projects...so, how do we achieve stormwater management retrofits to meet the Chesapeake Bay TMDL with an estimated cost \$1 billion?"

- ❖ PG County found CBP3 model attractive to address the county's priorities: education, public health and economic development.
- ❖ PG County looked at ways to incentivize private funding:
 - Use SRF as a guarantee for private financing
 - Use of Green Bonds
- ❖ Third-party investment—credits—using a bank and credit system based on watersheds (similar to energy credits).

Need for flexibility from the Regulators – EPA Region III has been working with PG County to help make this work.



Sustainable Stormwater Infrastructure - The Need and New Approaches that Drive the New Economy

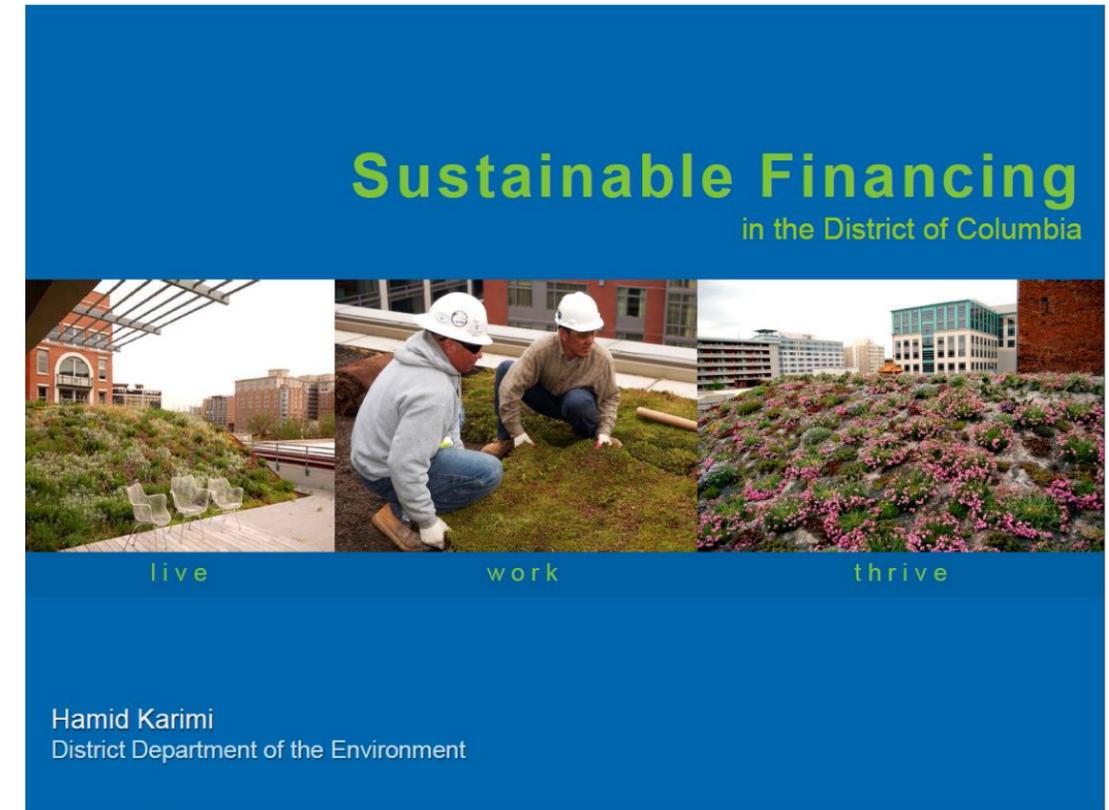
Dr. Hamid Karimi, Deputy Director
Office of Natural Resources, DDOE

“...Voluntary programs have proven not to be enough in the District. We are looking to internalize the cost of stormwater management and create a market-based solution.”

- ❖ The District is comprised of 43% impervious surfaces, such as sidewalks, roads, and roof-tops. As a result, the Anacostia River has suffered from the large volume of stormwater run-off.
- ❖ For every 10 regulatory required stormwater management retrofit projects (15 million square feet), the District only has enough funding available to cover the cost of one (1-1.5 million square feet). The estimated cost for needed stormwater retrofits is between \$7-10 billion dollars.
- ❖ The District’s solutions include, incentive and rebate programs, in addition to regulatory requirements.

We need to move from the old model of \$ Private Development + \$ Govt Stormwater Management + \$ Govt Cleanup = Healthy Water Bodies to a new model based on \$\$\$Private Development with SW Management = Healthy Water Bodies.

For more information, visit DDOE’s stormwater management web page at: <http://ddoe.dc.gov/node/10372>



Lessons Learned-to-Date from an Innovative GI CBP3- The Prince George's County Public-Private Partnership, "The Clean Water Partnership" for Stormwater Retrofits & Economic Revitalization *[Public, Private, Financial, and Legal Perspectives]*

Larry Coffman, Deputy Director
 Department of the Environment, Prince George's County

"...we are working to drive cost down, accelerate implementation and gain efficiencies where possible"

- ❖ PG County is utilizing GI stormwater retrofits to meet the Chesapeake Bay TMDL; need to retrofit 15,000 acres by 2025 at a cost of \$1.2 billion.
- ❖ Governments can save up to 40% by utilizing the private-sector market. Estimated savings by streamlining govt. processes = 20%; estimated savings through private processes = 20%.
- ❖ Public-private partnership established through a contractual mechanism provides flexibility to the contractor with general oversight by the county government.
- ❖ P3 also focuses on local businesses to provide the resource needs of retrofits, ultimately increasing local business capacity.

Important considerations of a P3 Agreement include authority, combined ability to design, build, operate, maintain and finance the project, flexible governance, risk sharing, incentives, and financing options.





Lessons Learned-to-Date from an Innovative GI CBP3- The Prince George's County Public-Private Partnership, "The Clean Water Partnership" for Stormwater Retrofits & Economic Revitalization [Public, Private, Financial, and Legal Perspectives]

Greg Cannito, Senior Vice President of Program Development
Corvias Group

"...If you want extraordinary results, you need extraordinary approaches"

- ❖ Stormwater needs a Call to Action to address unmet public need, stretched budgets, poor facilities, and weak fundamentals.
- ❖ How do you deploy a solution that creates wealth?
 - Drive local community economy
 - Have executable projects that provide experience for local businesses.
 - Process innovation – smarter, more efficient
 - Lifecycle management – manage as a large project versus taking a bifurcated decentralized approach in order to produce cost efficiencies.
 - Find best fit financing for each community even though it may take time.
- ❖ CBP3's are engines for growth and wealth creation that create jobs and support local, small and MBE business capacity.

P3s are a potent way to create and translate visions into financeable and executable projects, to reform sclerotic procurement processes, and to improve operating performance.





Session 2

Lessons Learned-to-Date from an Innovative GI CBP3- The Prince George's County Public-Private Partnership, "The Clean Water Partnership" for Stormwater Retrofits & Economic Revitalization [Public, Private, Financial, and Legal Perspectives]

Roland Jones, Director

Prince George's County, Office of Central Services and Economic Development Corporation

"...Life is about timing and leadership"

- ❖ Before beginning the process of finding a partner, there is a need to come up with a viable source of funding.
- ❖ Funding challenges for PG county included economic development and new jobs as the county does not have an industry sector.
- ❖ 90% of the funding distribution will be invested locally as a means to support the local economy and build a new industry in the county.

The private partner is also responsible for mentoring small businesses in the area to build capacity in the County.



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Luncheon Keynote

Achieving Sustainable Infrastructure through Public-Private Partnerships: Why The US Army Wouldn't Do It Any Other Way

John Picerne, Founder/CEO
Corvias Group

"...partnerships are successful if both parties are looking to achieve similar goals through a long term relationship...so you have to pick the right partner—someone you can work with for the next 20, 30 or possibly 40 years"

- ❖ You can't predict the problems or the next issue and shouldn't try...we are trying to solve deep problems for generations to come.
- ❖ Public issue—dealing with changing administrations that only focus on the problems of today. We must begin to push forward-thinking approaches to problem solving if we want to be sustainable.
- ❖ I hope we are past the era of short, inefficient solutions. Our job is to push the issue to get long toward solutions.
- ❖ The first requirement for a partnership is to align interests and understand what each partner brings to the table.

Although both parties go into the partnership with good intentions, you cannot forget the legalities. You must be sure to include a "break-up" clause in the event the partnership does not work out.



Luncheon Keynote

Achieving Sustainable Infrastructure through Public-Private Partnerships: Why The US Army Wouldn't Do It Any Other Way

Ivan G. Bolden, Chief, Privatization and Partnerships Division
OACSIM (DAIM-ISP), HQDA, Pentagon

"...as the federal government, we are trying to leverage what we have with outside resources and create linkages"

Why privatize?

- Helps tax payers
- Leverage industry expertise and financing
- Fully sustainable
- Can utilize federal employees for other specialized tasks.

❖ Sustainability is the buzzword of privatization. An example is the utilities privatization which has resulted in a 31% reduction in gas use and a 28% reduction in water use. This is possible because the systems are better maintained and managed by the private sector.

❖ To make a P3 successful, it needs:

- Senior management support and backing on both sides
- A 100% commitment – Managing a partnership is a full-time duty, not an “other duty as assigned.”

Vision for the partnership was to serve as the Army's center of excellence for privatization expertise, supporting soldiers.



Why Privatize ?



Army's backlog of deficiencies poses

A Threat to Mission & Environment



Smart Financing Tools & Market Approaches for Driving Effective, Affordable Urban Stormwater Retrofit Partnership Programs

Dan Nees, Senior Research Associate (Facilitator)
Maryland Environmental Finance Center

“Our main focus is on 3 key stakeholders – communities, market place and private sector.”

- ❖ 3 key actions/requirements: Commit, Invest, Focus
- ❖ We must commit to solving the problem.
- ❖ We have to make the decision to invest in change - doing something to address the problem.
- ❖ Once we commit and make the decision to invest, we have to focus on efficiency and community approach.

Federal Fund Leveraging – SRF & Loan Guarantees

Paul Marchetti, Executive Director
Pennvest

“Pennvest manages both the drinking water and clean water programs at the State level...MS4 enforcement is going to drive the need for capital investment.”

- ❖ Pennvest established a nutrient trading program 4-years ago between wastewater treatment plants and farmers through the creation of trading platforms (i.e., auctions) where people can buy and sell credits.
- ❖ Pennvest is typically oversubscribed and has difficulty getting to larger communities. Therefore, we decided to institute a loan guarantee program that will increase the loan capacity to help medium to large communities.

Pennvest has an AAA credit rating and will guarantee a community's loan so that the community will receive a lower interest rate loan...savings of the guarantee is worth about 1/3 of what they would get from a low interest loan.



Smart Financing Tools & Market Approaches for Driving Effective, Affordable Urban Stormwater Retrofit Partnership Programs

Green Bond Market – Background, Status, Future Trends and Opportunities

Kevin Smith, Vice President

Environmental Markets Group, Goldman Sachs



“...Green bonds are essentially public debt securities earmarked for environmental stewardship.”

- ❖ European investment banks were the first to tap into the Green Bond market as part of the sustainability market – Socially Responsible Investors (SRI) focus.
- ❖ Now seeing more Green Bonds in the US and in US corporate and municipal space.
- ❖ Green Bonds raise awareness in institutional investors' minds with respect to Green Infrastructure and lowering the cost of capital and increasing efficiencies.

Over the past year, the market for Green Bonds has tripled (\$38 billion issued) and the market is expected to triple again over the next year (to more than \$100 billion).



Smart Financing Tools & Market Approaches for Driving Effective, Affordable Urban Stormwater Retrofit Partnership Programs

Philadelphia's Greened Acre Retrofit Program (GARP)

Mami Hara, Chief of Staff
Philadelphia Water Department

Erin Williams, Manager, Stormwater Billing & Incentives Program
Philadelphia Water Department

"...within the Philadelphia CSO area, incentives are incredibly important for providing access to private land which comprises about 80% of the land area to which the stormwater regulations do not give the government access"

- ❖ The City of Philadelphia, through the Philadelphia Water Department (PWD) and Philadelphia Industrial Development Corporation (PIDC), has created the Stormwater Management Incentives Program (SMIP) and the Greened Acre Retrofit Program (GARP) to offer incentives and assistance to non-residential PWD customers and contractors.
- ❖ These programs aim to stimulate investment in and utilization of stormwater best management practices, which reduce stormwater pollution to the City's sewer and surrounding waterways and enhance the region's watersheds.
- ❖ [SMIP](#) provides stormwater grants directly to non-residential property owners who want to construct stormwater retrofit projects.
- ❖ [GARP](#) provides stormwater grants to contractors, companies or project aggregators who can build large-scale stormwater retrofit projects that total at least 10-acres in project size.

Keep incentives simple or people will not want to play—3-step mode—the strategy is, create a commodity, create a carrot, and create a subsidy.

To learn more visit <http://www.phila.gov/water/wu/stormwater/Pages/Grants.aspx>



Smart Financing Tools & Market Approaches for Driving Effective, Affordable Urban Stormwater Retrofit Partnership Programs

District of Columbia Stormwater Retention Credit Trading Program

Brian Van Wye, Branch Chief Program Implementation

Stormwater Management Division, DDOE

“...there is a \$7 billion cost estimate in the District for stormwater retrofits”

❖ Why are regulations so critical?

- Regulations touch 10 times the land area that public (ROW) type investments touch... thus, getting retention requirements and regulations in place is important to get to real solutions.
- Credit trading and off-site work is essential

❖ Spreading green infrastructure (GI) throughout DC versus implementing GI only at regulated sites provides the benefit of stormwater credit trading.

❖ Stormwater credit trading is also a tool to get green infrastructure installed, in addition to bringing about awareness and expertise at non-regulated sites. We want to transform the mind-set of construction project managers.

❖ District certifies credits for up to 3 years at a time. The advantage for DDOE is the savings associated with not having to pay the life-cycle cost (20-30 years) upfront for a property that may be redeveloped in 5 years and ultimately become subject to regulation.

Regulated sites have to go above and beyond the regulatory requirement before beginning to earn credits versus voluntary site that earn credits for all stormwater green infrastructure retrofits.



Value of P3's & Key Elements, Financing & Benefits of Community Based Public-Private Partnerships for Rebuilding Sustainable Stormwater Infrastructure

Seth Brown, Stormwater Program/Policy Director

Water Environment Federation (WEF)

"...looking back, 85% of water quality impairments were the result of point-source discharges in 1970; that has now flipped with 85% of water quality impairments the result of non-point source discharges"

- ❖ Public-only traditional funding is inadequate to meet current or future needs.
- ❖ There is a clear need for innovative approaches for private investment
- ❖ There has been a 67% growth in stormwater (MS4) between 2004 and 2008.
- ❖ \$25.4B in '04 to \$42.3B in '08 – *largest growth sector*—since 2008, less than 1% of SRF funds have gone toward Green Infrastructure projects.

Seven (7) states reported 85% of needs are MS4-related -
NJ (\$15.6B), PA (\$6B), CA (\$3.8B), MD (\$3.8B), TX (\$3.1B), FL (\$2.5B), NY (\$1.1B).

Demand for Innovative Stormwater Financing/Funding

Sustainable Financing Forum for "Faster, Cheaper, Greener" Urban Stormwater Retrofits

Seth Brown, PE
Water Environment Federation
Stormwater Program and Policy Director
sbrown@wef.org





Value of P3's & Key Elements, Financing & Benefits of Community Based Public-Private Partnerships for Rebuilding Sustainable Stormwater Infrastructure

Todd Herberghs, Executive Director
The National Council for Public-Private Partnerships

"...P3s are an innovative resource and tool in the community toolbox"

❖ Things to consider:

- Public Sector Champion
- Favorable regulatory atmosphere for P3 legislation
- Consideration of alternative organizational structures for the management of partnerships
- Clearly defined revenue streams
- Carefully picked partners
- Education and Stakeholder Outreach

Government does not have the funding to address stormwater which is why there is such an urgent need to co-op the private sector for help

Matt Nichols, Partner
Sutherland, Asbill & Brennan, LLP

"...the transactions we did for on campus housing at a public university share many of the same characteristics that have been talked about today"

- ❖ These projects are controlled by the state and Board of Regents (selected by the legislature) technically called, the "Central Office" and similar to state, county and local councils...a lot of folks to answer to.
- ❖ Initially, it really had no private involvement at all, but it did use a local economic development authority or a housing authority as a way to get around some constitutional restraints from the state's ability to borrow.
- ❖ The finance part, in describing the PC agreement today, finance is a big part of how these things work...It is design, build, operate, reconstruct, maintain—finance – it's a big part of the deal

It was very important that the private market bring some discipline to our process for determining how much student housing we needed, how much investment and what kind of investment. Finally, accountability was one of the most important things in this process for us and the state.



Value of P3's & Key Elements, Financing & Benefits of Community Based Public-Private Partnerships for Rebuilding Sustainable Stormwater Infrastructure

GI Driven, Long-Term Low Interest Debt Financing Approaches

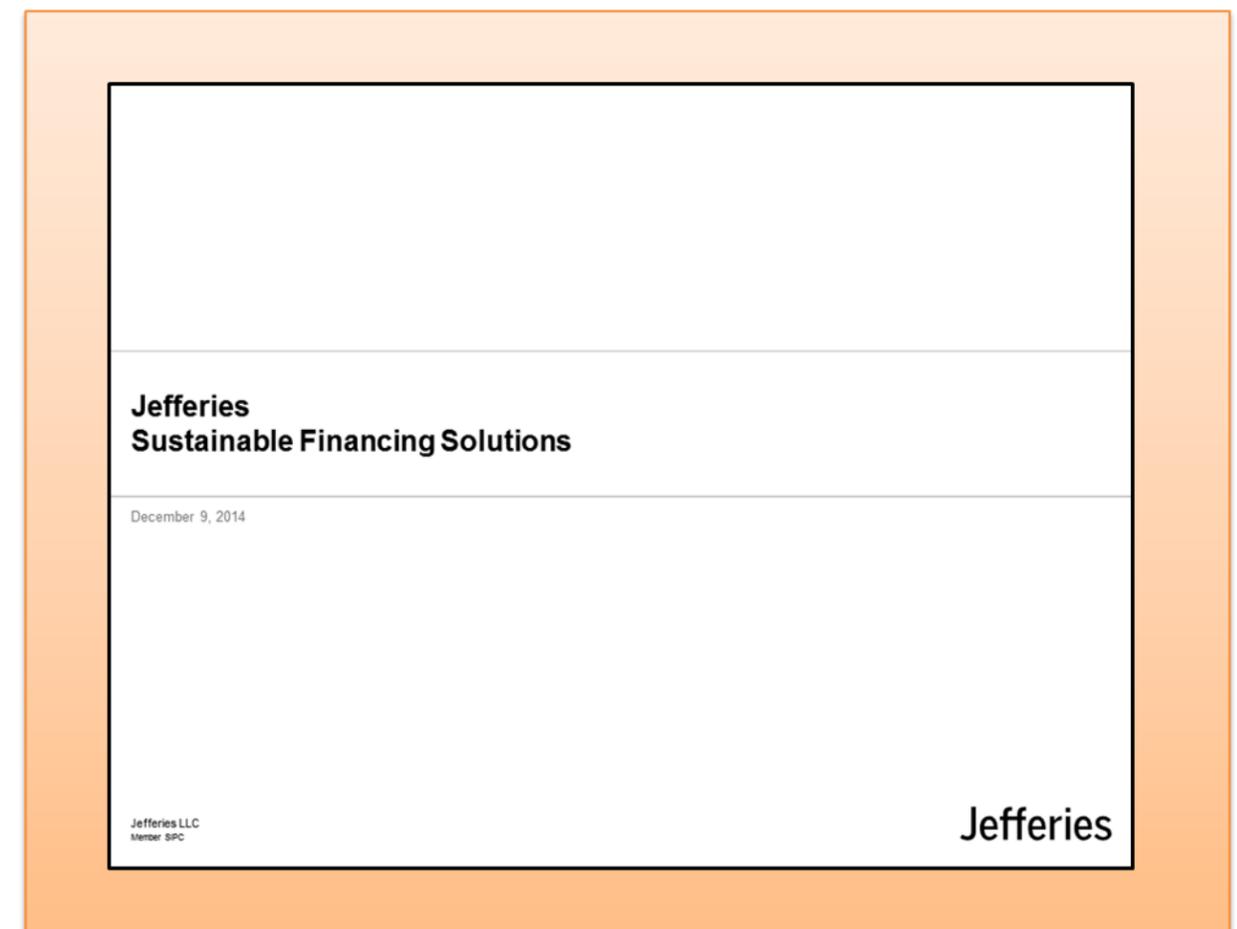
John Germain, Managing Director

Jefferies

"...stormwater P3s exhibit attractive attributes for investors"

- ❖ A successful P3, must establish a strong partnership first.
- ❖ Financial structure should suit the partnership.
- ❖ Financing should not drive the partnership.

Long-term programs need long-term financing.

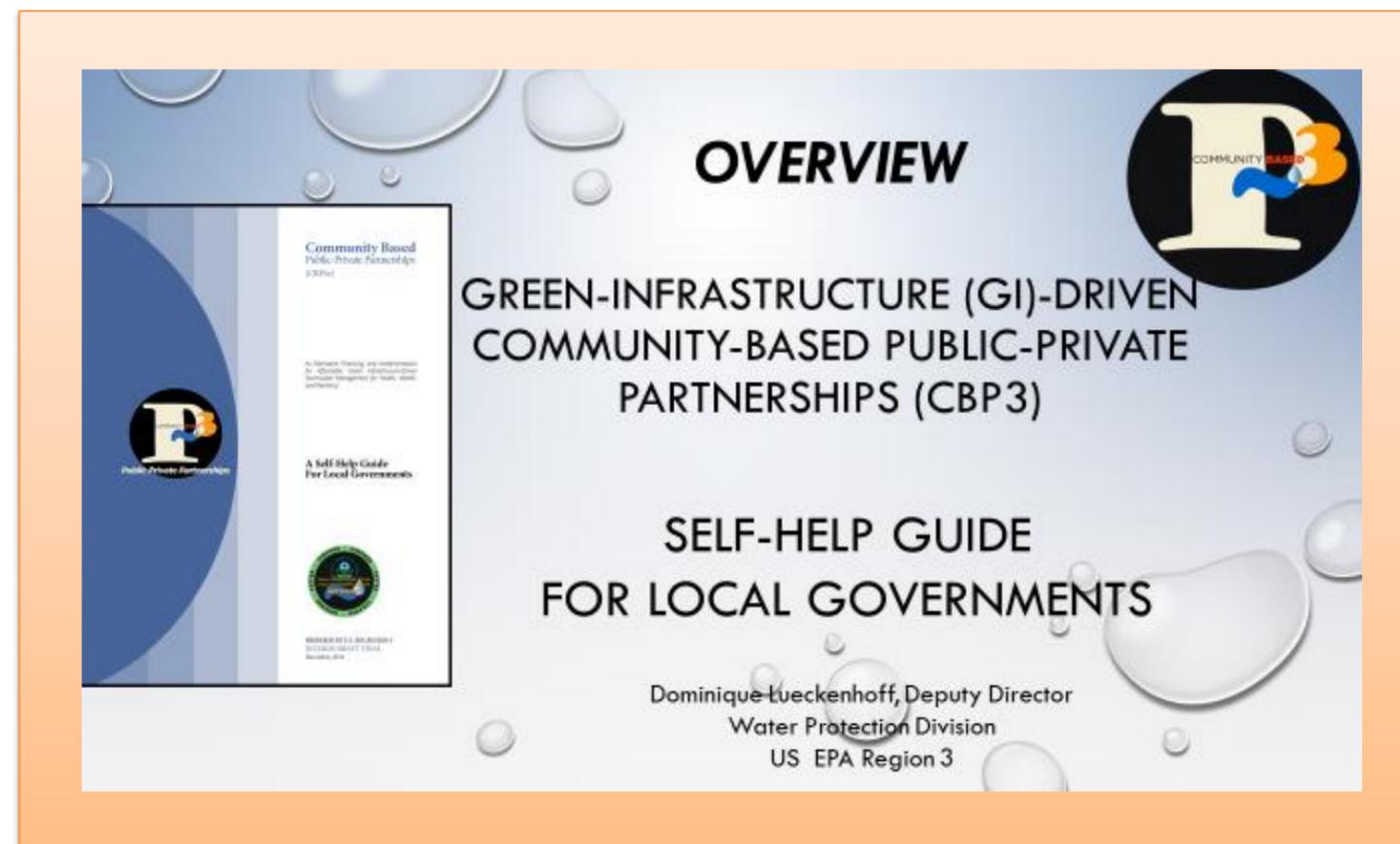




Value of P3's & Key Elements, Financing & Benefits of Community Based Public-Private Partnerships for Rebuilding Sustainable Stormwater Infrastructure

Overview of EPA's Draft GI-Driven CBP3 Self-help Guide for Local Jurisdictions

Dominique Lueckenhoff, Deputy Director
Water Protection Division, EPA Region 3





Enabling P3s & Smart Financing to Support the Needs of Various Types of Communities

Action Kick-off

Adam Ortiz, Director

Department of the Environment, Prince George's County

"...we need to be "real"

- ❖ There are going to be more regulations, more permits – it is not going away.
- ❖ All MS4s are struggling with similar issues.
- ❖ Environmentalism is about connection; we need to stay connected to nature for our quality of life.

The old way is not working...we have to take risks, think and act anew... We need to adapt.





Public Private Partnerships



G3 Website

www.g3partnership.org



Partnership

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GREEN STREETS • GREEN TOWNS • GREEN JOBS



G3 APPROACH

Implementing a green approach to designing and building community infrastructure can have a variety of meanings from recycling programs, landscaping, Low Impact Development techniques to developing a sustainable and resilient community. The G3 approach also includes empowering small to mid-sized communities with the tools and mechanisms to achieve their goals of improved livability, healthier environment, and prosperous green & local economy.

[READ MORE +](#)



G3 ACADEMY & PARTNERS

The G3 Academy represents a 'virtual resource' and a collaborative network of stewards, practitioners and sponsors. The Academy offers community leaders, local stakeholders, and private and public entities easy access to technical, planning, policy, funding and job creation opportunities as it relates to the creation of green streets and green towns.

[READ MORE +](#)



G3 LIBRARY

The G3 Academy Library provides a compendium of research and informational articles and resources for G3 policymakers, local officials, engineers, community organizations among other disciplines

[READ MORE +](#)



G3 TOOLS & RESOURCES

These tools can help you map out natural resources around your community, calculate stormwater treatment, and understand the multiple benefits of making your streets and your town a greener, more sustainable place to live.

[READ MORE +](#)

G3 SPOTLIGHT

- [G3 Community Grants](#)
- [G3 Grant Projects](#)
- [EPA Green Infrastructure](#)
- [Water Sustains Us-Best Practices Portfolio](#)
- [The Economic Benefits of Green Infrastructure: A Case Study of Lancaster, PA -](#)
- [Soak It Up Philadelphia](#)
- [Community Design Collaborative](#)
- [Green City, Clean Waters Video](#)

G3 DIGEST

A G3 "MODEL PRACTICE"



The G3 DIGEST is designed to incorporate, leverage, capture and disseminate information on sustainable products and practices related to sustainable transportation, green infrastructure, innovative storm water management, low impact development, context sensitive solutions, and innovations in transportation and community planning, economics, career development, policy, legislation and funding.

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G3 NEWS

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- 16 JUN** [2014 CHESAPEAKE BAY WATERSHED AGREEMENT](#)
- 16 JUN** [AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS SELECTS DESIGN WORKSHOP FOR CHINATOWN GREEN STREET DEMONSTRATION PROJECT](#)